A REFLECTION UNDER PANDEMIC ON FASHION AND INTERACTION DESIGN

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CONTENT

Fig. 0 CYBERMODA LOGO

ABSTRACT

In 2020, everyone is under coronavirus' influence. Each industry has to change and innovate actively to protect the ecosystem. Fashion is one of the hardest-hit industry. The primary research question is how the fashion industry can adapt to the pandemic situation and evolve to achieve a better user experience. After analysing and designing, this research thesis reveals an interactive way of fashion performance to better adapt to the context. Its structure mostly follows design thinking, from research to the prototype. There are five main chapters, research, current context, ideation, design, and prototype.

The research stage is always the best period to get familiar with the target market or industry. In Italy, the fashion industry is essential for its economy, culture and lifestyle. In the first few months of 2019, the sector recorded a trend of + 3.5%. With about 500,000 employees (+ 0.3% compared to 2016), the fashion industry is the second manufacturing sector in Italy after metallurgical activities.[1] Italy has most famous brands, such as Prada, Gucci, Armani, Missoni, Etc. "Made in Italy" becomes a symbol of high-quality handcraft; also it becomes a unique heritage to the world. There is no doubt about the importance of fashion in Italy. However, fashion is an entire industry; it contains thousands of activities, from each technic during sewing to the economic policy to run a global fashion world. In this essay, we will pick fashion show as the focus, the most attractive activity in the fashion world. There are interview conversations with experts of the fashion industry for getting the practical and actual observation and insight in the appendix.

There is only one emergent issue in 2020, which is COVID-19. This pandemic epidemic situation pushes everyone on the precipice of the times. This public health emergency of international concern changes everyone continually. Citizen's life is restricted. Working remotely, shopping online, and a distant relationship are the normal states. However, COVID-19 influences the original society in both positive and negative way. In a positive aspect, it changes the order of ancient and traditional society. It means the revolution also brings innovation and efficiency. In the other hand, it destroys lots of industries because of the quarantine. Company and factory need to shut down. The economic crisis happens around every single one.

In the ideation chapter, it explains a theoretical design system, variable element system. This idea is converted by analysing previous findings. This chapter also answers how in the fashion show background, the system can present the high immersive experience for users and how to combine the technology to

deliver the concept from the current situation. The last subchapter, direction, shows the design preparation of a new AR fashion show application, which names CybermodaFig.0. During this phase, it reveals the design questions for this thesis, how fashion show can remotely express the "Sense of Ritual" and how can fashion show satisfies the different demands under the development of technology.

The design chapter contains the user experience design manners to detailed the new function and new relationships of Cybermoda. This application is a new platform for fashion insiders to share their professional opinion and understanding of the fashion show in the first place. For regular users, they have a new educational fashion show platform and can get the information for design and fashion show immediately. It remarkably improves the sense of participation under the epidemic as well as brings a new interactive experience. On the other hand, as an open platform, it also stimulates brands to create better products. It reduces the distance between the designer, fashion insider, and customer.

After that, it explains how to build the prototype. This prototype divides into two parts, model and action. For the model part, I have used Cinema 4D, Character Creator 3 and Marvellous Designer to build the 3D models. For the action part, Cybermoda is made by Xcode for the iOS system. With the Reality Composer which plugs in the Xcode, the triggers and result can set directly on it. It is convenient for designers to build the application without coding or algorithm quickly. After that, there are two rounds of user testing within eleven people. The recording of the interview of user testing is in the last. In the future work chapter, it shows some possibilities and opportunities beyond.

Overall, this thesis is written mainly in two parts, theoretical and practical. On the first three chapters, it describes the variable element system, and for the rest is about an experiment to verify the system. In the period of writing and designing, my perspective is from an interaction designer to consider and finding the solutions to research questions. Therefore, this thesis contains most design methods and design thinking from a user experience design concept or some of interaction design basis.

RESEARCH

The research phase diagnoses the status of the fashion show and understands deeply about the fashion industry by using shadowing, desk research, in-depth interviews and other research methods. This chapter explains the role of the fashion show and how it serves for the industry. Then, with the analysis of fashion show within two dimensions, entertainment and commerce, it proves that it is necessary to exist. It also illustrates how Chinese brands developed in the local and international markets. After that, this chapter explains how technology changes the fashion show. The logic of this chapter is from the historical point of view. We can rewrite the structure by three main questions. Fashion show exists in a long time before whereas why the fashion show is invited. Then, it answers what makes runway exist and how fashion show evolved with the times. This chapter helps to get insight of the fashion show.

1.1 THE ROLE OF FASHION SHOW

The fashion show is a typical form of displaying garments to the customer, especially the textile and cutting movement, by wearing the garments instead of the mannequins. However, in the 1800s, clothing was sometimes made in miniature on dolls to show how designs would look on the body, and these dolls were also sent out to wealthy customers around the world.[2] At that time, fashion is a service for wealthy people. The wealthy family will have specific tailors, shoemakers, etc. It is the original service for haute couture first. Compared with the ready-to-wear runway show, for haute couture, miniature garments as the traditional way to reveal the fashion design and the texture of textiles also deliver as an icon which represents this classical activity and the skills of craftswomen. In 2021 Dior fall and winter fashion film, Le Mythe Dior, it extracts the idea of mini mannequins, and the inspiration is sending the mannequins to different "muses" in the fantasyland, and measure their size, to displaying the traditional haute couture creation process.

Moreover, the fashion show has the function of the social status award. "Social status awarded" function refers to communication behavior can endow an individual social status for people, things, and social activities, which makes social legitimation of the things and people, and sets up prestige, as well as receives a significant position, or on the contrary, it can make its reputation down.[3] Most people always identify that fashion shows provide the latest and reliable information of the new trend to wear. The fashion show's functions are different, but the motivation for holding a fashion show is similar to Oscar's. This information has a significant influence on the industry or normal people, such as the jewelry, the detail of garment such as the closed way of a shirt after fashion show released.

The social role of the fashion show also reflects on the egotism. Before fashion shows officially launched, people used to assemble in fashionable places, such as a ball or masquerade. It is a perfect occasion to display their dresses and to observe others' wearing. "People were as interested in the contest of fashions as in the contest of horses on the turf."[4] A psychological aspect of the fashion show in the original is the mental willingness to show off. A person shows off only when they need to. Only when they think that others do not consider them important will they try to prove that they are important.[5] At that social background, women need a social occasion as an independent individual. Clothes are their weapons. For example, during the TV series "The Crown," it introduces Queen Elizabeth II's life, there is one scene describes the first meeting with Jackie Kennedy; before the banquet, Queen

Elizabeth II was worried about her dress because she wonders if the American first lady will beat her. We cannot dig the evidence to prove the truth of history, but the mental activity of this detail is reasonable. The occasion of the dinner banquet as a social activity is similar to the fashion show. Since civilization begins, the garments as the first impression have raised the vast waves into everyone's inner world during social activity. Therefore, the original motivation of the fashion show starts from personal achievement.

From the mass of people's point of view, in psychology, people have a fear of being isolated, as well as seeking the fashion trend. Imagine if someone is wearing the dress from the '80s or in an extreme old-fashion way compare to others, what will be the reaction of people. The answer is obvious. The fashion show is the manner to imitate and seeking common ground with others. The function of trend releasing by fashion show determines that fashion show is bound to become a high class in the fashion industry. It also determines that the model's dress is bound to become the "advantage" opinion and then is sought as a fashion; as fashion is a kind of lower-level class imitation becoming popular, people fear that they would be "outdated" and throw out the old dress to follow fashion. Then fashion would be popular as a "majority opinion", it forces people with "disadvantage" comments to generate fear of social isolation and follow fashion. This time the fashion pioneer who has already produced new fashion guiding people to chase. This is a cycle, iterative process.[3] This cycle forces the fashion industry to develop at a surprising speed. Most of the designers who work for a famous brand, such as Dior or Chanel, need to proceed at least ten shows, includes haute couture, fashion weeks, menswear, and womenswear in different seasons, Etc. It is also a challenge for designers.

In a bigger picture, the fashion show is a directly visible way to look back the history. It influences the social impact, especially in the war period; some of the classical iconic products are designed during this period, such as the military-style coat from Burberry, the suit with Chanel's collarless jacket. At that time, the fashion show proceeds in a simple way to reduce the cost, and the purpose is changed. During World War I, fashion shows were organized to help raise funds for the war effort. In 1914, Edna Woolman Chase, the editor of Vogue, put on a fashion show to display the work of New York designers.[6] Most of the brands cancel the fashion show, and some of them close the house. In the last century, America, as a large export country, promotes fashion system development in Europe. However, the war weakens the dominance of Paris as the center of the fashion world. The American government initiated an endeavor to promote American designed fashion, and in 1914, Edna Woolman Chase, the editor of Vogue, organized a show to promote New York designers.[4] Nowadays, Paris still has control; for example, it has the haute

couture committee's center department. This committee can permit revealing the haute couture. The evolution of the fashion show provides us the timeline for the milestones of history. The runway has evolved by many external elements, such as politics, economic, social, Etc. For example, the first and second world wars influence the direction for shows in Paris, the development of American forces the most market turn their direction to the U.S. And also, designers will proceed with the fashion show in New York. Then, after the second world war, youthquake started in London and rapidly spread internationally. Pop culture influences not only for garments such as mini-skirt but also the form of the show. The zeitgeist demonstrates on the show that the model's gesture becomes lax, and the environments are casual, not only in a fashion house. This phenomenon also embodied the fashion show's social role. It contents social awareness.

Runway as a method for delivering the concept, designers can bring some social topics into the fashion show. On 2020 Paris fashion week, Chanel brings a plus-size model, Jill Kortleve, on its runway. This behavior receives lots of positive feedback from social media. Body-positive advocates are pushing for greater representation on fashion runways, and some brands are listening.[7] Jill also walks on runways of Fendi, Alexander Mcqueen, Valentino, Etc. Moreover, back to the history, in the earlier stage of the fashion show, it serves for the wealthy people, so when designer selecting the model, they will choose the model who has a similar body shape to the customers. Through using a plus-size model, the fashion industry delivers the concept of equality and diversity on the runway and gives the fantasy to more attendances and the audiences on the other side of the screen. Demna Gvasalia, creative director of Balenciaga and founder of Vetement, said, I like to see fashion as a reflection of what is going on in the society around us. On Dior 2020 Spring-Summer Couture Show, Creative Director Maria Grazia Chiuri brings the show into the "womb." Maria joined forces with Judy Chicago to realize a great American second-wave feminist artist imagined for a public sculpture to maternal power back in 1977. On the first day of the couture season, we entered the birth canal of Chicago's installation, there to watch Chiuri summon a golden host of goddesses onto a womb-shaped runway.[8] Maria was bringing "Goddess" as the metaphor for women's power, for the installation of the show venue, the shape of the Chicago's sculpture, the textures on the carpet, and the color and atmosphere all echo to the topic. This concept of a holistic way to the show starts in the 1980s from Japanese designers, such as Rei Kawakubo, Yohji Yamamoto. Show production as one piece, includes the set design, the order of the garments, the makeup, the model, and all the rest set up for the show. This manner helps designers explain their concept and also giving more experience to audiences.

By the concept of holistic, haute couture shows still keep the high quality of the handicraft garments with classical style for performance, serving the wealthy world, even the service for a specialist, during Chanel haute couture shows, the customers will have a personal specialist during the show for explaining the history, concept, material, design and also helping them ordering. Upholding the complete service maintains the Haute couture's mystery and luxury. On the other hand, for ready-to-wear shows, we can realize that they change rapidly, more inclusive, and diverse. For example, on Balenciaga 2020 Sprint Ready-to-wear show, "So there we sat, in an auditorium Gvasalia had pointedly smothered wall-to-wall in a color not far off the blue of the EU flag, to view his socio-design study of the structure of today's dress codes."[9] It is hosted in a council meeting room; the audience sits in a blue box, a cold color. The music was in down dram-beats. On the runway, some of them are normal people; they come from different industries. However, all of them were walking like a robot. The topic of the show is discussing power dressing and fashion uniforms. This show fades the boundary between high fashion and everyday life from music, environment, and model aspect.

Fashion show as a performance for fashion, in recent years, its foundation of the duty switches from exclusive fashion to express the positive energy to the society, such as feminism, equality, or sustainability. Marine Serre, who wins the 2017 LVMH Prize for emerging talent, established a brand as her name. She redesigns the used clothes, using recycled materials, then brings new meaning to them. Marine Serre said, "To me, it means to grow something after damage," On her 2020 Spring and Summer collection show, by using her iconic monogram of the crescent moon as her name, the amount of recyclable material upcycled into Marine Serre's fashion language. On regenerated SS20 shows behind-the-scenes footage of how a garment transforms from recycled product to the finished piece, from reusing discarded denim to upcycling old bedsheets. Other materials saved from the landfill include overproduced towels, old silk scarves, deadstock leather, and crochet table cloths.[10] Marine Serre makes sustainable as its brand core, and in fact, the collection of sustainable has less profit than producing the star products, such as the T-shirt in monogram with the crescent moon. Sustainable as a social phenomenal redeclare by the fashion industry, most designers use their fashion language to deliver positive power. Moreover, it represents fashion show enlarges the details in virtual information transmission and exists in our lives. The fashion industry can create a trend and support a trend as a mighty army. Nowadays, the fashion show presents new garments as a massive fashion ceremony. Fashion week compresses the schedules for women ready-to-wear shows. Fashion professionals travel to attend the fashion weeks frequently, start in New York, then move to London, Milan, and Paris

in the end. Most of the brands attend the fashion show. Its influences are similar to the expo for a country's industry, technology, and culture. In Paris, its elitist and elegant luxury features attract designers to attend the fashion week. Moreover, Pairs as the birthplace of fashion, Yohji Yamamoto, was quoted as saying in The Talks in 2011: 'Paris is the place for establishing your brand as an international one.' Its culture and context give designers strong support, such as Silicon Valley, for the IT industry. These are Big Four recently appear more cities, including Tokyo, Seoul, Copenhagen, Shanghai. These iconic cities spread the fashion spirit to the world and represent different fashion industry features. They are the fashion landmarks established by their different context, such as government, culture, history, Etc.

Fig. 1 (Vauthey, 1988)

1.2 FASHION SHOW EXISTS AS AN ENTERTAINMENT

When we talk about the fashion show's social aspect, there is always some common points as entertainment. Entertainment such as sport, performance, or communication combines with the social occasion, in 19th, presents such as breakfast club, hunting feast, Etc. Same as the fashion show, the french shows mimicked elite social events, with calligraphed invitations, live music, and tea service.[11] At that time, the fashion show was an occasion for upper-class people entertaining, especially from club culture. The arts had influenced show production for over a century, and in the 1980s, the club culture movement in London brought fashion and music together through runway more powerfully than ever before.[12] In Issey Miyake FW 1988 fashion show[Fig.1], the designer uses dancers to present the concept of 'Pleats Please' collection and instead of the traditional use of professional models on the fashion show. Compare to the current fashion show; the runway is more loosen in before.

Talking about the entertainment aspect, I will take an extreme case, the Haute couture show. It always presents traditionally. It probably depends on their clients. For the haute couture clients, through the limit of too high price, by following the Pareto principle, these clients might be the top 20% elites who own the 80% wealth of the world. They are not willing to change since the wealth already controlled by them. For them, their taste might be educated during children period, and haute couture might be just a piece of garment. Therefore, the haute couture collections have less innovation and changes. Usually, the collections are made by heavy handicraft and luxury textile. Also, about the customer care of haute couture, Chanel provides the alteration services for a lifetime. The clients will have personal assistance during the show. Haute couture show has more social role than the entertainment role.

However, there are some fashion shows as entertainment and performance. For example, in the 2019 Dior Haute Couture Show at Paris Fashion Week, Creative Director Maria Grazia Chiuri combines the traditional circus performance with the runway. The environment is built in the tent of a circus. While models pass by, the circus artists act in different shapes by using their body language, including the interaction with the models, for presenting a playful, conceptual, and immersive fashion show. The benefit of immersive is similar to the theme park, bringing the audiences into the background of each garment's design and delivering the collection concept. Another example is the 2019 Spring and Summer fashion show[Fig.2 (P.16)]. Kim Jones, artistic director of Dior Homme, collaborates with New York artist Kaws. In the middle of the stage, there was a massive sculpture of Kaws' classical

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character called BFF, which high 10 meters and made by 70000 roses, and on the top of his left hand, there was the dog of Mr. Dior, named Bobby. Fashion and art have always had a symbiotic relationship. At times, it is straightforward, where the garments act as canvases for iconic pieces of art. More often than not, the works of art serve as a form of inspiration and starting point for designers and their collection.[13] Like other art performances, the fashion show is a more acceptable and popular way for designers.

In Jean-Paul Gaultier 2020 Spring and Summer Haute Couture show, the farewell show concludes his 50 years experience as a designer. During the show, there are over 200 looks. Moreover, all the models as the actor and actress interact with garments, audiences, and other models. The runway as a stage, there are full of dramas, plots, and interactions. It is not the first time fashion designers bring theatre on the stage. As the creative director of Dior, John Galliano, in Dior Haute Couture Spring 1998, at Palais Garnier Opera House, hosts an incredibly visual feast for the fashion designers, critics, celebrities. For his spring and summer 1998 show, Galliano took attendees on an operatic flight of fancy, staging the show on the grand staircase of Paris's historic Palais Garnier opera house. Featuring an orchestra, tango dancers, and dozens of extras dressed as figures from the world's greatest operas, it was Galliano at the height of his dramatic powers.[14] He constructs a world of luxury and imagination. In my opinion, he describes the style of decadent noble on the fashion show. The show, as a novel, the stairs of Palais Garnier opera house is the best background. The movement and action, the makeups of models, dedicates the soul to the novel. In 1996, John Galliano was appointed as creative director by Dior. During 15 years working at Dior, he receives praise comments for his haute couture and ready-to-wear collections.

Since the rapid development of technology, most brands release the haute couture and ready-to-wear shows for the public on social media. With the changing of technology, the fashion industry presents more experimental shows. On Gucci 2021 Spring and Summer Show**Fig.3**, is the end of the three-part fairy tale series of shows, which begins with the 2020 FW fashion show. This fashion film is similar to Y2K style. Y2K, which means the Year 2000 Problem, is created from computer flaws or bugs' panic with the dates change into December 31, 1999. In recent years, Y2K in fashion also as a trend to make the looks in the late 90s and early 2000s back. With an interface of the Windows 95 style program, this film shows the operation and explains the concept by designer's monologue. This way of expression satisfied audiences' desire to spy on the fashion industry. This game operation performance enhances the immersive experience and storytelling by showing different attractions to bring a casual and experimental combination. Moreover, there are "post-it" on the different looking

continues the concept of "unfinished." These elements present a more interactive fashion film to the audience. Alessandro Michele said It is a process of role reversal, once more, he said. "The distances shorten. The creative act becomes exhibition praxis. The inside projects itself outside. The invisible takes its shape, radiating through self-combustion. More than that. This time, my analysis of the mechanisms that regulate the world of fashion intensifies: This reshuffling will be portrayed through an unusual perspective. For a whole day, anybody will be able to investigate, thanks to suitably arranged cameras, the process through which the design office will embody Gucci's new advertising campaign."[15]

Furthermore, the live platforms recently have more and more online users, such as Instagram or Youtube. Most of the fashion brands catch this opportunity to spread their shows by this way. I will quote the concept of "online social entertainment". The term "online social entertainment", describes a combination of the digital and social platforms for entertainment. It provides participatory interaction, giving many people the chance to participate in the content consuming experience. The social entertainment for brands by using art, film, or game provides the immersive and the shareable information. During this period, storytelling is the primary method to allow the audience to substitute the characters and the environment quickly. Moreover, the feedback is in real-time, and the audiences can get a rapid reaction.

1.3 THE REASON IN COMMERCIAL ASPECT

Garments are the top of the essentials for everyone in daily life. The consumption of fashion goods creates profit. According to market research firm NPD Group, on average, American women spend three times as much as men on clothing for themselves and others.[16] The market provides positive feedback on women's wear sales; then, the capital prefers women's wear market. Also, brands consume more money for holding the fashion show for women's wear. However, the fashion industry considering sustainability, with low consumption, London Fashion Week announced today that for the next 12 months, it would merge menswear and womenswear into one gender-neutral platform.[17] Therefore, how fashion shows developing does not always depend on the best sales but the commercial state of context.

Fashion trend always changes and also has an undeniable cycle[Fig.4] to be changed when a trend becomes popular. The fashion show is the start of this cycle, from this point until being popular. Moreover, the most important rule is that the process creates profit. The fashion show is a start point and a meaningful
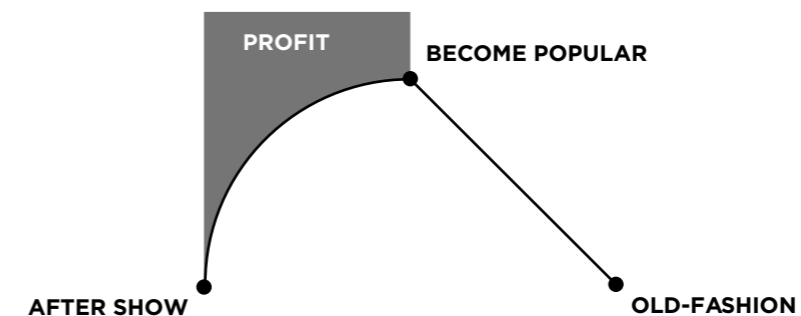
← Fig. 4
TREND CYCLE

way to enhance this process and create the profit faster. In my opinion, this is the economic reason for the increasing number of the fashion show and the establishment of fashion week.

The fashion show is a commercial promotion tool. Promotion is a broad term used to describe all communication activities initiated by the seller to inform, persuade, and remind the consumer about products, services, and ideas offered for sale.[18] The fashion show has different commercial types, such as formal runway show, informal runway show, ready to wear show, haute couture show, industry fashion shows, trunk shows, retailers & press shows, and trade shows, in-house shows, and also fashion week. Except for the commercial shows, there are also charity shows, and school production shows such as London graduate fashion shows. Alternatively, sometimes, brands just use trade show or fashion week to invest in marketing and evoke brand awareness. It depends on the financial support from designers and brands. Through technology development, some brands use Instagram to proceed a live broadcast, not only live shows but also

marketing promotion on the social platform. For example, Daisy Marc Jacobs opened a pop-up tweet shop, by using exchange the social currency, which is the hashtag with MJDaisyChan, the attendees can receive the gift from the brand. A marketing strategy that exchanged branded Marc Jacob items for social media posts, increasing brand awareness, and rewarding loyal customers for their endorsements.[19] Nevertheless, for some show, the designer's purpose is not only for commercials, such as Viktor & Rolf's 1990s show. They produced shows during which fashion was manipulated and commented commercial upon through performance.[20] Breaking the traditional role gives designer new inspiration and also pushes fashion shows to be more creative.

1.3.1 Analysing the Chinese brands in the global market

The Chinese market is a good case study for explaining the fashion and fashion show in the commercial aspect. Before the Chinese fashion market developed well, some independent brands cannot survive in Chinese market. The main reason is the sales. At that time, the environment for the fashion industry is weak. Customers consume mostly international brands. The local brand is rarely getting attention. Ziggy Chen, I have noticed this brand in Europe at first. Its design combines the Chinese traditional styles and contemporary fashion trends and the atmosphere of the brand, which attracting a small group of fashion enthusiasts. The founder, Xiang Chen, said, "In China, how many people will buy products from Ziggy Chen? A little it won't reach 1%. If there are enough sales in China, we won't go outside. Ziggy Chen's 80% sales from oversea market."[21] When Ziggy Chen appears in public, most people thought it is overpriced. Compare with the similar style of a famous brand, Yohji Yamamoto, its price sometimes is even higher. However, Xiang Chen has faith in his brand, which has two strong swords for other brands' pressure, clipping, and material. In recent years, the spirit of the craftsman is a trend. Each industry publicizes its focus and treasures skillful masters. If necessary, they will use years to find out the perfect shoulder radian of a suit. As I understand, for a brand, customers can not tell where it has the strength, or just the whole feeling or atmosphere attract them. The spirit of craftsman delivers the products in detail. Detail brings time-consuming when something accumulates in a certain period; it will bring significant artwork. No matter Louis Vuitton or Hermés, it is the brand core value they came from their spirit for a high-quality product. The spirit of artisans can guide the process of success.

In collective stores, Ziggy Chen is putting beside some brands like Gucci, CDG. It gives the first impression as an avant-garde designer brand. It is a brilliant strategy. On the one hand, Ziggy Chen brings a unique Asian style with high-quality garments into the international market. It brings the contrast in the market and

also easy to get from a European customer. On the other hand, when Ziggy Chen win acclaim from the China market, it already becomes a famous Chinese brand oversea. By the international capital entering the Chinese market, Brands can attract more attention and get more orders from the stores. This strategy solves the problem of popularity and also sales. Moreover, it can succeed not only thanks to the commercial strategy. "70% of material from Italy, 30% from Japan."[21] Their material comes from the factory, the same as Gucci. The quality of the material gives a brand spiritual support. A similar supplier in China is hard to find out. Combine the spirit of craftsman, the high quality of material, and a creative commercial strategy. Ziggy Chen takes a piece of cake from this cruel fashion industry.

The Chinese market is not as simple as the surface of the lake; another strong undercurrent is the rise of the local streetwear brand. Public opinion, such as some entertainment shows or the social topic, the local streetwear brand is a hot topic, such as C2H4, Randomevent, Etc. In recent years, some luxury brands are trying to transform their target customer to the young generation. Brands target to the capital. DEWU is a popular trading platform for sneakers and streetwear in China. Its founder Yangbing said, the upgrade of consumption will be an essential subject of the Chinese digital economy. Generation Z represents that young people will be the pillar of consumption upgrade. For young users, consuming the product with cultural value is the inevitable choice after satisfying the basic needs such as live, diet, Etc. The pop culture or other new trend culture and fashion consumption are essential during the consumption upgrade.

"The fact that China is a huge market is without doubt one of the biggest advantages of being a Chinese designer. Proximity to a great manufacturing supply chain means that more and more emerging designers can grow."[22] In two to three years, most local brands have been supported to develop their business, thanks to China's rapid development. In different fields, Chinese brands attain success in the international market. Lots of international capital into the Chinese market brings new power to this industrial country. With healthy development, there is more and more opportunity for designers, artisans, and other job titles. Moreover, the industry will be more and more complete. It will not appear the situation of finding the material supplier as the early period. Simultaneously, instead of Made in China, design in china will be the next level of the manufacturing industry. With the development of economic and technology, China attracts lots of investors and companies. At the end of 2019, I had the honor to have a chance to talk with Moncler's digital department designer and manager. When we talk about the Chinese market, they predict China will be their next target market in 2020.

Policy	In recent years, the Chinese government public some preferential policies for the local company into the international market, such as the state council published no.66 documents in 2015.
Economy	Through economic development, the income increased, which prepare the foundation for the fashion industry's development. Because every year, the world consumed 53000000 tons of textile and garments on average. However, it depends on the different areas; the income difference is enormous. For the developing country, the fashion industry will be developed rapidly.
Social Culture	People pay attention to the personality. The garment is not only for covering the body but expressing the user's attitude and lifestyle.
Technology	Technology in these years developed fast, such as digital printing, 3D printing, or some wearable devices are changing the concept of the garment, more comfortable, flexible materials are appearing. Moreover, shopping is no longer only in-store. The online store subtlety changes people's shopping manner.

Fig. 5 PEST ANALYSIS OF CHINESE MARKET

There are two brands we cannot ignore; one is JNBY, which focuses on design, the other one more for material, which is ERDOS. JNBY has a certain number of followers and also has an affordable price. JNBY group has three leading brands, which is JNBY for women, Croquis for man, JNBY BY jnby for kids. Group's concept for the international market is separated into two parts, first, break the barrier, increase the influence of the brand in the capital market. Then, attracting new designers, they develop a platform for new blood designers. According to the consulting company's investigation, there are mainly almost 300 brands in the Chinese market. The top 5 brands have a 30% share of the market. JNBY is the top one brand, has a 9.5% share of the market.**23** As PEST analysis **Fig.5**, JNBY has the proper arrangements. For example, designers will combine the proper local trend to design the garments for a different country.

On the other hand, another classical brand, ERDOS, is famous for its cashmere. Its garment style is similar to Max Mara's, simple tailoring. As a classical local brand in China, ERODS has established an entire industry for cashmere garment production chain, from raw materials to the final look in more than 30 years of Chinese market experience. This strength makes it the first choice for the domestic manufacturer or subcontractor

of international brands. However, ERDOS was also gradually developing its brand. Since 2008, the management of ERDOS has carried out a new definition of the entire brand. Gradually improve brand characteristics and product styles. An in-depth user survey was conducted in 2016, covering more than 20 cities across the country, more than 5000 survey samples. It enables ERDOS to provide better and highly matched products to the customer base, strengthen the brand image, and increase the brand influence. Its complete industry chain and high-quality raw materials, combined with new talents, ERDOS continues to innovate and make breakthroughs in fabrics, processes, and design techniques. To maintain the brand's fresh blood, ERDOS also continuously cooperates with talented designers from China or oversea. Besides, ERDOS has held many fashion shows to increasing exposure. For example, in the 2019 autumn and winter fashion show, the Chinese model LIU WEN was invited to participate in the catwalk, it also brings mass people's attention to this traditional and classical local brand. Simultaneously, due to the gradual popularisation of digital marketing and brand collection store concepts in China. ERDOS is also continually improving the user experience of its stores and the marketing effects of new media. In personal experience, ERDOS was commonly found on the underwear floor of a shopping hall in years before. In recent years, their boutiques are everywhere in China.

The entire brand style, from products to offline store decoration, is aligned with current trends. As a leader and veteran in the domestic cashmere industry, ERDOS has stood out in the international market in recent years. Entered the Hankyu Department Store Umeda Main Store in 2016, and until 2017 ERDOS already has had eight stores in Japan.

Moreover, when the Chinese brands into the international market, they need to challenge many significant obstacles. When we were talking about "made in China", the high-quality craft and materials. During the industrial revolution, Europe's producing industry grows fast. With time, this duty transfer to a developing country. The manufacturing industry rises in China starting from around 2000. These years, "design in China" also have become the new power of the fashion industry. This process is similar to Italy. After handmade leather goods became famous worldwide, the Italian brands brought more Italian design into the market. As the same development process, the Chinese brands are trying to reverse the impression from producing to design.

The capital market brings enormous pressure on Chinese brands. For example, for the local market, by adjusting the exposure to TV programs, Chinese streetwear displays its positive future. However, in the international market, the situation is uncontrollable. It is barely to see the Chinese brands on the fashion week. If we back

to these international luxury brands' history, they amassed their brand hidden assets over a long period, such as their brand culture, customer foundation, and brand value. These are the reasons they can exist for a long time. Although we do not have the top class fashion companies in the fashion industry for now, into streetwear or casual wear, there are some notable brands. For instance, Uma Wang, the founder of the brand with the same title, graduated from Central Saint Martin, officially launching her brand in 2009. In 2011, Uma received the invitation to Milan Fashion Week; at that time, Uma Wang was the first Chinese brand into Milan Fashion Week's schedule. After six years, she brought Uma Wang into the Paris Fashion Week in 2017. Now Uma Wang, as a Chinese design brand, gradually proves itself into the international market. She said, in China, the fashion industry developed exceptionally rapidly, someone wants to create an international brand in several years. It is impossible. Amount of things are built by time consumption, subtlety from quantitative change to qualitative change.**24** Therefore, Chinese brands want to get into the international market need more time to prove themselves and need more time to accumulate and bring unique Chinese cultural identities.

There is another brand that appears in the fashion week. Xiangyu Zhou, who cannot be ignored, released his brand, Xander Zhou, at London Fashion Week in 2013. He became the only Chinese menswear designer who released collections at London Fashion Week. In 2015, Xiangyu Zhou served as a menswear director for T magazine's Chinese version. In the concept of "boys will be boys," he leads, street culture is well integrated into high fashion. In the 2018 spring & summer fashion show, Xiangyu Zhou brought the audiences into a brutal office scene, but the models wearing Xander Zhou looked like a group of boys who had to wear their father's clothes. Xiangyu Zhou said, "Designing should be a bit rebellious, not deliberately not following the crowd, but when you are in reality, you want to do something contrary to reality. For example, if you all love to discuss globalization, I don't have to join in." At the same time, Xander Zhou also co-branded with domestic Didi Driving and HLA to enhance its visual image. Dan Cui, the fashion director of GQ Magazine, believes that Xiangyu Zhou has redefined an independent designer's identity. Traditional companies trained most of the previous generation of designers. After they started to be independent designers, although their business was doing well, they were more like artists and rarely contacted the media. The new generation of designers like Xiangyu Zhou grew up with the Internet, who effectively uses communication resources. The previous generation mentioned by Dan Cui mainly refers to Uma Wang, Ziggy Chen. They are more like a group of "tailors", people who will study tailoring and fabric carefully, and the new blood group of designers, such as Xiangyu Zhou, who began to accept it very early, from advanced overseas fashion education are more interested in the

social attributes of fashion, which also means that as designers, they are more familiar dealing with "concepts."25 New media has provided opportunities for more designers to display their talents. Fashion always has self-contradictions during the confrontation with capital, whether to insist on the uniqueness of its brand style or to follow the market trend. For instance, in recent years, international brands have joined hands with street fashion brands to expand their target customer groups. However, between maintaining brand tonality and market trends, they are also in a dilemma about balancing them.

1.4 THE EVOLUTION OF FASHION SHOW

Talking about the evolution of fashion shows, we need to mention the first fashion designer in history, Marie Antoinette, Lady of Louis XVI, and Rose Bertin, Marie's personal marcahande de mode. Marie Antoinette noticed the skillful fabric seller Rose Bertin, who immediately became her dressmaker and stylist. Rose adapted Marie Antoinette's look, creating a special relationship with her. Marie Antoinette was probably the first "top model," dressing in Rose's creations and trying them out like a professional model. The first "fashion parades" took place at the spectacular Galerie des Glaces of Versailles among ambitious ladies-in-waiting, the king's lovers, parties, and love intrigues. On those special occasions, Queen Marie Antoinette and the women of her court could show off the beautiful creations of Mme Rose Bertin and display her talent for fashion and elegance, immortalizing her as the first official fashion designer.[26] Bertin is called the minister of fashion. For the rest of the time, Bertin made some dolls for the queen's sisters and mother, and also for attracting more buyers, he sent the rest dolls to the major European capitals. Therefore, fashion dolls were the first technique to display the garment as a fashion show. Moreover, the first doll fashion show in America was sponsored by Vogue magazine in 1896.[27] In 2009, Barbie's fiftieth anniversary, the "Half-Century Barbie" fashion show held at New York Fashion Week.

In 1858, the father of Haute Couture, Charles Frederick Worth, one of the earliest designers who use live models, opened his first fashion house in Paris. The House of Worth called the women who wore garments for his clients' mannequins.[27] This manner of displaying the clothing on the body is similar to the current fashion show. The advantage is clearly showing the effect of the fitting and textile on the body. Up to this point, the term mannequin had referred to a stationary doll or dummy used as a display fixture.[28] In the first period of the live model, the show is more like a showroom. Mannequins were wearing the garments, stay still, and the context might be a fitting room, and only a few clients will attend. In the 20th century, Paul Poiret was one of the first couturiers to parade his mannequins at the races.[29] The form of fashion show approximately fixed since that time. Until today, using a live model is still the most way to display the garments on the runway. Even if some designers are trying to break the role, such as the 1998 Spring RTW Maison Margiela show, designers use the hangers to present the clothing.

Until today, most brands will use live models to display their garments. However, the style of the fashion show is also evolving. The frame of the show keeps changing. It is not news that designers or show producers transform shows into performance art. For example, in 1996, John Galliano was appointed as head designer of Haute Couture and ready-to-wear collection in Dior. He mixed theatre and show in a perfect recipe. For Dior haute couture spring and summer show in 1998, he brought the audience to Palais Garnier opera house, including dramatic interaction between the models and actors or actresses. Moreover, at the start of the 21st century, fashion shows turned ahead to a minimalist approach. For example, Dutch designers Viktor & Rolf and Maison Margiela show are mostly experimental and minimalist, such as the 1999 Viktor & Rolf show and Maison Margiela 1995 fall show. Both of them using a different way to show the minimalist on the fashion show. For the first one, the model's movement and frame of the show are simple and direct. For Maison Margiela's 1995 fall show, the designer covered the model's face to guide audiences' attention to the garment. These frames inspire us what will fashion shows look like in the future.

When we talk about technology and fashion show, I have to mention the artwork between digital and art. In 1956, Nicolas Schöffer, a pioneer in interactive art, presented CYSP1, a dynamic sculpture that interacts with a dancer and the environment, whereas, at that time, he used photoelectric cells and a microphone as the sensors. After almost 40 years, in 1999, Alexander Macqueen integrates the interaction between dancer and robot arms. This show at that time swept the fashion industry. During the show, the robot painted on the dancer's white dress, and the dancer was dancing at the same time. It is performance art, digital art, and fashion's corporation. Furthermore, this cooperation continues to develop through new technology. In 2006, on Alexander Macqueen's fall/winter show, Kat Moss appeared as the finale by using hologram technology. She was dancing and disappearing by an effect. Also, the hologram is used by other designers. In 2011, Burberry used a hologram to demonstrate its new collection in Beijing. We can see the models disappeared by colliding, and the effect gives more attraction to the visual aspect. The fashion show is changing with the technology development, different performance art frame, and bringing more immersive experience.

After that, the network and social media developed well from the 1980s. It provides a chance to attend the most exclusive runway shows to everyone who has a smartphone. According to Statista (2018), in 2017, Louis Vuitton had the fifth-highest market share of Instagram Storie's luxury content Interactions; the brand accounted for 7% of user interactions.[30] Network and social media change the way people interact with fashion and fashion shows. Attending the show is no longer an exclusive way to see the latest trend and collection. It removes mostly the barrier between ordinary people and the elite who attend the fashion show.

Therefore, the evolution of fashion show starts from the way, how to display the garment. After that, using different expressive ways to explain the concept they want to deliver to the audiences. For the fashion show itself, the meaning for everyone who can watch the show is not only for industry but also for the more social role.

CURRENT CONTEXT

This chapter is about the state of the art and the current situation around us. In 2020, COVID-19 is the top emergency issue for the global industry. Therefore, under the COVID-19 pandemic situation, how the world changes are the first point to discuss. It will include some financial opinions and solutions that some of the fashion company already tried to face the quarantine. Then, There is no doubt that our best weapon for this virus battle is technology. The second point is about technology development in different industries. This analysis helps us to find the best way to express the idea for the next procedures. The latest opinion is about the digital fashion show compared with the physical. It contains some personal insight into physical fashion show analysis, such as by using a journey map to clarify how a fashion show be proceeded with teamwork. This chapter helps to define the design focus, how the fashion show can adapt to the pandemic situation and evolve to achieve a better user experience.

2.1 THE COVID-19 PANDEMIC SITUATION

In 2020, there is an unforgettable epidemic disease, the COVID-19. The pandemic situation destroys the world's order and gives everyone and every industry a new chance to evaluate themselves, what should be in the future. During the lockdown period, people suffer from losing the freedom also the financial crisis. By talking about the financial crisis, we need to understand how the financial system works worldwide. First, the financial model is simple; the financial model is a machine and money transaction is the different components of this machine. All the transactions are pushing the machine work; for example, if someone stops going to cut his hair and give money to his barber, he stops giving money to the supermarket, the loop will shut the whole financial mode down. Moreover, globalization increases this impact stronger. The financial model is no more just in one or two countries, but influences worldwide. What if the people in Europe did not go outside spend two euro for gelato, then the other people on the other side of the world will starve for one month. It also refers to the butterfly effect. Therefore, most of the government promulgate the temporary law for stimulating consumption and economic growth and facing the trend of global financial decrease. Even for the fashion industry, it is the same situation. Compared with the same period in 2019, LVMH, for the first quarter of 2020, the revenue downs 15%. ZARA closed 1200 retail stores and shift to the online shop. Lots of fashion companies eagerly protect themselves during this difficult time. On August 6th, 2020, LV bringing the men's 2021 spring and summer show to Shanghai, China. During the interview, Virgil Abloh explained that they decided to choose China because of safety. China efficiently controls the coronavirus and has a significant result. The financial market recovers at a fast speed. According to the fashion network china's report, post-pandemic 50% of luxury goods will be consumed by the Chinese market.[31] Even though most of the fashion brands suffer heavy casualties from the pandemic situation's influences. They saw the last chance in China's market. On the other hand, this situation is similar to World War II. The U.S. becomes a powerful super country because of the gap while Europe is recovering. However, the difference is that there was no war between humans, but a battle with the virus.

The previous analysis is mostly from a macro perspective, whereas from the micro point of view, how COVID-19 influences us. First, the psychological influence on consuming fashion goods is apparent. The real economy and market impact are unforgettable and more robust than the H1N1 in 2003 or the subprime crisis in 2008. Everyone, not only the Chinese consumers, has an awareness of the crisis and try to hold their money even tighter.

However, it does not mean the consumption will decrease. First, customer psychology, we can quote the upper part of Maslow's Hierarchy of Needs, self-actualization, esteem, belongingness, and love needs. These will be the new market for the post-pandemic. During the pandemic, I have interviewed some Chinese people, most of them claimed that facing death, family, healthy and these long term satisfaction bring them more feeling of safety. Moreover, safety is the most significant consideration for post-COVID-19.

Also, pandemic and quarantine evoke people to reconsider about rational consumption. As mentioned in the financial model, there is an amount of company declared bankruptcy during the pandemic situation. While many people lost their jobs, causes the cash flow was decreasing drastically. The rest of the money on their hand spend carefully on the product or service, which delivers the feeling of safety, such as health care, insurance, education, or real estates such as cars or houses. During the pandemic, one of the American government's strategies for COVID-19 is printing money. As the international currency, it causes an increased rate of inflation and decreases the value of cash. However, it is the usual strategy for encouraging people to spend money and protecting financial mode.

During the pandemic, most luxury fashion brands were incredibly increasing their retail price, not just once. LV adjusts the price on March 4th and May 5th, the margin of increase is about 5% to 10%. Also, Chanel announced there was a 5% to 17% rise on May 14th. Bvlgari, Dior, Gucci, Fendi, Balenciaga followed to rise in May. The French watch and jewelry brand, Cartier, raised the price in September 2020. The reason for this phenomenon, first, the raw material cost increased, such as human resources, transportation cost, cost of production, Etc. Moreover, COVID-19 causes the stock market to fall sharply in value. At the same time, the company needs to protect itself by raising the unit price.

Second, the luxury brand needs to keep a position in the market. The brand value is their core for the capital market, and it depends mostly and directly on the price. On March 26th, LV on the RED platform proceeded a Livestream merchandise for the Chinese market; the comments mostly are not favorable; the main reason is that the expectation for Chinese customers of LV does not tally with the result. The keywords of LV are "luxury," "chic," "high class." However, this activity does not consider the customer's psychology. How much effort they paid for it, how much desire they had to get it. In social psychology, it calls "Effort Justification." It means when people paid more effort into a product, it will be more adorable. When getting knowledge of luxury products more directly, then this information will be more ordinary. Live-streams is an excellent way to deliver the information, but for the fashion industry, deliver the concept and keep the brand value

is the point. They were seeking to stimulate consumption. For example, using social media for marketing, converting the ideas with new technology, virtual fashion show or showroom, fashion film, and the aim of these solutions are attracting customers for consuming. Therefore, the proportion of brand value more considerable; the accessibility needs to be more extraordinarily.

The enthusiasm for the fashion show was decreasing sharply compared with other needs for people. Nevertheless, the fashion show is still the most direct way for brands to symbolize their value and deliver the concept to the customers. Therefore, we can predict that the fashion show's digitalization development will be fast since the COVID-19 in a short period rapidly will not disappear from our daily life. Also, fashion needs a sense of ritual. Revealing fashion products is similar to the technological product. They have functional features, but the competition is also fierce. The way of presenting helps the company grab the public's attention, such as the Apple launch event.

2.2 INTRODUCTION OF MODERN TECHNOLOGY

Technology influences us in the different tiny angle of life. According to Moore's law, it predicts the exponential progress of transistors' number on the integrated circuits. It also indirectly shows that technology development will in exponential progress. In 2020, some keywords already evoke our curiosity for the future, such as 5G, blockchain, extended reality, Etc. First of all, 5G, the fifth generation of mobile networks, provides a higher network connection speed. The core concept compares with 4G as point-to-point transmission, whereas 4G uses area covering by a base station. As a result, when we are using the 4G network, sometimes the signal is weak. However, 5G contains two different modes, FR1 and FR2. If using a simple way to explain is that 5G has long-distance (FR1) and short-range (FR2) modes, and for FR1, the connect has a limitation, FR2 is unlimited into 100Gbps. For different distances, it will provide the best solution for users. The signal will directly influence the network's speed, which means 5G is much higher than 4G, whose peak value is 100Mbps. For example, auto-drives vehicles, in the 4G environment, the error will reach 2.8 meters per second; imagine a car drives on the motorway with this error, the result causes death. However, in the 5G environment, the error will decrease to 2.8 centimeters per second. This error can not take into account. For the fashion show, 5G will influences the experience of participating in the runway, for now, the video contents the visual and audio senses, in 5G combine with the extended reality, it might deliver the experiences of touching and the spacial perception. During the 2020 London fashion show, on the Central Saint Martin catwalk show, with British telecommunications, internet service provider Three UK, Designers transform Adwoa Aboah, the Vogue cover model, into augmented reality, and shows her digital avatar walk the runway. All the audiences use smartphones to scan the blank runway, but they can track Adwoa Aboah walking through the stage on their phone. This 5G-powered show features a range of connected multi-sensory technics, such as 8K projection, 3D spatial audio, and haptic feedback devices under the seat. It highly improves the performance of technology and experience during the show. Moreover, a high-speed network for the remote participator can decrease the limitation for designers building concepts and experience.

By the development of 5G, the concept of blockchain also presented. Blockchain is an information security system. Blockchain is a distributed, decentralized, public ledger. For example, in the cops-and-robbers film, the bank always targets robbers because everyone will save their money in a bank, and there is money in the bank. Moreover, the bank is in a dangerous position. However, blockchain, as its name contributes by the block, contains the information, and the chain, which is the last part of the block, will only combine with another block in a specific way. Therefore, if someone changes one block's information, they need to unlock all the blocks on the chain, which means impossible. For the retail industry, the blockchain solution creates a link from physical to digital between products and their digital identities. It will dramatically solve the problem of fake products, especially for luxury goods. This technology will fully help the store operation for customers.

Then, about AR, the extended reality is the topic for most of the experience design. Extended reality includes virtual reality, augmented reality, and mixed reality. AR, augmented reality, is used widely in these years. The most famous social media platform, Instagram, from 2017, provides the augmented reality filters. In August 2019, Spark AR Studio, powered by Facebook, provided the interactive AR filter maker for the public. After that, everyone has a chance to create a facial effect on Instagram. Moreover, more and more companies are using AR for preview, such as GAP, IKEA, AMAZON, Etc. AR seems closer to VR for our life, in our daily life; by using a camera, AR can be contented on the smartphone screen, but VR requires more equipment and different mode of display. As we talked about the 2020 London Fashion Week, the AR model appears on the blank runway for the fashion show.

The definition of virtual reality comes, naturally, from the definitions for both 'virtual' and 'reality.' The definition of 'virtual' is near, and reality is what we experience as human beings. So the term 'virtual reality' basically means 'near-reality.'[32] Virtual reality mostly needs to use the earphones and VR glasses such as oculus, google cardboard glasses, Samsung HMD Odyssey+. According to my design experience with google cardboard glasses, the interface will be separated into two left and right eye perspectives. Our view will move with the central point of sight. Therefore, the focus point is on the central, resulting in changing the sight that users need to move the head, not only the eyes. In the VR environment, we can feel the virtual world extremely familiar with reality. It brings the relative VR performance, such as the virtual concert for the virtual idol. Similarly, the VR runway provides everyone the chance to be a part of the invitee to feel the runway, eliminate the exclusive feature for the physical runway, and contribute to environmental protection. Also, the virtual fitting room provides a new solution for online shopping. However, VR still has limitations. For example, the virtual fitting room needs users to provide detailed data of their body shape. It requires the pieces of equipment such as Kinect, 3D camera. For now, the virtual fitting room is still during the developing stage.
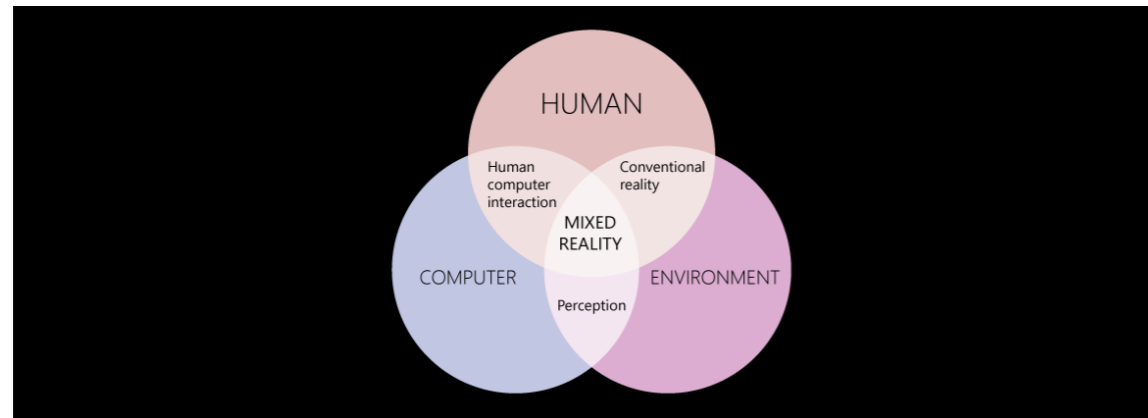
Fig. 6 (Microsoft, 2020)

Next, MR, mixed reality, according to Microsoft's documentation**Fig.6**, mixed reality is the result of blending the physical world with the digital world. By combining the human-computer interaction with the environment, mixed reality brings the digital world into the physical.

For example, the video Hyper-Reality by Keiichi Matsuda is not a real prototype but shows how the physical world will be impacted by technology. In a simple way to describe, MR is the combination of AR and VR. For a concrete explanation, MR appears mostly in the movie. For example, from Iron Man, the artificially intelligent J.A.R.V.I.S. to the big market of "Valerian and the City of a Thousand Planets," some science fiction movies' scenes demonstrate the proposals of ideal MR directions.

Moreover, the hologram, robot, live stream runway, and large scale projections or LED screens are also the technology development outcomes. In these years, because entertainment's function becomes vital, the fashion show is no longer only for display but also for experience. Someone also calls fashion show as the tech exhibition or event. Holography is a photographic technique that records the light scattered from an object and then presents it in a way that appears three-dimensional.[33] As we mentioned before, Burberry applied hologram during their 2011 Beijing runway show. Moreover, Alexander McQueen used during the 2006 autumn and winter show.

Alexander McQueen used the robot arm in his spring 1999 show. Hussein Chalayan, During his Spring Summer collection in 2007, Chalayan created dresses that changed shape through the use of microchips and animatronics. By building a hidden electronic infrastructure beneath the garments, Chalayan created pieces that transformed through fashion periods – from the 20s through to the new millennia.[34]

Live stream runway is not news for now. Everyone can access the online shows directly by their smartphones. In October 2020, Chanel presents the ready-to-wear 2021 show in Paris, supports on the multi-channel, also the mini-program on WeChat. At the same time, lots of influencers or YouTubers can reflect immediately after the online show. For instance, some YouTubers can analyze the show quickly and well explain for more people who miss the show, or someone does not have enough background information for the brand, designer, or the concept of the shows. Some runway shows provide the purchase service besides the live-streams; it breaks the conventional trade mode and eliminates the barrier between brand and customer. It allows customers to place the order during the show, such as the 2020 Shanghai fashion week.

Then, a large scale of projections or LED screens all help for an immersive experience. For example, at the Balenciaga Winter 2020 Fashion Show in Paris, by using 1000sqm INFiLED AM9 LE screens, designers deliver an "impressive canvas" representing different content linked with different looks. This screen is called the most giant LED screen of the Paris runway history.

By developing networks and smartphones, e-commerce and mobile commerce influence us in more dimensions of daily life. For example, in China, food delivery services like Meituan, mobile transportation planform like Didi, and Taobao's biggest online shopping world are all subtly changing people's daily behaviors. In fact, according to BigCommerce, two out of three millennials would instead shop online than in-store. The digital wallet, such as Paypal, Apple Pay, and Google Wallet, is replacing the actual paper money on the retail aspect for the fashion industry. It brings smoother experience for online shopping. For example, using Paypal, users only need clicks to finish the purchase without inputting the card's information. As the third part of the trade, Paypal supports the function for a refund; users do not worry about their money. The social media also recognized the retail; for example, Instagram released the Instagram Shopping function for business accounts. There are some advertisements during scrolling the screen; users can directly select the items and visit the business page.

Into the digitalization world forces more and more industries online, such as remote meetings, online classrooms, remotely applying the credentials, Etc. It means there will be significantly increased information online. At the same time, it will bring a dramatic diversity feature to the network. More frames of information will be created by different content sharers, such as text, audio, video, Etc. During this period, the progress of digitalization will speed up the competition of contents in the industries. For example, in China, the influencers recommend the products to the audiences, and they can directly order the

commodities during the live broadcast. The top influencers for the live broadcast will also earn most of the profit; the reason is simple; the more customers in the channel more influence the channel, which will attract new audiences. It is a positive trend and a powerful series. For example, the most famous live broadcast influencers in China, Jiaqi Li, and Ya Wei, at their channel, they can sell hundreds of lipsticks in minutes or seconds. Compare with the consultants in-store, the result and effort are in a normal distribution. It means the top consultants do their best effort can earn double or triple than the average. Different countries' contexts and circumstances might not be similar to China, but we cannot ignore the power of digitalization.

Not only the influencers, but the virtual influencers also answer the market that the "Black Mirror" type of illusions are coming true. Lil Miquela, Imma, and Noonoouri are the most famous virtual idols on Instagram. Until June 2020, Lil Miquela has 2,400,000 followers, and she cooperated with Calvin Klein and Prada as their brand ambassador. Her figure is a 19 years old Brazilian American model and a musical artist created by Trevor McFedries and Sara DeCou. Compared with the real person, virtual idols are more flexible for commercial circumstances. For example, their appearance and personality can be precisely customized by the requirements. The previous stage for fostering the avatar has tons of time and money consuming, but the cost is far less than physical shooting during shooting. Technology brings the model into digital, explains the possibilities, and also presents multi-experience. Whether a brand opted for an adapted-for-digital runway format, a collection film, or some other unconventional format, the online engagement was relatively muted compared to the same period the year prior.[35]

Therefore, the experience for the show to the purchase for financials, technology gives the fashion industry many choices, and lots of brands are experimenting. ZARA presents the AR model for their in-store experience, for linking the online and offline commercial impact. Users can scan the specific image in-store; the virtual model presents the latest garments. The combination with technology will increasingly appear in the future and also focus more on the experience. Simply, technology serves the industry from the performance aspect, making the presenting more immersive and diverse.

Policy	For every industry, each country claims different laws for stimulating consumption. For example, in the UK, government subsidy dining in the restaurant, customers will have a 50% discount on the bill. However, each country still stays the limitation for long trip traveling. It leads the tertiary industry will decrease in these months until adopting a more flexible policy.
Economy	Recreating money flow produces profit. EU reaches an agreement for economy stimulating; the budget is up to 1,000 billion euro.
Social Culture	Consumption psychology, post-pandemic, customer's preference for consumption will be more for safety, asset. Moreover, for generation Z, virtual consumption has become popular, such as LV cooperated with LOL.
Technology	For the retail industry, Live-stream and online shops help the recovery and also create more opportunities. For exploring the possibility in the future, the virtual influencers and other extended reality will be the trend.

Fig. 7 PEST ANALYSIS OF CURRENT CONTEXT

2.3 DIGITAL AND PHYSICAL FASHION SHOW

2.3.1 Physical fashion show producing

As the most attractive activity in the fashion industry, fashion shows can rapidly help designers and brands improve their impression to customers. Fashion companies rely heavily on branding by creating a name, term, design, symbol, sound, or any other feature that identifies a seller's goods or services as distinct.[36] Except the spectacle show, for the avant-grand or new talent designers, the small range of fashion shows such as education show or in-house show is the best choice for them. As the show producing procedure, the main involvers are the lead team, model team, stage team, promotion team, merchandise team, and budget team. As the construction journey map shows[Fig.8 (P.43)], the team has to cooperate to accomplish a show by the time-consuming. It demonstrates the fashion show production in general. For example, for the educational show for students, setting the group will not be necessary. I compared the Gantt chart from Gill Stark and time table of "Guide to producing a fashion show." This chart includes some hybrid opinions, and sometimes the names of teams are different, such as combining some parts of the model team and merchandise team's duty into the backstage team. Alternatively, sometimes there is the creative director who separates the show producer's responsibility about the presenting field, and the show producer only focuses on the show planning and the coordination of teams. However, the main working flow is similar. The importance is teamwork.

The total preparation period usually requires 6-12 months before the show, and the shortest period requires at least five weeks for preparing. The lead team's responsibility is guiding the whole team's direction and setting up the show producer by company or designer. From the business point of view, the budget is an essential point, and the budget team controls and balances the income and expense. Then, promotion team, promotion is a broad term used to describe all of the communication activities initiated by the seller to inform, persuade, and remind the consumer about products, services, or ideas offered for sale.[36] Therefore, for the financial aspect, the promotion team has the duty for publicity; in my view, it has the similar duty to the PR team but more responsible. They build intangible support for the fashion show, such as organizing the guest list, sponsorship, advertising, Etc. Then, for the performance, the merchandise team, stage team, and model team cooperate, we can assume the model team as the actor, the stage team as the stage and camera, and the merchandise team as the actor's garments. These three teams present the tangible touchpoint of the show for the audiences.

The physical fashion show relies deeply on human and financial resources. However, each show also brings lots of exposure and brand value for the company. Most brands cannot refuse fashion show opportunities. Also, in my view, this is why Victoria Secret keeps holding the show, sometimes the income and expense not balanced and even pays the shows by itself.

The internet improves the physical show heavily in these years. The digital platform as a promotion manner, helping the physical show. For example, the banner advertising on Google, or the posts shared by influencers on Instagram changes the promotion opportunities rapidly. For keeping the focus topic, sometimes the show will also be related to the online promotion activities. Louis Vuitton partnered with Snap for its A/W19 show to create an AR version of its light-up Keepall bag. Users can unlock it with a Snapcode with invitations and play with it during and after the show with the Snap camera. The Snapcode drove post-runway engagement in Louis Vuitton stores, according to Selby Drummond, Snap's head of fashion and beauty partnerships.[37] Moreover, for the 2018 Gucci autumn and winter catwalk, the topic around the 3d printing heads and dragons is simmering on social media after the show is revealed. When I saw the catwalk on Youtube, the baby dragon reminds me of the TV series "Game of Throne." Moreover, I also discuss this opinion with other web users. It is the power of social media now. The real-time discussion and information explosion confer imagination for fashion shows. "Extending the life of your show like this is so powerful because it turns a one-off event into a content machine and amplifies the conversation around your brand," says Joe Yakuel, chief executive of Agency Within, a digital marketing firm that works with Alice + Olivia, Hugo Boss and Nike.[37]

2.3.2 Digital fashion show experiment

The live fashion show becomes familiar since 2010, the mobile internet revolution. 4G gives people a chance to view the videos on mobile devices by a better speed network. Lots of mobile applications and web applications appear in our life. Then, the live fashion show appears on websites and apps, such as Instagram and Youtube. With the development of 5G, the virtual world becomes our new fantasy land. Virtual reality, virtual currency, remote surgery, auto-drive become the most popular topics of imagination for the future. During the 2020 shanghai fashion week, models walked in front of the green screen and synthesized with the conceptual context in real-time. Moreover, customers can directly purchase the commodity during the show. Shanghai Fashion Week, which took place online in late March, reportedly drew 11 million viewers and sold $2.75 million worth of clothes and accessories direct to consumers during livestreams.[38]

The digital fashion show experiment continues. The Copenhagen Fashion Week's combated pandemic situation with a new hybrid frame, physical and digital shows and presentations begin, organizers have unveiled its new digital platform, CPHFW72H, designed to stream this season's 72 hours of shows, talks, and events.[39] Copenhagen fashion week launched on August 10th, with a digital system called CPHFW, which streams 32 shows and presentations. As well as, designers on the schedule engaged in a live Q&A with editors and buyers, directly after their show, a definite pandemic-proof way to keep the press going - under and probably even after lockdown.[39] It provides the channel for the internal communication for buyers and editors, instead of the evaluation after the physical fashion show. Designers can directly communicate with the audiences. This digital platform is also specifically for the fashion week instead of social media, which builds a feeling of formal and official. This contextual probing method has both benefits for audiences and designers.

For now, the interaction between show and audience is simple. Whether a brand opted for an adapted-for-digital runway format, a collection film, or some other unconventional format, the online engagement was relatively muted compared to the same period the year prior.[40] Copenhagen fashion week was trying to build some new connections. Shanghai fashion week was tracing the exit for the commercial. Their presenting form is the live broadcast fashion show, a definite trend under the digitalization environment. Most brands are afraid to change because of the symbolic value of the brand. For example, LV cooperates with Riot Games for an online game, Legend of Leagues. In my view, the target customers may not have the ability to purchase 5000 dollars for a leather jacket, whereas they have the impression of LV being young and luxurious. After 10 or 20 years, these young people will have the ability to purchase it. Most luxury brands avoid cooperating with the game company because the impression they built in many years is supreme and upper-class. LV takes the risk and also gains huge. On 2020 Forbes ranking for the world's most valuable brand, LV is in ninth. Hermès is in the 32nd. Chanel is in the 52nd. There is also a phenomenon that explains that brands are eager-beaver. Brands are changing their monogram patterns and their logo into San serif. In the beginning, the reflections are not always positive. However, this change helps the brand deliver a more memorable impression for audiences and practical functions for more digital and physical applications. Changing is the chance now.

	PREPARATION					SHOWDAY	AFTER SHOW	
LEAD TEAM	Select show producer & coordinators. Decide show date, theme, venue, audience	Vision, concept & brief	Select pieces and accessories. Plan the styling of all looks. Plan for dress, hair, make-up	Final lineup	Lighting & Scenic Design. Technicians needed. Stage managing	Realtime adjustment	Strike show	Evaluation
BUDGET TEAM	Plan Budget: Sponsorship, Expenses, Incomes	Keep Records	Keep Records	Keep Records	Keep Records	Keep Records	Keep Records	Prepare income statement
MERCHANDISE TEAM		Plan Merchandise Scene	Review merchandise. Prepare tentative lineup, accessories	Schedule fittings. Pull merchandise. Prepare final lineup	Rehearsal		Transfer merchandise. Return merchandise	
PROMOTION TEAM	Plan Design	Send to Printer: Poster, Invite, Tickets. Write Press Release	Plan advertising. Plan PR. Distribute Press Release. Distribute Posters. Mail invitations	Send to Printer: Program. Run in-store advertising. Run print advertising. Start social media campaign	Arrangement for guests	Backstage activities		Send thank you notes
STAGE TEAM	Reserve Venue	Design brief	Begin music selection. Plan set 3 months	Write Script. Plan seating arrangement	Technical run-through. Dress Rehearsal	Filming	Strike show	
MODEL TEAM	Select Model		Prepare tentative lineup, hair, make-up	Set choreography	Rehearsal			

Fig. 8 CONSTRUCTION JOURNEY MAP

IDEATION

The industry research and the current context help to convert the concept in the ideation part. This chapter will reveal a new system to deliver a better experience for the performance or other art format. This system is called Variable Element System. However, before the main content, this thesis explains two main components of this system, difference and relationship. In the fashion show background, it can be transformed into a sense of ritual and immersive experience. Also, this system has two functions and directions, analyse and design. The construction of this system is from some interactive art performances' analysis. By verified with some exist immersive or interactive fashion shows, it also stands up to scrutiny. This system is the core of the project design phase.

3.1 SENSE OF RITUAL - DIFFERENCE

Shows are the way to deliver the experience to audiences as an important commercial event for brands. For the physical shows, audiences are mostly buyers, press, designers, photographers, and influencers; they focus on garments and communicate with recent fashion topics. As the first chapter we mentioned, the fashion show is a social activity in the first place, no matter pre-show or post-show activity. Also, as Lauren Indvik wrote on financial times, "Fashion weeks aren't just about shows. Equally important are the interactions that take place away from the catwalk." The combination of sound design, stage design, garment, model, and even the surrounding people, its irreplaceable reality impact brings the charm of the fashion show. We are still on the road to explore the possibility of a fashion show, but the directions are similar, which is hugely simulating the ideal fashion show experience for the public, no matter digital or physical environment. For 2020 Menswear Milan Fashion Week, it operates as a digital fashion week. The Camera president insists that a digital Fashion Week cannot and should not replace the physical shows that are still scheduled, in some capacity, for September.[41] Therefore, the fashion show's environment demonstrates how to build the content of the fashion show's exciting atmosphere. I defined it as a "sense of ritual."

Digitalisation gives people the chance to access many brands' runway remotely. However, during this behaviour, the runway has a chance to miss its original concept at the same time. We can imagine if every corner of the world can proceed with a fashion show like it in Paris, and everyone can attend the shows. Then, the show itself loses most of the impact of conversation and atmosphere. On the other hand, in the fashion show world, every city represents different functions or feelings from others. Paris, Milan, London, and New York are the places which contain the original and traditional fashion culture and soul into themselves. They represent the taste of style and the inspiration of life differently. For example, the show in Paris always shows romantic and luxury. Brands will choose Paris on purpose such as Raf Simon, John Galliano, Berluti. The conditions about the experience in the fashion show mutually influence each other. The balance between the exclusive and experience is the questions for this advanced technological world. Also, back to the idea about the "Sense of Ritual", from the previous physical show experience, audiences come to perceive the ideas of the new trend since the second they get out of the aeroplane. "Sense of Ritual" is delivered subtly, not on purpose. From the historical aspect, in the first chapter, we mentioned that fashion in the first place is a service for wealthy people. The process of making a fashion doll, mini size of sample

garment, or the measuring, are showing the "Sense of Ritual." The detailed procedures and careful preparation demonstrate the sense of ritual before. However, in these days, technology is reducing the procedure and preparation instead with the algorithms. They are the two sides of the coin. Technology is the trend and eliminates the barrier and the distance of fashion show. Fashion show becomes near to daily life. However, also, the "Sense of Ritual" does not necessarily disappear during development. Therefore, how fashion show can remotely express the "Sense of Ritual" is one of the points for the next design process. To answer the question, we need to understand what is the sense of ritual and how to proceed with it. First of all, the definition of ritual is uncertain. M.D. Abigail Brenner explained ten phenomena that ritual helps us celebrate our lives. Rituals are tools that give us the freedom to take responsibility for the direction and purpose of our lives. Our task is to seize and shape this freedom—consciously, deliberately, and joyfully.**42** In July, Gucci reveals a video named "The Ritual", which shows the daily life of models who wear the garments from Gucci. Alessandro Michele said, "I decided to let the clothes travel towards the houses of the cast of models – the characters that have embodied my stories for years; individuals I chose precisely, over time, for their uniqueness that usually brings my campaigns to life. I asked them to represent the idea they have of themselves, to go public with it, shaping the poetry that accompanies them. I encouraged them to play, improvising with their life." Models always act others, Michele let them be themselves to express the sense of ritual to other audiences during this pandemic situation. Models are dressed up and doing daily routines such as riding the bike, eating, singing, Etc. It delivers the idea that daily life can be exciting and full of "Sense of Ritual." Therefore, "Sense of Ritual" does not need much effort to achieve, with an inspiration of respecting every single and regular thing during our daily life.

In the fairy tall, Little Prince explained, a rite makes one day different from other days, and one hour from other hours. In the movie Breakfast at Tiffany's, the character Holly will dress up and finish her breakfast in front of Tiffany. These detailed and various examples explain the ritual is something we almost forget but precious in everyday life. For each of us, dressing up is the most effortless ritual for everyday life. I have interviewed with a store consultant, and she said, some men will wear the suit even in summer because when they wear the suit, they can naturally straight their back and have confidence. There are lots of effort to achieve this effect, such as the tailors' craft, the design of pattern maker, Etc.

Nevertheless, also we cannot ignore when people decide on picking that suit out of the wardrobe either. They choose the ritual of that day by garments. This closest behaviour brings power to life. Another example is the invention of the dress

code, which appears mostly for the civilisation. For example, in China, when people attending a wedding, they will avoid black or dark dresses, whereas, for the funeral, they will try to dress dark or black. These are two extreme examples, but briefly, most of the ceremonies have a dress code, and this is a phenomenon of "Sense of Ritual". However, the sense of ritual is detailed and tiny for every day, such as wearing a different dress, making breakfast, taking a shower, or pouring a glass of wine. The procedures bring a sense of ritual. In my view, fashion is never about efficiency, but for the experience. Therefore, a sense of ritual is the experience which is different, tiny, and detailed. To create a sense of ritual, it can convert to one word, "difference." This "difference" has to be easily accessed during daily life as well as its behaviour is detailed from the designer's point of view.

3.2 IMMERSIVE EXPERIENCE - RELATIONSHIP

A fashion show delivers a different experience to different audiences. A fashion show is the business occasion for the people who work inside the fashion industry, such as buyers or press. The show is part of their job in daily life. Their expectation of garment and the design concept is higher than the other participators, and their critique is professional and unique. However, fashion show and fashion week are special occasions or rituals for most of the people. It delivers the beautiful power of the spirit world for us. Even though we mostly watch the show by live-stream or video recording, but as mentioned in the previous chapter, with the development of technology, it becomes closer to our life. Therefore, for all the audiences, how can fashion show satisfies the different demands under the development of technology.

Digitalisation is the trend, but implementing it with performance is not a simple copy and paste. Considering technology, we need to think about the operation of technology and the relationship during the interaction. For example, in the silent disco, people dance with music on wireless headphones. The audiences without the headphones hear nothing and present the reaction for the people who dance with nothing. It includes technology, not a hyper-advanced technology, but during the action of putting on and taking off the headphone, it brings a new relationship. It creates a new relationship in the room, people hearing the music and DJ as a group of performers, and the rest people without headphones as the audience seeing the effect. This relationship concept also appears on the Gucci 2020 RTW show. Alessandro Michele said the attendances are also part of the show. With technology, most of the people who are remotely watching the show have a similar position as the people without the headphones in the silent disco. Technology brings this new angle and identity. Therefore, there will be more identities in the future, expect audiences and models.

Talking about the relationship, we can also refer to the film producer, game producer, or show producer; they all attempt to bring the audience into a new identity for their creations. For example, the film "The Truman Show" describes a protagonist who lives in a film. Except for Truman, all the people around him are actors and actresses. The film crew has the "God's perspective" and controls his everyday life. Usually, during a movie, directors mostly put audiences substituting ourselves with the protagonists. It means most of the performance or artwork attempts to evoking empathy. However, there are three identities during this film: Truman himself, his surrounding (other actors or actresses), and the film crew. The last two characters have the

same task, monitoring Truman's life. At the same time, audiences have the same behaviour with them, monitoring. It brings strong empathy while people are watching this film. Empathy creates the relationship of a film, a story. The fashion show is one type of storytelling to deliver the design concept. On the Dior haute couture spring and summer show in 1998**Fig.9**, this spectacle show gives audiences a new concept of the show's intangible interaction.

Fig. 9 (Christian Dior Spring 1998 Couture, 1998)

Instead of the usual audience and model interaction, there are more interactions between model and model, audience and audience. Models are the actors of theatre, their garments explain their characters, and the body languages are the plots. Furthermore, this interaction gives people a feeling of immersive and attractive. From these two examples, to build the immersive experience, relationship, and different identities can express empathy to the audiences.

On the Gucci 2020 fall RTW fashion show, because of the unique format of the show, it has some different procedures. For instance, the staff stand and face to the audiences after dressing in the same gesture. The performance on stage and delivery through digital screens or other platforms have different presentation methods. For fashion show, onstage performance, direct communication and the garment presenting are the focuses. In contrast, presenting a fashion show remotely as a video or film, the details, plots of the catwalk, and the editing skills are the points. It is similar to the difference between film and drama. For instance, Hanifa, which is an African brand, under the COVID-19 pandemic situation, designers bring their digital fashion show on social media. Without the context and model, they are digitalising the show in a black background and the garments walking themselves within a body shape by 3D modelling. Audiences can observe the details of the garments and the texture present on the body. As a "film," Hanifa's PinkLabelCongo collection fashion show is successful. Therefore, during the 2020 Milan Digital Fashion Week, there is an increasing number of fashion films instead of the fashion show video recoding. Most of the brands

noticed remotely present the fashion show by using films, videos, background clips that are more impactive and empathise.

Moreover, during the 2020 Shanghai Fashion Week, it brings a new visual stimulation by extending reality technology. The runway is shooting in a studio with a green screen and re-creates in a mixed reality environment. The immersive visual effect brings a novel performance to the audience. It still has a limitation in some aspects. The quality of the video cannot provide enough information for garment, cloth, and textures within the live-steam. However, this is an experiment for delivering the more immersive experience to the audiences.

Therefore, the fashion show's video recording is the most direct way to proceed with the fashion show in digital, but also with less empathy. The onstage show and show film have different functions. However, under the pandemic how to combine the show film and onstage show's advantages to continue a new format for all the audiences. The answer to this question is similar to the question we asked at the beginning of this chapter. Onstage show's target users are the attendances, and the show films are for the majority. Building a new relationship between these two segments of users, bring empathy to them in the same context.

3.3 VARIABLE ELEMENT SYSTEM

After the previous analysis, there are two sets of components inside the system, but the core of this theory which connects with these two is "variable element". In the following context, it defines "variable element" by a personal experience of the immersive theatre. Sleep No More is an adaptation of Shakespeare's Macbeth. It is an immersive theatre created by British theatre company Punchdrunk. Into the theatre, every detail of the plots reveals in front of the spectators. I have attended once in Shanghai; After the regular ticket checking and waiting, audiences are forbidden to use phones, and they will have their gears, a poker card and a ghost mask. Different from other theatres, the ticket checking has proceeded inside the Manderley bar, and the attendant will call the poker with a number. People with the same number of card will enter at the same time. This also corresponds to the opinion that when people arrived at the airport, the fashion show starts to influence them. Before they into the main room, they will need to wait for the introduction in the waiting room. At the waiting room, the audiences are mandatory to wear white ghost masks. We can assume this is the procedure to build the immersive experience. Also, the attendant will pick different people to different floors to separate the audience for a better immersive experience. Because when people face a strange situation alone will be easier to get inside the context. When they start to explore in the building, people can randomly pick different actor or actress and follow them. Most of the interaction active by body language. Inside the theatre, audiences can stay as long as they want. The show replays several times a day. It gives audiences a chance to follow other actors. There is one difference, at the last time of looping, the story's ending is different.

Each corner of the building happened different stories at the same time. How the story will proceed is depend on the audiences themselves. Whom they want to follow and which story they are curious about all are decided on audiences choices. To conclusion, this theatre gives people "space" as the variable element to control by themselves, no longer plush seats and the stage. This presenting method brings a more immersive experience by a variable controlled by audiences. At the same time, it is the possibility and spaces for producers or storytellers. At the immersive theatre, audiences have more actions, such as running, tasting, staring as well as during this process, creating more unpredictable interaction. It brings the new meaning of theatre and the new relationship between audiences and dancers.

Another essential element appears during the interactive theatre

experience, is the hidden plots. During the Sleep No More, all the characters have their plots. However, there are some empty plots, such as actors moving to a different position or waiting for other actors to interact. During these periods, the actor or actress will randomly pick the followers and interact with them. These interactions mostly present in a simple way, such as holding their hand or showing them a book. From the audience's point of view, these blank plots are the hidden plots. These interactions are exciting and unpredictable, similar to an easter egg in a game or film. Atari's Adventure reveals the first easter egg. One of their engineers does not get credit. Therefore, he set a hidden plot, when players enter, his name appears. Recently, the easter egg is regular for the games, videos and films. The variable element creates the opportunities to add the easter eggs. For instance, in the early period, John Galliano always prepared a suit for himself with the particular style of a different fashion show during the finale. At that time, we can assume "finale" as a variable element of his fashion shows. As the previous chapter wrote, most of the fashion shows the aim of telling a story. While delivering the immersive experience, the show guides and limits the audience inside the story. The invention of easter egg helps storytellers to decorate the experience with extra motivations and can make the show complete in a different way. Therefore, for Sleep No More, we can analyse by the variable element system. Its variable element is "space". The relationship changes from audience and actor/actress to explorer and NPC. The difference is the action during the experience. Compared with seating during the traditional theatre, the audience needs to change the position to follow the story. Then, instead of giving all the plots directly to the audiences, each explorer needs to find the story and the hidden plots. Also, the hidden plot is the easter egg. The variable element system is not only for analysing the immersive theatre; there are more cases in fashion show history.

Gucci 2020 Fall RTW show, this show is mentioned many times in the previous chapters. This is a dramatic and vital change for fashion show concept. There is a 360-degree transparent stage. The creative director, Alessandro Michele, brings his crew on the stage. Michele stands in the middle of the stage, and the staff is around in a circle. During the show, it shows from stylists dress garments on, to models' catwalk. Audiences as the third party of this drama, observe each step which will happen on backstage, with a new perspective of the show. The show uses a variable element "space", designers bring the backstage in front of the audiences. Also, there is a new relationship. The show as an entire show, there is cooperation from audiences, models, and backstage crew. Michele let audience as a co-creator. Each audience is the audience and also one of the personnel. They have different identities. "You were our show, and we were your show," Michele said in his typically elliptical manner.**43** The

sense of ritual is not apparent, but subtle. The difference is at the entrance of the show. The entrance is passing by backstage. Audiences need to go through the backstage, and they can observe all the models and staff working at the same time.
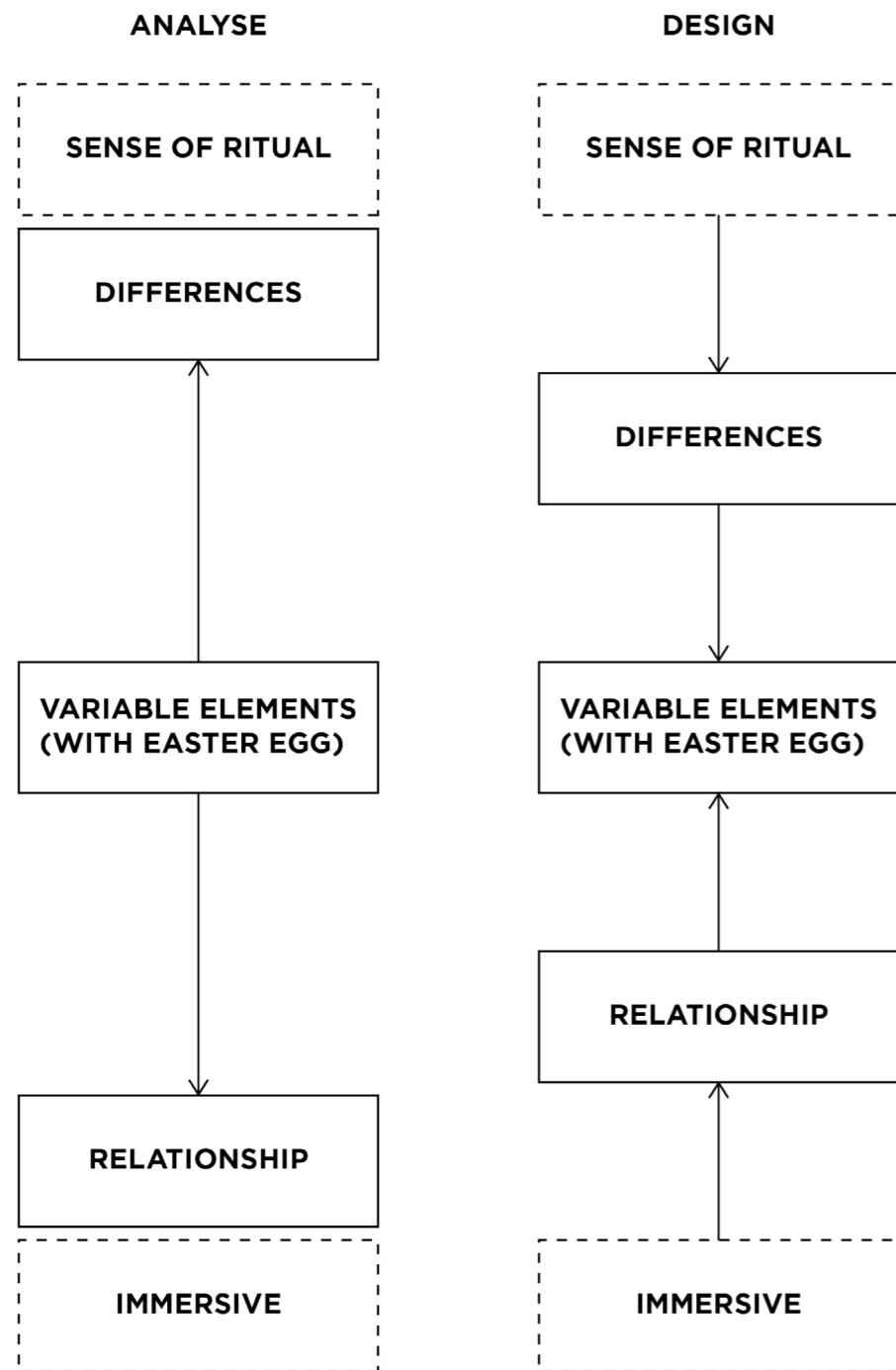
Sunnei's 2021 spring and summer collection, provides a digital platform that allows people to change the garments or models on digital devices. It also has the variable element; the stylist's work is to decide the looks in the fashion show, which is rigorous. It needs to consider the order, model, music and other elements on stage. Through the platform, users have a chance to change this mode and create their look. Therefore, the variable element of Sunnei is "look"; users can change the matching like a stylist. Although this interaction mode more like a game or an interactive product, not as a performance, it brings the variable element as a new way of experience and a higher sense of participation. Sunnei uses a practical and technological way to approach, and this direction is a trend for the fashion show design platform in future.

Moreover, for Gucci 2021 digital fashion show, Michele uses video editing to deliver the new collection under the pandemic situation. For the remote interaction, what audiences can control is not apparent; therefore, we can start from difference and relationship. For the difference, this video re-structure the plots, similar to the interactive film, the plots are not linked in a complete and entire logic. It brings more possibilities for audiences. Then, from the operation interface, it is evident that the relationship is the player and computer system. It brings the immersive concept of fairy tales and unreality, which same as Michele's design concept. Therefore, we can analyse this show as an interactive film, such as Black Mirror: Bandersnatch. Besides the content, the interaction depends on the "timeline," which is the variable elements. Each look is introduced into a specific period; each user can change the timeline to adjust. Christopher Edward Nolan also uses "timeline" to create opportunities on the content editing.

In conclusion, the variable element system is the design thinking of creating the opportunity for the existing performance, film and other art formats. This system is discovered from many case studies with different art presenting form. However, it is not only for analysing the existing cases. However, also it can be used to design more interactive project.

3.4 DIRECTION

As the theory of the previous chapter, I made an organized logic diagram of variable element system**Fig.10**. The left part shows how to analyze the existing cases by Variable Element Theory, whereas the design process is reversed as the right part shows. It can be used to evaluate and create an interactive project. The differences are the start points and direction. For designing the variable elements, the design process starts from a sense of

ANALYSE   DESIGN

SENSE OF RITUAL   SENSE OF RITUAL

DIFFERENCES

DIFFERENCES

VARIABLE ELEMENTS (WITH EASTER EGG)   VARIABLE ELEMENTS (WITH EASTER EGG)

RELATIONSHIP

RELATIONSHIP

IMMERSIVE   IMMERSIVE

Fig. 10 VARIABLE ELEMENT SYSTEM DIAGRAM

ritual and immersive in fashion show background. Finding the differences and relationships, then the variable element can be settled. The following chapter explains the sense of ritual and differences first, and combining the insight of fashion show and the relative topics for the current situation explores the relationship of the show. The variable element and easter egg reveal in the end. The differences triggered the sense of ritual and relationship transferred to the immersive for the fashion show. An essential point in this system is the final elements on both sides can be changed by different subject. It means in fashion show context, differences can deliver the sense of ritual, or we can say deliver the sense of ritual by difference. However, difference, this element can be redefined into a different background. The core components are variable elements, relationship and differences.

3.4.1 Sense of Ritual - Difference

By following the Variable Element Theory, as the current situation for the start-up brands, the mobile digital platform such as smartphones or tablets is the best choice. Because the digital platform has low cost and high accessibility, compared with the physical fashion show, how to bring a sense of ritual? First of all, there are three fundamental interactions with smartphones, visual, auditory, and touch. If we analyze the action while using smartphones, visual is the passive information output, auditory and touch are mostly passive as output and active as input. However, mostly, people get information by visual on the smartphone. Most applications for the fashion show on mobile their interactions are based on typing by touches, such as Instagram and Tik-Tok. Therefore, in my opinion, making the interaction differently on a digital mobile for the fashion show, to bring the sense of ritual, keep touch as input, but also make visual as the input, and auditory as the output. It is abstract to describe without the story. Combine with the technology; the story will complete. Augmented reality is a powerful tool for the fashion industry.

By supplying on a digital screen, the runway's experience is limited to visual and auditory effects mostly, several times involves touch. There are some experiments for delivering more senses. For example, in 2010, Ralph Laurent presents a "4D" fashion show using video mapping, which delivers a significant visual and auditory effect. As a collection of perfume bottles appeared, the air was filled with Ralph Lauren's Big Pony fragrance, giving the event what the brand called a "4D twist."44 There are still some technical barriers to better experience ideally. Therefore the concept before the technology comes true is the designer's focus. Tim Cook, CEO of Apple, the world's largest company has to say – in an interview with Vogue, he says that over time, Augmented reality (AR) might be as crucial to fashion retailers as having a website.45 About visual as the input, augmented reality is the first

choice. The smartphones are the additional eyes for users, and this pair of eyes can interact with the algorithm. Moreover, the user can change the distance to change their vision. From the user's point of view, it delivers an unusual interaction of mobile devices.

3.4.2 Immersive - Relationship

Compared with the 19th century, we can get information conveniently and rapidly in 21st. Technology and internet decrease the barrier for watching the fashion show. Who is the user to use the latest technology and network, is the young people. For the fashion industry, the new target group is Z generation, and they are curious and independent. Most young people have willing to express themselves by their style of appearance. Because of the limited accessibility of fashion shows, this mysterious industry exists besides their life, but not knowing well.

The fashion show is an event for the new trend of the garment, technology, news, and many different topics of discussion and thinking in our daily lives rather than just a service for ordering. Instead, the promotion activity, revealing the fashion show as an educational event is the trend. Moreover, as we mentioned in the last chapter, training the consumption habits for young people, even if some of them cannot contribute profit for now. The way to training them, in other words, is helping them to learn about fashion and style.

Therefore, for the relationship, the audiences and this new fashion show format can be in an educational mode. It means the platform introduces the garment from the different attendances who give their unique insights. For users, they can directly know about the garment and fashion show. Also, they can have more perspective to understand by different fashion insiders' opinion. During exploring the garment and show, they can know what an insider think about and care about during the show. They can through this additional pair of eyes, experience the fashion world from others' eyes. In the end, they will know why fashion show is essential for the fashion industry.

3.4.3 Variable Element

After analyzing the sense of ritual and immersive, the relationship is educating, and the difference is reversing the interaction of normal behaviour. I summarize the variable element as "Identity" or "Character". The identity can be changed and then explain different information to users about the fashion show's production. For example, for the buyers who consider the trend, market response, stocks, and some other financial elements, the key is to form their version and express their knowledge to the customers. Another instance, as stylist's identity, the critical

word is about the matching, accessory, shoes, garment, detail of garments, Etc. To achieve multi identities, it requires different internal pieces of information. Moreover, from a commercial point of view, the buyers' analysis and decisions, stylist's matching of the look are also the direct way to persuade customers. Moreover, because of the limitation of the screen, most of the information are fragments. People need a platform to piece them together. Convert a similar comment from insiders and also provide a platform for them to spread their inspiration.

For the easter egg character, the hidden identity can bring the surprise, and it can present occasionally. It means to bring some identities that are not regular attendees, such as movie figures, celebrities, or other iconic people. For example, during VFILES 2016, Young Thug fixes model's garment during the catwalk, bringing into the system and being triggered by the specific action. It is not a right or wrong action for the fashion show, but it is unusual, representing the easter egg's unpredictable feature. Also, the Easter egg identities can update at any moment on the internet. The trigger for changing the characters depends on the actual roles behaviour, for example, for the stylists, their distance with garment and model is close, whereas the buyers as the audiences, always have distances with garments.

In conclusion, this new format of fashion show delivers an educational platform for young people and as an information-sharing system for the professional users inside the fashion industry. During this process, this system can deliver an interactive and immersive experience as well as brings different experience compare to the physical fashion show.

DESIGN

The direction of the design is explicit. The three main components are settled. In this section, the structure of Cybermoda project is revealing. The name of Cybermoda is combined by "Cyber" represent high-tech and "moda" which means fashion in Italian. In this chapter, Cybermoda is separated the direction into the detailed plan. Also, about the methodology, it shows persona, competitor analyses and benchmark, tree diagram, to be journey map and other methods. These tools can help the designer to understand the focuses better and organising the hierarchy of the service and the tasks of the product.

4.1 DESIGN - EMPATHY

As the previous chapters, this project is designed for fashion insiders, and the target user is Gen Z. Also, in the capital market, fashion product is still catching the attention of customers, especially in China. Therefore, our persona is a Chinese young people who love fashion and has her attitude for fashion. After clarifying the persona, by proceeding a survey with similar target customer groups, there are 87% of them want to learn more knowledge about the fashion industry with systematically and professionally. All of them generally get fashion news by social media, such as Instagram, Twitter, WeChat, Etc. The majority pay attention to the fashion show, especially the show production (75%), design concept (65%) and the new products (65%) which reveal on the show. There are some questions about post-Covid-19, since, in China, everything is in recovery for their daily life. Post Covid-19, there are 65% of them prefer digital fashion show rather than the physical runway. They expect on the new way of experience, the latest primary fashion news, and more robust sense of participation. About shopping, most of them consider that Covid-19 does not influence their fashion needs. For e-commerce, two thirds of young people has a clear shopping goal. The reason for purchase is mostly about the requirements such as seasonal basis and the promotion.

Therefore, our target user is more precise, a fashion enthusiast who has no background about the fashion industry. For concretisation of the story, her age is about 25, graduated from the college in 3 years, can purchase the luxury goods, but not frequently. Her job is not related to fashion, but young people like her age love to express their dressing and style to others. She follows some YouTubers who explain the history of fashion and fashion show as well as absorb the fashion news mostly from social media, such as Instagram, WeChat or Weibo. On these platforms, she usually searches on the garments matching and the new trend. She has the willingness to learn about fashion. She always has a specific target product when she is browsing the online shop. Also, she is practical because she mostly purchases if it is indeed. The new experience attracts her to attempt. Therefore, this new fashion show AR product attract her from a different perspective. At the same time, the platform also delivers value to her. First of all, she can learn from it. It has detailed information in every aspect of the garment she loves. Then, she can take the experience of augmented reality. During the pandemic, she already watches a lot of videos and websites. She even starts to listen to the podcast. AR experience helps her to get information in a different format.

For the competitor analysing, as the benchmarking map**Fig.11**

EDUCATIONAL

CYBERMODA

SEPHORA

COMMERCIAL   EXPERIENCE

AR FASHION

Dior
ZARA
GUCCI   asos

ENTERTAINMENT

Fig. 11 BENCHMARKING MAP

shows, there are more and more extend reality APP in the fashion market. The Fashion AR is an app for sharing after users create their matching look, they can take the photo and share to the social media. This app is for social in the first place, which is significantly different between the following company. ZARA revealed an augmented reality feature on their APP in 2018; it allows users to access the AR mode by using smartphones scan the icon at an offline store. This strategy is for increasing the offline stores' volume of customers. In 2019, the "Virtual Catwalk" of ASOS, it perfectly brings the model into reality. Users can move their camera to see the model in 360 degrees without limit. Janosch Amstutz, chief executive at HoloMe, said in a statement: "By allowing the consumer to bring mobile shopping into their own physical space, we can create a more intimate buying experience. We are excited to see how our technology can be used as a new way to communicate with the customer."**46**

Also, in 2019, Dior presents its new sunglasses on social media to provide a new way for the try-on experience. Dior creates a new filter on Instagram. Users can directly add the DiorSoLight sunglasses on their face. Now more and more users can create their AR filter by using Spark AR Studio. For try-on function, there are lots of brands that contain it on their

official application, such as Gucci. After downloading the APP, users can follow the instruction to place the hand, face or feet for the accessories, shoes, or cosmetics. For the cosmetic industry, Sephora also has the AR try-on functions. In early years, the new feature of Sephora's application is to synthesise the cosmetics on users' photo which needed to upload in advance. Compared with the current AR mode try-on experience, this is old-fashion. However, at that time, this is the new direction for the retail industry. The new AR platform in the market locates as less commercial but more entertain. I believe most of the commercial feature comes after the attraction of the product.

After the benchmarking, based on these exist augmented reality fashion features, task analysis helps to understand better how users interact with the augmented reality app by each step. For the current AR context application, the primary step is scanning the environment and detect the anchor to place the model. The complexity requires the area of the model. Optionally, the augmented reality app allows users to scale up and down the size of the model and place the model into the real world. Moreover, for tracking the real world also depends on the hardware, such as Apple AR support on the processor, which at least is A9/A10 or after. Also, Apple reveals LiDAR, which can detect the depth and distance in 2020. It is a significant hardware update for the AR experience. Augmented reality experience will be more realistic and fluent. Therefore, for AR experience, detecting is an essential procedure before the experience.
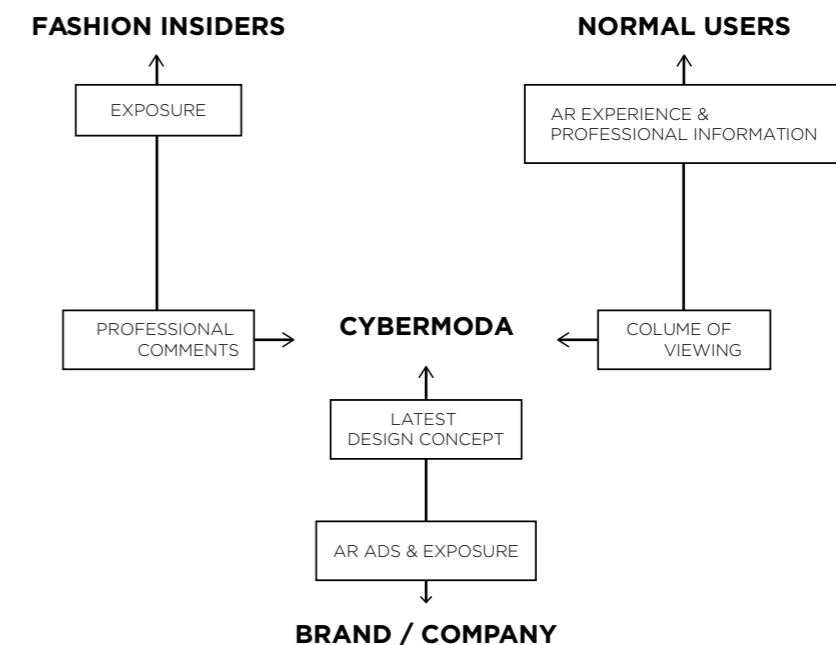

FASHION INSIDERS   NORMAL USERS

EXPOSURE

AR EXPERIENCE &
PROFESSIONAL INFORMATION

PROFESSIONAL
COMMENTS   **CYBERMODA**   COLUME OF
                                      VIEWING

LATEST
DESIGN CONCEPT

AR ADS & EXPOSURE

BRAND / COMPANY
Fig. 12 SYSTEM MAP

From the benchmarking analysis, Cybermoda's location is an educational experience platform. From a business point of view, this product also has value for the commercial. As the

system map**Fig.12** shows, one of Cybermoda's aims is to invite fashion insiders into this community. The power of professional information is the selling point. Eliminate the boring way of getting the information of fashion; the platform works for both people who have willing to get and who are professional to spread. Therefore, the stakeholders are not only normal people or stylists, fashion criticiser, journalist, and also people on the backstage, such as photographer, model, dresser, designer. For the information receiver, Cybermoda provides the AR experience, and it gives fashion insiders a new platform to express their professional opinions to increase their value on the internet, such as YouTubers.

Therefore, as the third-party show application, there are three direct stakeholders, companies, insiders, and normal users. For normal users, the accessibility of professional information is high, and also the AR experience attracts them to use the APP. For the insiders, the platform provides the opportunity for enhancing the influence of individual, and also communicate with other colleagues in the fashion industry. For the company, this platform provides them with AR experiences without developing their application, and also as a fashion show platform, it has more volume of users compared with the brand's app.

4.2 DESIGN - FUNCTIONS

After the research and analysis, the original idea is an augmented reality application as an independent platform for the fashion show. Its foundation is providing the immersive experience of the fashion show and sharing professional information from the experts. For the App, the form of the garment is in 3D modelling. Users can trigger different pieces of information from various roles in the fashion show with different interactive way. The information presents in visual and also with audio to enhance the impression. It also helps the fashion insiders to share their insights in an immersive way and building personal influences or value on the platform.
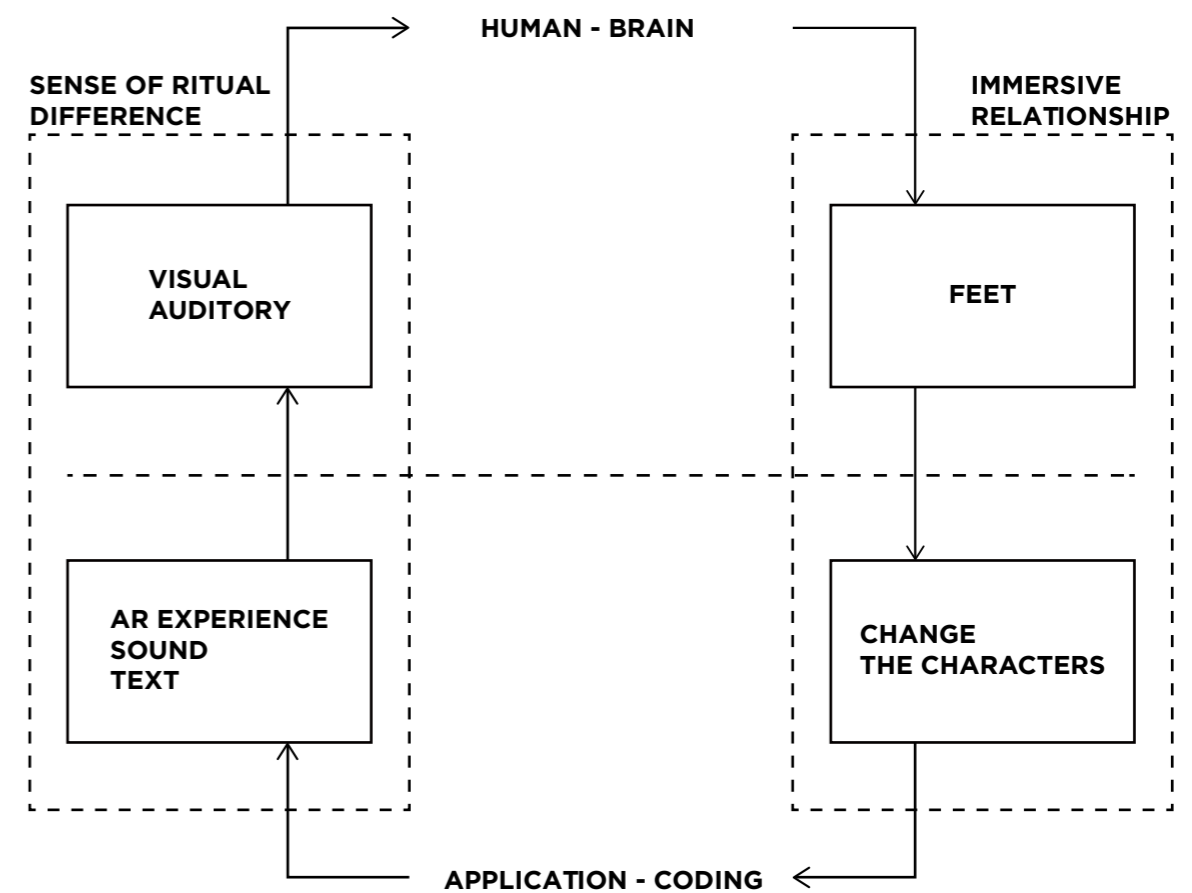

Fig. 13 INTERACTION MATRIX

For detailing the interaction between the application and human behaviour, the Matrix**Fig.13** shows the input and output from users and applications point of view in a circle. The upperparts, which present the user's perspective, the visual and auditory effect are the inputs, and visual is the output in another way that transforms into the movement with feet. Because the mobile platform supports the augmented reality

application, the device's camera represents an additional eye to express visual changes. Users use smartphones' cameras to experience the system's interaction, and the camera's changing can achieve by moving and changing the angle.

For the lower part, it analyses from application's point of view, the different movements as the input it triggered the characters, the sound and AR visual experience are the outputs to present the sense of ritual. In a vertical way to analyse it, as a human, the sense of ritual is from the input which is the output from the product, and the immersive experience is the output for human and as the input for the product.

For organising the hierarchy of the functions of the system, the tree diagram**Fig.14** shows the arrangement of the pages. By
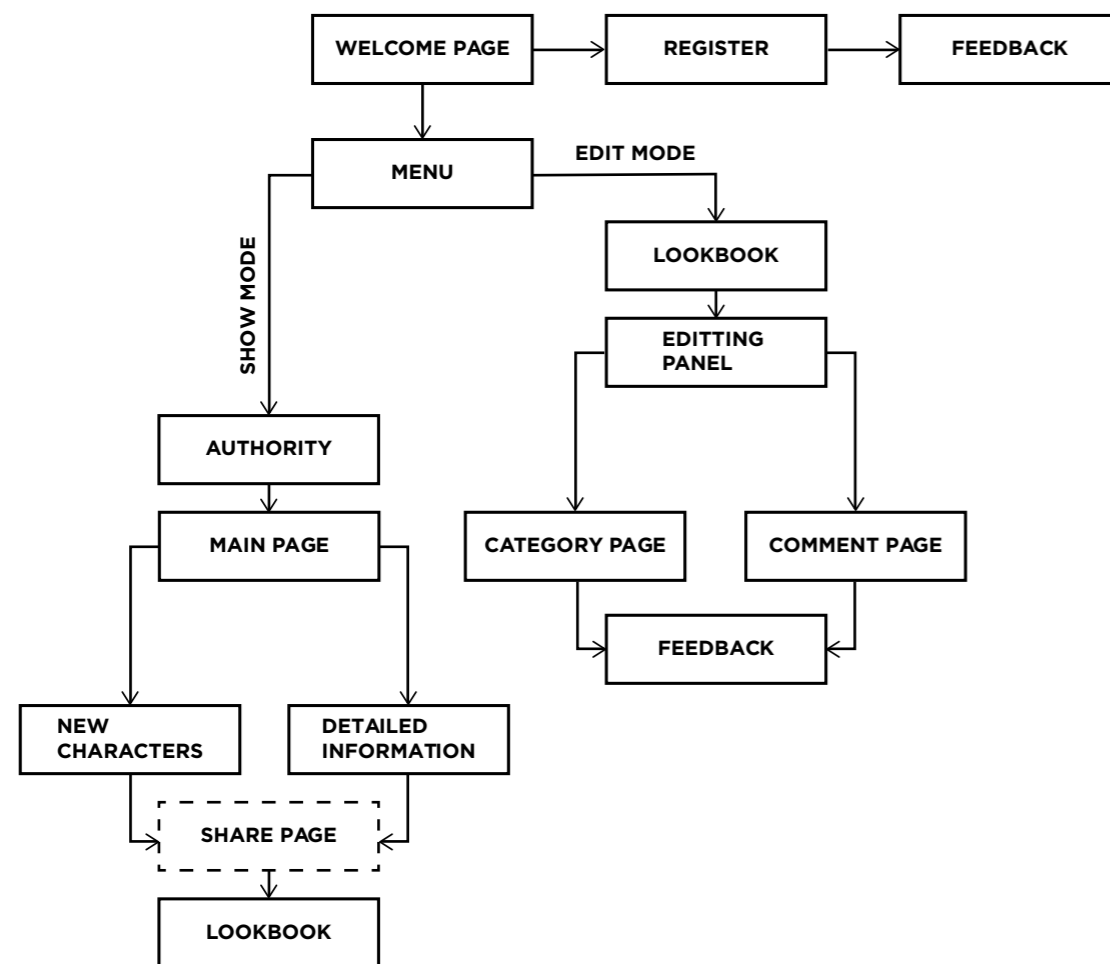
Fig. 14 TREE DIAGRAM

the task analysis with the existing AR application of fashion brands, some of the functions are necessary, such as asking the authority for the data privacy and hardware support. Also, the diagram shows the primary user interface. There are at least three leading groups of pages that need to design for the user interface, welcome part, show mode and edit mode. For the welcome part, it contains three pages, which are welcome page,

register page and the feedback page for register. The reason for putting a feedback page here is that this system requires the verification which is precisely valid the identity of insiders. For approaching this function, the LinkedIn or Instagram API can help in this process. After clarifying the identity, there are show mode and edit mode. For the regular users, after the first time register, the edit mode button will not appear on their version of the interface. In the other hand, for the insiders who pass the identity verification, the edit mode appears on the menu. Therefore, the register system is to separate and distribute the version of App.

The primary function is show mode after asking the authority of camera and detecting the environment. On the main page, there are two parts, model and information banner. The AR experience allows people to move around for browsing the model. The interface for information has two sub-functions. First, when users click the information on the screen, it appears a pop-up content for more information. User will not transfer to another page for the information, because if the AR interaction changing back to the user interface interaction, it will disturb the experience of AR experience. A pop-up component can easier back to the AR experience without distraction. Then, changing the distance with the model as the trigger, the character and information sections change at the same time. After the experience, there is the sharing page as the selection page, because users can skip this page. When users finished all the scenes, they will enter the lookbook page to review and return one specific look.

For the edit mode, it is designed for the insiders. It means all the comment is signed with their title and name. They choose the look they attempt to leave the opinions at first on the lookbook page. Then, entering the editing panel, there are two sub-pages, category page and comment page. The category is shown on the information banner at the AR mode. The comment page is detailed information. After editing the content and uploading, they need to wait for the backstage verification. After that, the system sends the feedback on the application for the process.

To be journey map**Fig.15 (P.71)** shows how users interact with the touchpoints and the actions they probably will make during the user experience ideally. Compare with the tree diagram analysis; it is on the user's point of view instead of the designer's. This method helps in predicting the more realistic user experience before revealing the application. Depends on the tree diagram, the journey has two paths after the welcome pages, show mode and edit mode. On the map, there are seven main parts, which are awareness, account, show mode preparation, show presentation, post-show, comment contribution and feedback, in which contain sub-actions. The text upper or under the

solid frame shows the touchpoint which users will interact with step by step. This map helps for detailed the pages need to include for the application. For instance, the submit action needs a submit feedback sign to achieve the function. It shows more detailed pages compare to the tree diagram.

After the tree diagram and to be journey map analysis, in the end, for the UI, there are almost ten pages need to design, which are welcome page, registration page, menu page, show mode main page, information content page, share page, selection page, editing page, submit feedback and feedback of verification page. Then, the above content describes the primary function for App and the pages for UI. In the next chapter, there is the prototyping part, making the App come true.
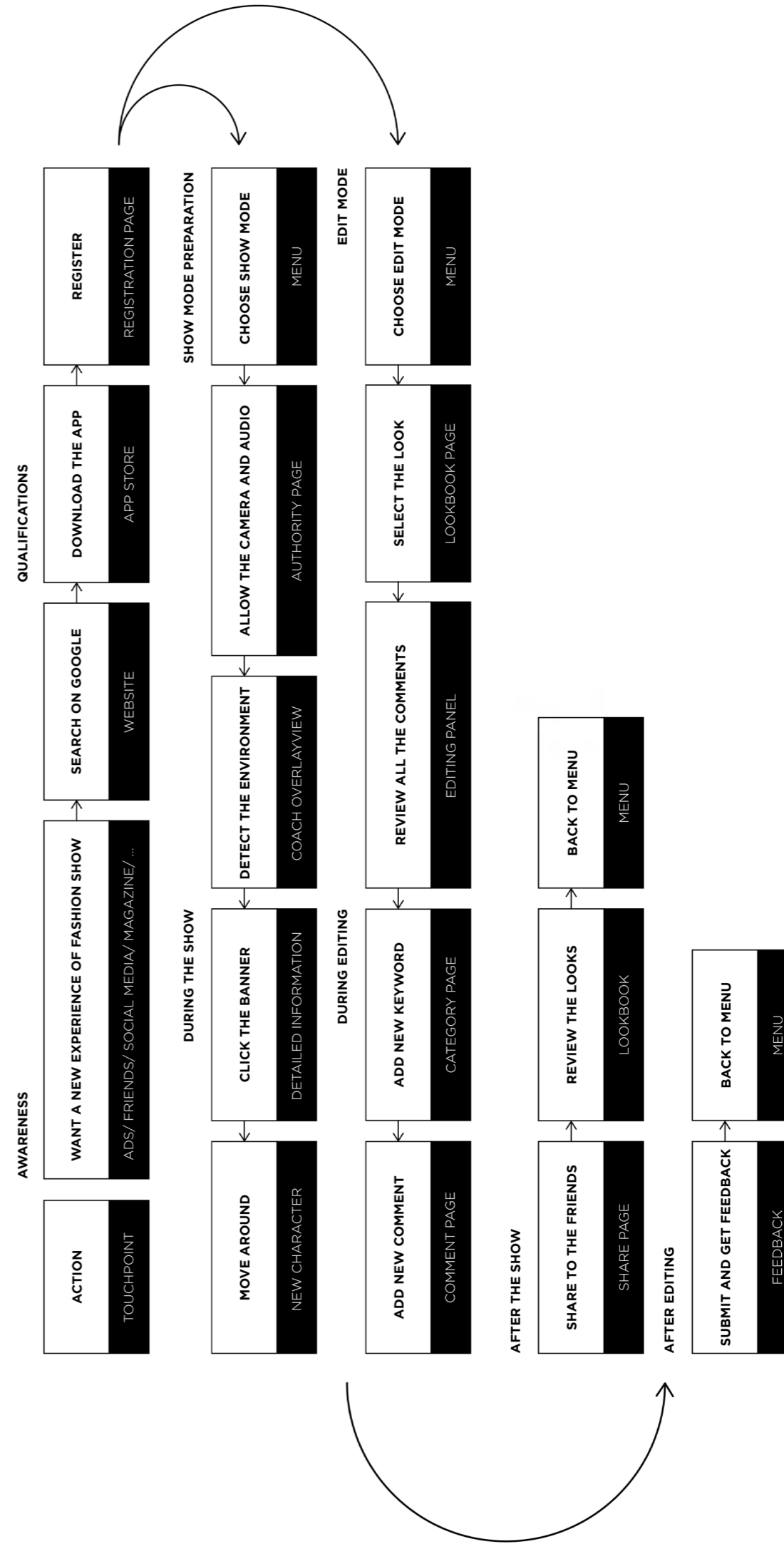

Fig. 15 TO BE JOURNEY MAP

PROTOTYPE

On this chapter, there are mainly three parts, augmented reality experience developing, UI and Sketch Video. On the AR part, it involves the 3D models building part and developing part. Because the 3D models are the base of other design procedure, I will introduce this part at first. Then, the developing stage is in the behind because of the developing logic. Then, the sketch video is not only for preview the final effect in advance, but also as the advertising video for the presentation. After that, it is about the user interface and the user testing. In visual way to demonstrate the pages designed before, UI prototype is not converted with the App in user testing. It still has some difficulty for coding. Therefore, the UI part will show as an extra prototype. All the recording of user testing is in appendix.
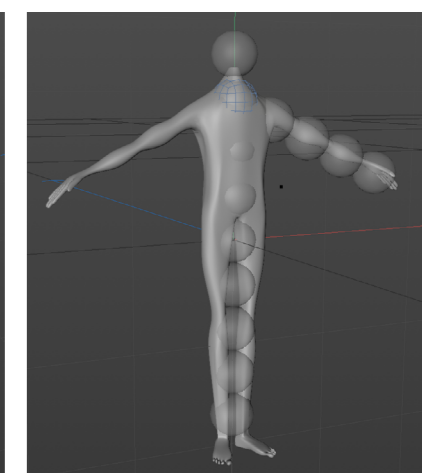
5.1 MODEL

For the model building, since I was not good at modelling and my background is hardly relative to 3D modelling. Therefore, I have found two way to making a human body in 3D model. At the first time, I have used Cinema 4D. The modelling starts with the body. The human proportion is about eight to nine heads. Therefore, in the beginning, the model needs to be settled down the size of the head, and then the arm is about four portions. The body part starts with a cylinder. After finish the body shape, the hand and feet are divided. As the image**Fig.16-3** shows, the feet and hands are combined after with the body. This model I have used for the first effect video.
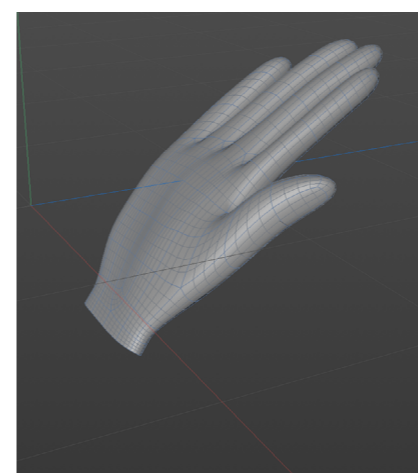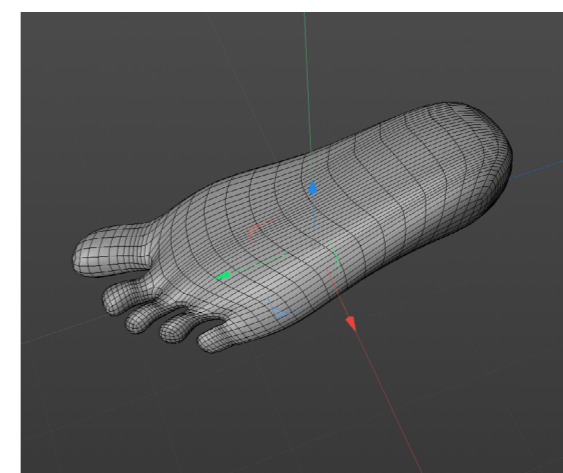
Fig. 16-1 HAND   **Fig. 16-2** FOOT   **Fig. 16-3** BODY

However, using C4D is hard to build a realistic model personally. After the research, I have chosen Character Creator 3 for modelling. This software is designed for CG or movie modelling. It is a powerful tool. Most of the muscles on the human body even the face can be customised. Moreover, it has a robust plugin, Head Shot. It allows to easily customise the head of the model by the portrait images. It can synthesise the photo into a 3D model. Therefore, I have made a model**Fig.17 (P.76)**, like my appearance and age. The hair is combined into the Cinema 4D. The choice of hair in CC3 is limited and customised hair in CC3 is not easy as in C4D. Meanwhile, Character Creator 3 also has the module for the garment. However, I used CC3 only for building the body and head because the garment's material and texture do not look very realistic when adding the gestures. The thumbnail shows the model is in T pose because in T pose is easy to add the garment on the model. At the next chapter, this essay will explain the garment model building procedure.

Fig. 17 MODEL IN C4D/ MADE IN CC3

After finish the model's body, I have imported the model into Mixamo. This is a free website for setting the movements of the model. After uploading the fbx. file, it reminds users to set the joints, chin and the median point. Then, it will automatically set the root of the model. Then, exporting the alembic file, this type of file contains the movements. Then, bring the abc. file back to the C4D for applying with the original model, because of the start pose of the abc. file is frozen on the random pose. It needs to combine with the T pose for the next procedure of garment modelling. On the animation mode of version, set the movement adding the motion clips and converge the T pose and movements. Then, the pose will smoothly transfer from T pose to the movements. Continually, exporting the abc. file can contain movements. After this, I have finished the preparation of the model's building.

5.2 GARMENT

After the 3D modelling of model, the design procedure moves to garment modelling. For garment modelling, I have used Marvelous Designer. It is a professional garment-creating program. It can simulate the natural shirring and the effect of gravity when human wears the cloth. The principle of Marvelous Designer is the same as the actual processing of making the garment. Cutting the fabric with the specific shapes, and the different pieces of cloth are sewed together with thread, button, or zip. Therefore, users need to start with the 2D work area for the pieces and synthesising on the 3D window placing the right area.
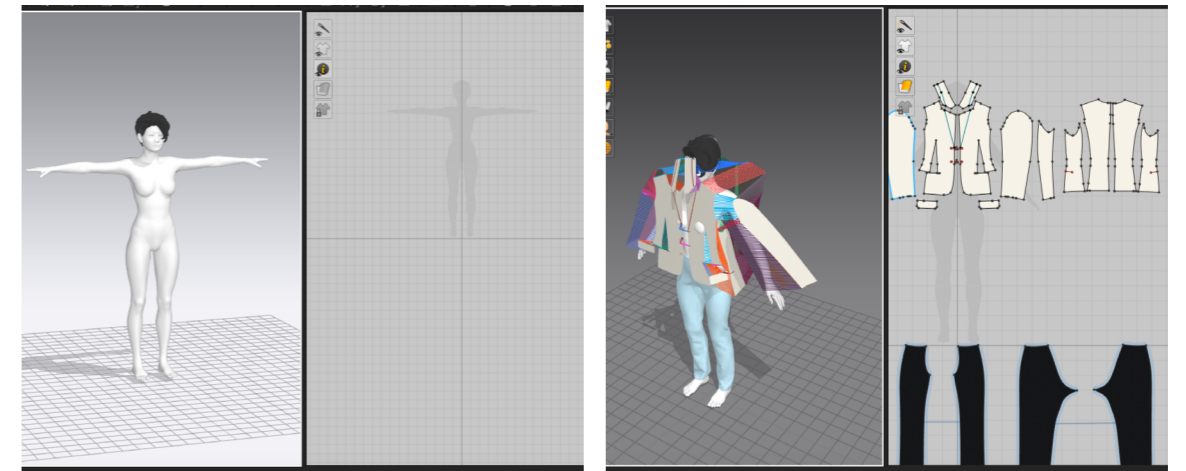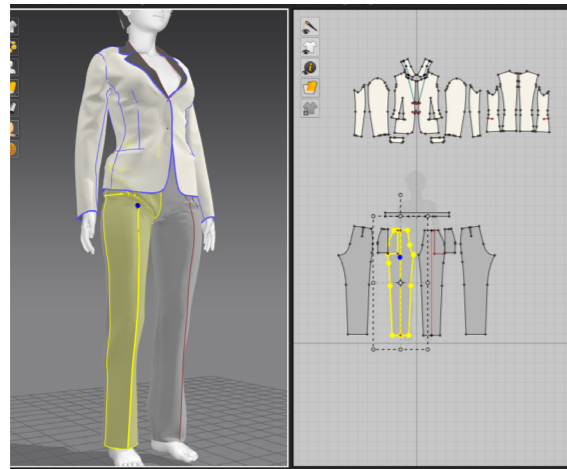

Fig. 18-1 PROCESS IN MD   **Fig. 18-2** PROCESS IN MD

Also, MD allows the user to import the customised model**Fig.18-1**, include the abc. file. On the animation mode, the garment moved with the movement of model which we set in the previous step. The pose of the model can be changed into the animation mode. The freeze-frame is stoped on the animation mode; it will appear on the editing mode. Therefore, the first T pose prepared before is easily for editing the garment.
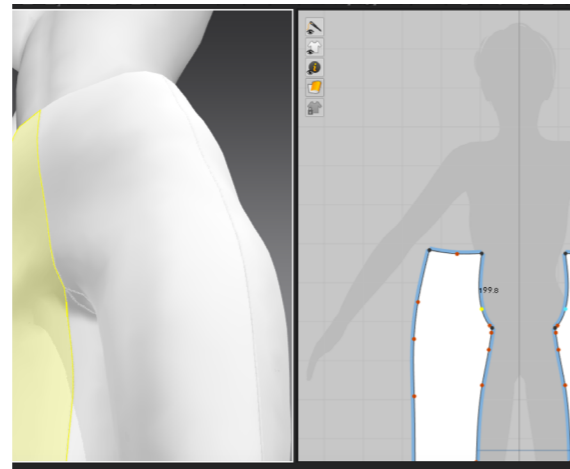
Back to the editing, drawing the pieces on the 2D form, at the same time, we can adjust the angle and side on the 3D window. The pieces I have used are the references for standard jacket and pants**Fig.18-2**. To make them suitable for the model, it requires some adjustment of the pieces. After placing all the pieces and linked by the threads, clicking the simulation button it automatically sewed together and dresses on the model**Fig.18-3**. Sometimes, it needs more time to adjust the details**Fig.18-4**, such as the layers of the button and the folding line. After the simulation, the animation module can check the result of the movement. If everything works successfully, then export as the abc. file. As we mentioned,

abc. file contains the movement but without the model.

We can bring the garment model back to the C4D later for editing the material and thickness, therefore when it exports the garment file as abc. and choose thin. Then, we open the garment file into the C4D; it does not contain the model and shows only the movement for garment, similar to the post of Hanifa's on Instagram. I have placed the model and garment together into the C4D for the final converge. Because I have imported the model with movement into the MD, then here I placed it directly on the model's body; it can perfectly match the movement. This is like covered-up the body with the garment. If the size or rotation is not perfect, in C4D I can also modify it. In the end, there is a model wearing the garment and walking in place. The modelling part is finished until this stage. The next chapter is about editing a video for simulating the AR model into the real world for preview.

Fig. 18-3 PROCESS IN MD   **Fig. 18-4** PROCESS IN MD

5.3 SKETCH VIDEO

First of all, the sketch video contains three parts which are the design question, the concept and the using flow of Cybermoda. For the design question, it films with the actress who is walking on the street and browsing. The shooting script is based on the storytelling methodology, and also refer to the persona. It separated into two parts. One is about under the alleviated pandemic situation, she can go outside, but will not hang out with her friends as usual. Therefore, she walks on the street by herself with the mask. The other shoot is about swiping the phones for getting the inspiration. We cannot ignore the power of e-commercial. It grows fast during the pandemic situation. It recalls the question we placed before, how fashion shows can adopt the pandemic situation and evolve to achieve better user experience. The first scene is for adopting the pandemic situation, and the other one for delivering a better experience than the existing e-commerce way.

The second part is about the concept of Cybermoda. The visual style of this part refers to the Cyberpunk world. Each mission that stylist concerned on the backstage during the show, transfer to the game tasks. By using a sci-fiction visual language to deliver the concept that augmented reality can improve the experience. I created it in the futuristic features with unrealistic imaginations. The reason for attempting to design it in this way is that under the pandemic, virus limits people's moving, but not thinking. This conceptual video shows the

The final part is the using flow of Cybermoda; this part is to connect with the design question part. The camera comes back to the actress; through her experience, audiences can observe the whole using flow in reality. The video is mostly designed by using Adobe After Effect. The key for editing is iterating it clip by clip. It does not achieve the perfect effect in the first place but becomes the better version after each time iterating. AE is a video editing software. One of its powerful tools is the tracking camera. It can analyse the spatial information of video and then creates the solid and camera after. Then, we have a layer with a camera with the spatial track. AE allows users to export as the C4D file. Then, for converging them, using C4D and placing the model with the garment on the solid layer and in the end, we can hide the solid layer for export. Then, in the end, it presents a super realistic effect with a 3D model into the real world.

5.4 USER INTERFACE

First of all, there are three different User Interface (UI) which appears inside the video. First is the one for the sketch video mentioned in the last chapter. There are two UI inside the application, basic UI and AR mode UI. All of them have some differences, but also they have the typical design concept as a series user interface of Cybermoda.

The application user interfaces for the Cybermoda project is designed by using Principle, Sketch and Adobe Illustrator. It has two parts, one for navigation, the other one for the experience which appears inside the AR function. Before I
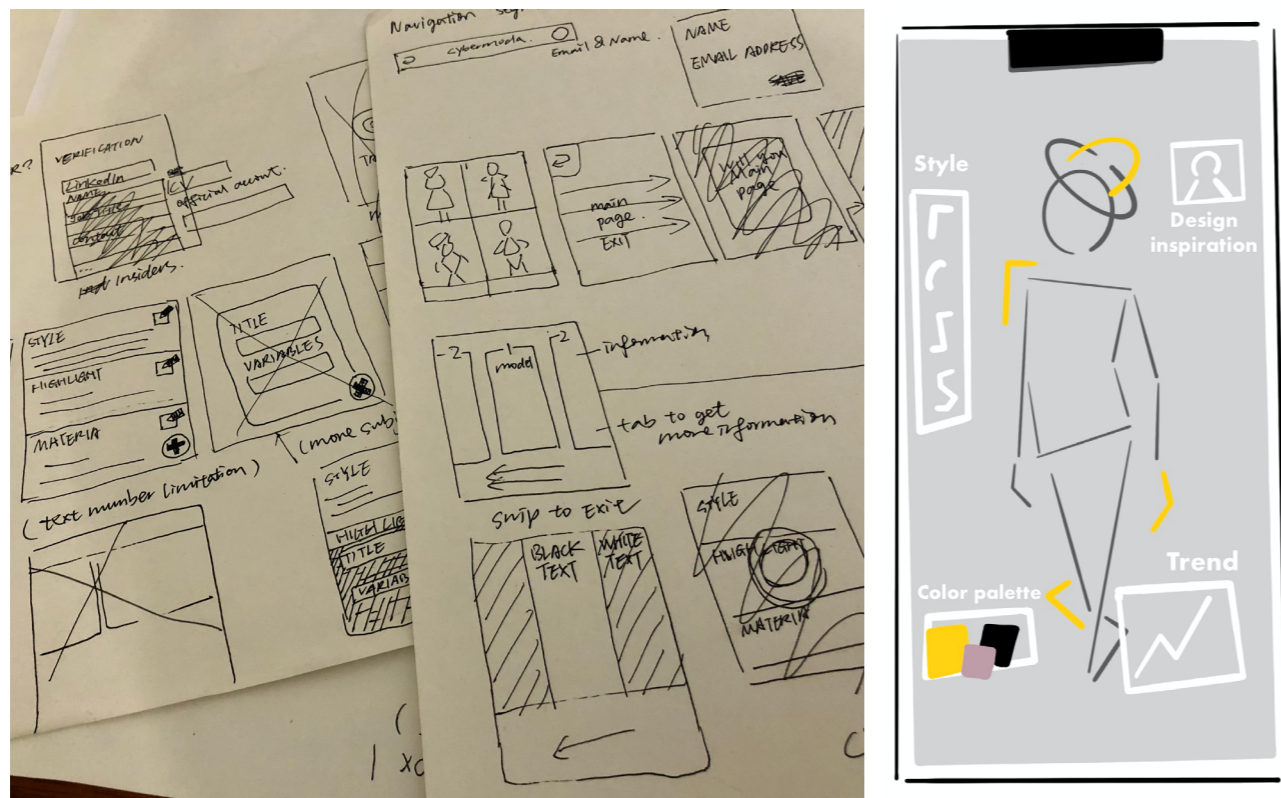
↑ **Fig. 19**
SKETCH OF UI

designed into the AI, there are some sketches and draft**Fig.19** before. The image shows the primitive user interface.
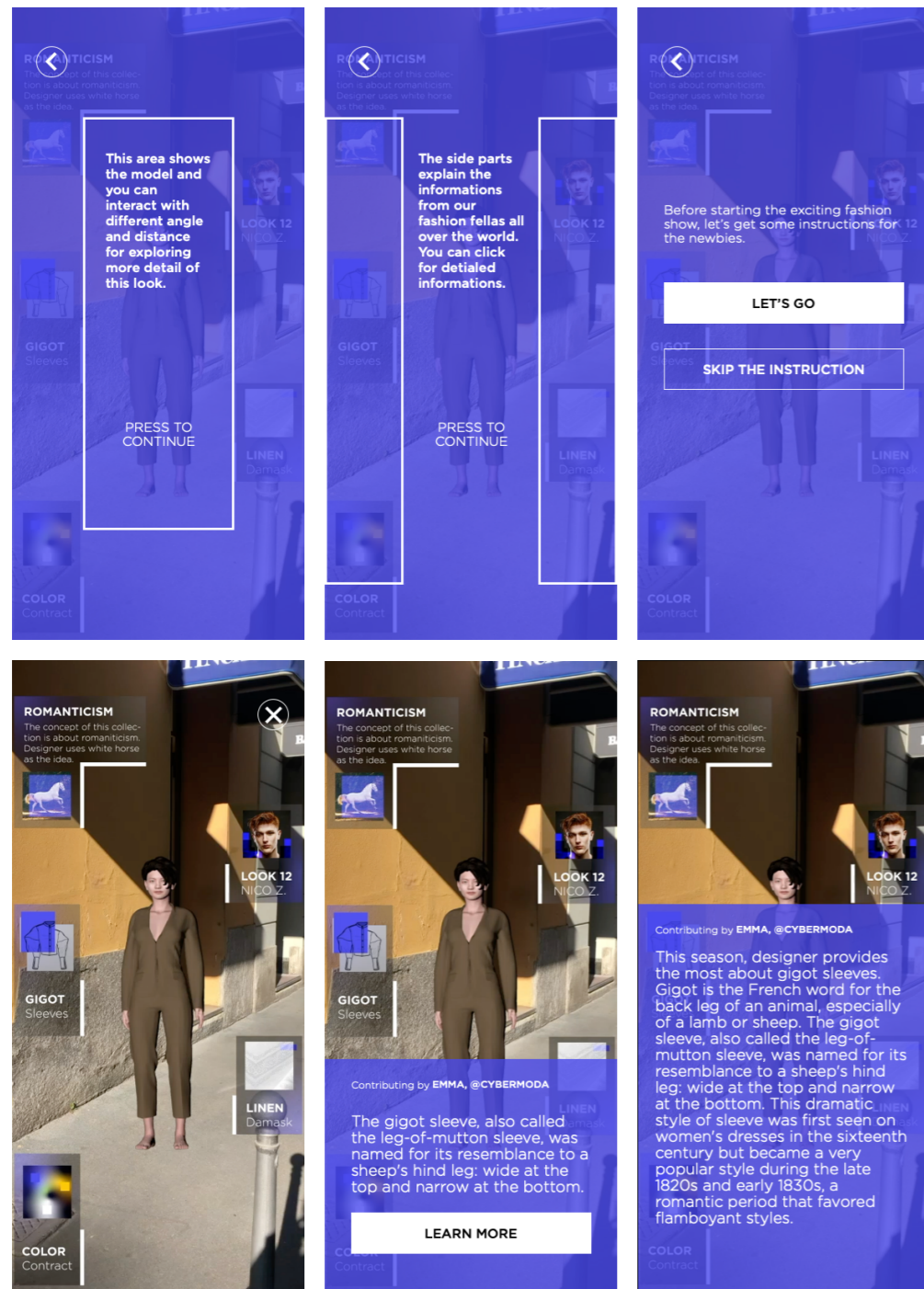
The navigation UI**Fig.20** shows the overall primary function of APP, such as the registration for different users. For example, for regular users, they can directly insert their name and email address. After verified the confirmation code, they can go through the AR experience. However, for the insiders, they have two choices, log in with LinkedIn or register. Log in with LinkedIn is easier and faster for the users. Because for the editor's identity, is the guarantee for the quality of the information and comment on the AR page. Also,
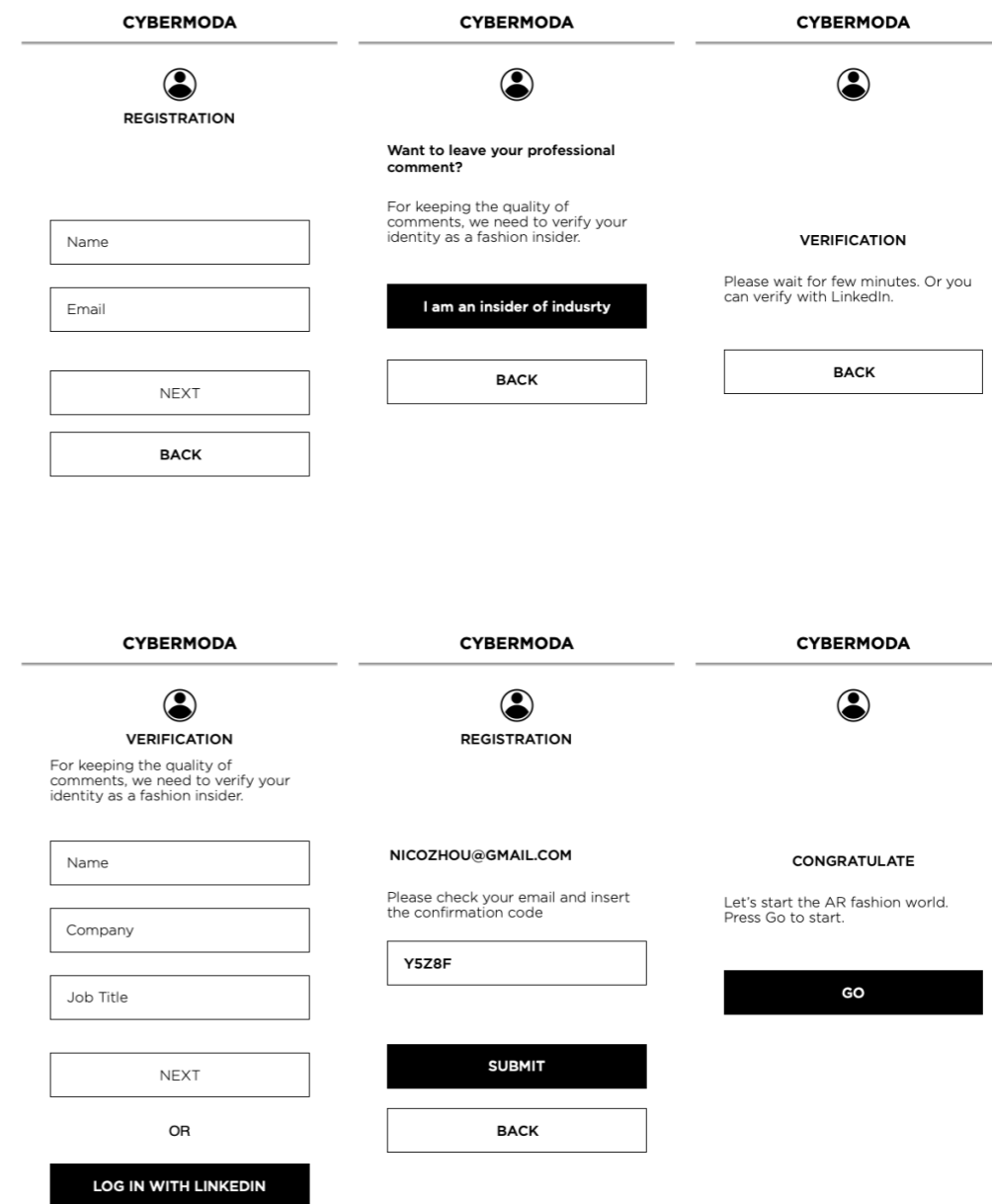
← **Fig. 20**
USER INTERFACE

LinkedIn is an official job searching platform, and relatively faithful for verifying the identity compare with other platforms. If users choose to register on the application, then they need to insert the name, company and their job title for verification. The backstage can send the email to the company or search on the business investigation platform for checking. The reason why strictly checking the identity is that, to maintain the service's quality and professional information delivery. After registration, for the users who are the first time of using the application, they will come to the instruction section of explaining the operation. It explains how the content will be triggered by variables, such as different angle or distance. Then, the side parts show the information from the other professional contributors of the community.

On the main page**Fig.21 (P.82)**, there are two parts of the user interface. One belongs to the AR mode, and the other one is inside the application. The reason why here it is separated into two parts is that the trigger is different. The user interface of the AR mode is part of the AR system. It means it triggers with the AR
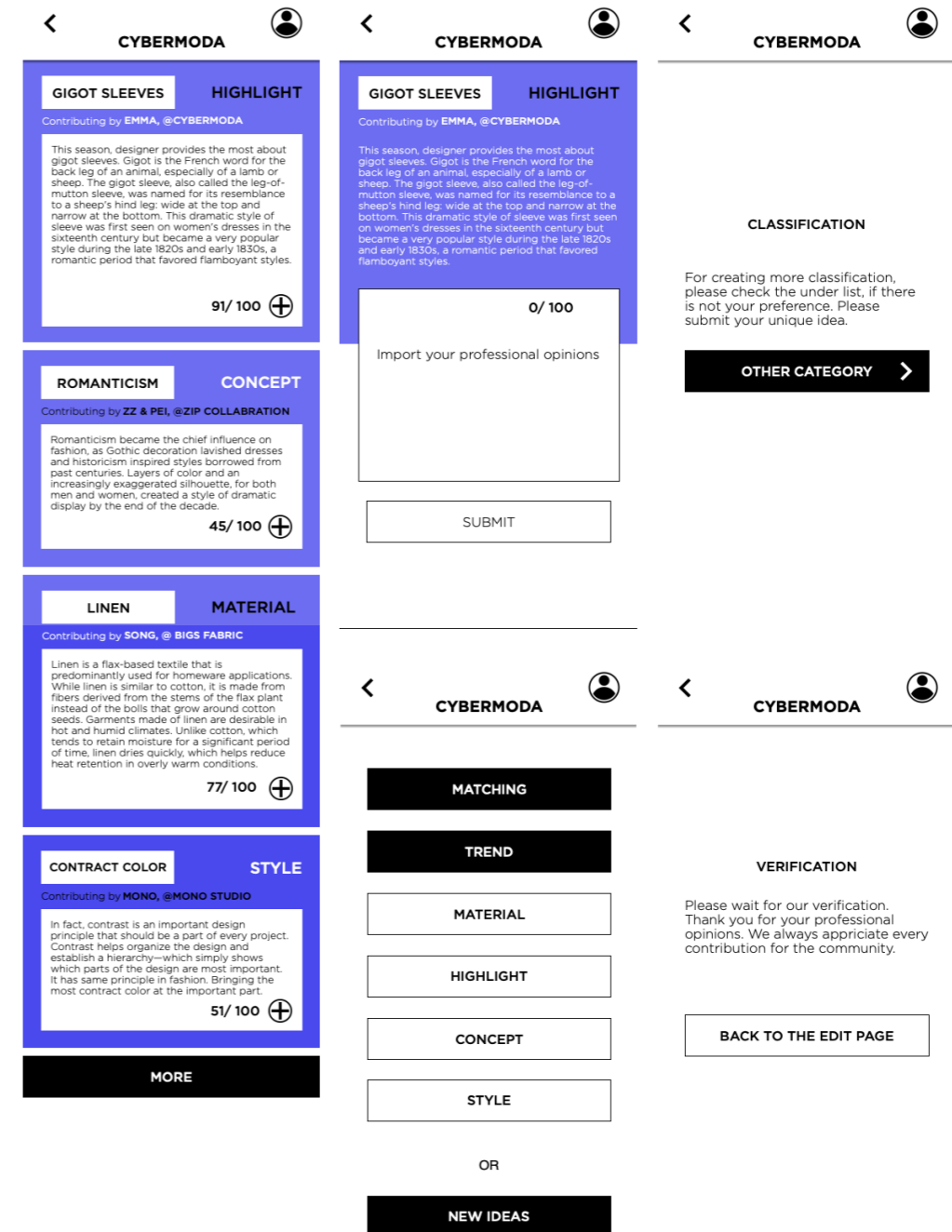
last is only for the users who are the first time watching the show.

For the editing mode**Fig.22**, the insiders need to access through the menu. After that, there is mainly two editing mode. One is adding the comment on the existing categories. The other one is creating new categories. After clicking the adding icon on the first page, it appears the import page. When I finished

system function. About the detailed information which inside the application using flow, it triggers by touching. Also, the detailed information has two versions, brief and full information. Because during the AR mode, users need to hold the phone for a long time, for reducing the required time, quickly getting the information first, and learning the detail content after. When users interact with all the looks, the sharing page reveals after. The way of sharing in the current stage is usual. However, in future, if combining with the function of social media sharing. The method of

Sharing page can proceed during the AR experience. Assuming users share the app link with their friends, the lookbook page is the next. On the lookbook page, it contains all the looks of this show, and if users are not the first time to access this show, the look book page will place right after the menu. Look book page on the

the content, it needs the verification procedure to maintain the quality of comments. Also, the new classification needs verification. By following the instruction, users can place more information on the AR mode. Editing mode is designed for the insiders. Therefore, in this mode, the high efficiency of importing the text and quickly create the new category are the aims.

For the user interface of the AR mode, which is the main page of the APP, it uses blueish purple and white as the primary colour. The colour of white uses for the text and the purple uses as the background for normal information delivery, whereas several red background colour appears as the reminder. The typeface is used Gotham. For separating the functions of texts like title and content, different typeface and colour is the way to build the hierarchy. If using the same colour as the text, I will use Gotham Light and Bold. In contrast, if the typeface stays the same, then using a different colour to deliver the visual information.

The user interface for the stylist contains five types of information which are colour, model, material, unique feature and design concept. The reason for the arrangement is that the job of stylist during the show mostly focuses on these five points, also in future users can customise the categories. The conclusion of these titles on the prototype is from the personal experience as a stylist during the fashion show, the research and the interviews with other dressers as well. However, in the future, these titles will appear to depend on the quality and quantity of comments. The size of the demo is designed into the frame of iPhone X. The UI for the easter egg is the same as the structure of the UI for the stylist. At the first place, I have decided to use 2D for delivery information. However, during the developing stage, there are extra 3D models for visually demonstrating the content. For better and fluent experience, I did not use 2D information mode. The 3D information banner follows the colour palette and the typeface of the UI system. It contains some more models to understand the information better.

The UI in the sketch video is designed in the Adobe After Effect. The visual part uses a lot of transparency colour, such as purple and yellow. There are lots of components simulating the gears for detecting body state such as stabilisation, loading process, Etc. The typeface is used Gotham as the UI system. The style follows the cyberpunk world. In general, the background shows the unstable of the system by using the fractal noise effect. The importance of this UI is the effect. Compare with the usual UI design phase, the software such as Principle and Adobe Illustrator has less flexibility on animation. Because the purpose of this UI is to show the changing based on the environment, therefore, all the effect is designed by Adobe After Effect.

5.5 DEVELOPING

Xcode and Reality Composer are the main platforms for developing the Cybermoda. Xcode is a coding platform with the latest language for iOS development, Swift. It allows designers to create the Application without requiring a high background of coding by their interface builder built-in feature. Also, Xcode uses SwiftUI, which is using declarative syntax, allows the user to state the function of each component during the user interface developing. Also, there are lots of codes for helping designer's developing. For example, ARKit is a considerable improvement from Apple. It also depends on the hardware updated. Apple reveals the new generation of the camera with the depth of field detecting. With the hardware support, ARKit allows users can catch the real scenes with the 2D or 3D elements. It seems similar to RealityKit. The Reality Kit also helps developers to synthesise the reality and 3D model. RealityKit leverages information provided by the ARKit framework to seamlessly integrate virtual objects into the real world.47 In short word, ARKit is the base of AR experience that implants in the iOS devices and the RealityKit is specifically increasing for the 3D model's performance into reality.

Also, during the process, Reality Converter as a 3D file format transformer helps to switch the regular 3D file into usdz. file. During the Application developing, it only allows the usdz. file to deliver the 3D or AR experience on the iPhone or iPad. For now, Reality Converter allows the user to use fbx., obj., and other formats. It is worth noting that Reality Converter only supports the abc. file in a single frame. It means that during the previous stage, we made the abc. file for the garment which not allows converting the animation. To fix this issue, currently, we can only abandon the quality of garment texture, which means synthesise the model and garment at first, and then adding the movement. This way, we can export the fbx. file with the movement and convert to the animated usdz. file. However, the disadvantage is evident that the garment looks unrealistic. Also, even we can import the abc. file into C4D with the model and export as the fbx. file. It also appears in a single frame. Probably in the future, this problem will be fixed. However, for now, for achieving the final goal, we can use this method to convert the usdz. file.

Back to Reality Composer, it is a powerful software to build the AR experience between iPhone, iPad, and Mac. When we create an AR App building preset on the Xcode**Fig.23 (P.86)**, there will be a .rcproject file. We can directly open the file with Reality Composer. It means each setting on the Reality Composer will automatically synchronise into the Xcode without coding, not only code-less developing but also the Build-in AR library and
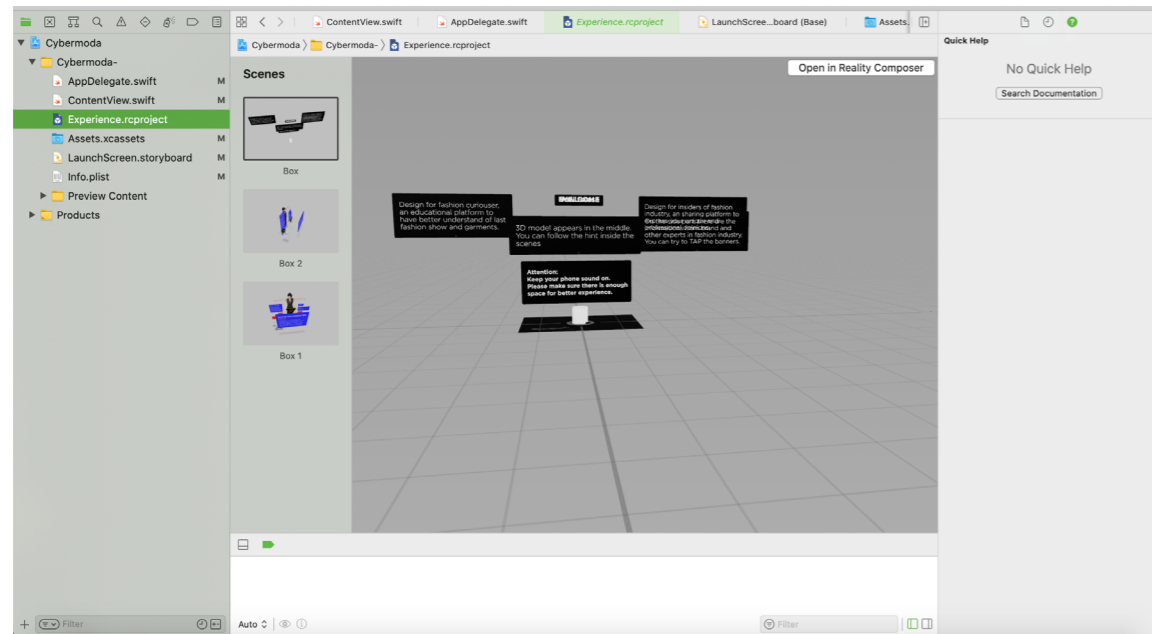
Fig. 23 DEVELOPING IN XCODE

different interaction settings. Reality Composer allows user to simply import the 3D model into the Build-in library with the usdz. file. Also, there are lots of interaction methods. The triggers are not limited in tap, proximity to the camera, collide, Etc. Moreover, the actions are shown, hide, emphasise, spin, play sound, and other significant effects. All of the settings inside the Reality Composer do not require to code a single line. It helps a lot for designers on developing AR App.

Moreover, Reality Composer allows developers to test the Application without building them on the devices. The AR Application building does not support with the Simulator, which is the professional simulator with the Xcode because of the camera required to detect the environment. Therefore, each time if developers attempt to run the App, they need to export and build into the devices that connect with the Mac. However, by using Reality Composer, they can Airdrop the .rcproject file to different devices directly. It sounds not a significant feature. However, during developing, there are lots of times to test the prototype. It sharply shortens the duration of testing. Reality Composer reveals during the 2019 WWDC. However, for now, it enormously helps and improves the work efficiency for designers.

In conclusion, the developing of the App is mainly using the features of the preceding content. First of all, developers can create a new AR App preset file on Xcode. Then, opening the Reality Composer to insert our usdz. files with animation, the models can automatically import the build-in library. After placing all the component and elements, we can start managing the triggers and actions, which users will interact. After that, before building the App, we can share the file to iPhone for testing via

Reality Composer. After checking the functions, we can start to export and build the App on the iPhone. The differences between testing via Reality Composer and building on iPhone is that via Reality Composer; the file is still by using the review mode. However, after building on the phone, it appears as an independent App on the home screen. After the functions checking in the full version of the App, developers can upload the launch page and the App icon. The launch page appears on the file named LaunchScreen.storyboard. For importing the image, we need to open the asset.xcassets file to open an image set, it allows different dimension for the image. Moreover, there is the AppIcon set; developers can directly upload the icon with different size. After uploading the image into the image set, developers need to import an image section on the launch page; then on the image view function, they can choose the image they uploaded. In the end, going back to the general setting of Application, remembering to choose Launch Screen File to LaunchScreen, then, the App's setting is ready. After this process, developers can upload the App to the Apple Store Connection. However, there is another critical task before launching. Developers need to test with the testers as much as they need to verify and improve the Apps before they reveal on the Apple Store. It means the App needs to be uploaded to the TestFlight. For testing the App, developers need more external users for improvement and debugging during user testing. TestFlight is a platform provided by Apple, which allows the developer to share the App to more users via email invitation or public link. Before uploading to the TestFlight, making sure the developer account already subscribed the Apple developer program. Then, going back to the Xcode, developers archive the file to the Apple Store Connect and following the guide and uploading. This period will take such a while. During this time, developers can open the App Store Connect via an internet browser. On the App page of App Store Connect, adding new Application and fulfilling the form, then developers can enter the detailed information for the App. The archived file will appear on the TestFlight page. After one to two days backstage checking, developers can invite the external users.

During the developing stage, there are lots of difficulties and crash. Except for the usdz. file converting progress, uploading the App also has to have patient on the file formats and the uploading guidance. Also, the Reality Converter is still the Beta version. Sometimes the material disappears on the review mode. However, even though there are lots of obstacles during developing. For designers, the current software is far more friendly compared with years before.

5.6 TESTING

For user testing, I have followed the initial fashion show functions, from entertain and commercial aspects to evaluate the Cybermoda as we mentioned, in the previous chapter. For testing the App, it is necessary to upload the App to the App Store Connect. Before the test, we can add the external testers via email or active the public link. I recommend inviting via email with the redeem code. For choosing the target testers, I mostly chose the tester's profile and background similar to the Persona. In the first round of testing, I have invited three males and three females for testing the entertaining feature of Cybermoda. Their age is around twenty-two to thirty. They are interested in the fashion industry in different ways, but they are not fashion insiders.

After that, there is a second round of testing for another group with three people at a similar age. At this time, the target users are fashion insiders who know about fashion and engaged in fashion work. During the test, I have made the video recording and an individual interview for each tester. The reason why there are two rounds of testing is that the target users of Cybermoda are different. From normal users, the concentrate is a sense of ritual and immersive experience. In a word, their focus is experience. However, for the fashion insiders, the App needs to provide a platform which involves their professional work. They focus on the efficiency and operational performance of the application.

During the testing, the stories are different. For regular users, after start the recording, I will not interrupt their procedures and only prompt when they are trapped. For the insiders, they will use the editor mode for Cybermoda. They have a background story as a fashion insider to deliver their pieces of knowledge. The first round of testing focus on ordinary users. The questions of the interview are the same. There are ten opening questions and a discussion about Cybermoda. After the first round, the barrier of Cybermoda is that the human size model requires a blank space for detecting. However, for their living environment on their age, most of them rent the house with a roommate, and their sharing space is not always enough for supporting moving around in a large space. Moreover, some of the text is difficult to read. When they are reading the context on the banner in the 3D environment, they felt exhausted. Also, several of them do not understand the purpose of Cybermoda and the easter egg. Therefore, for the second round of testing, I also fix this problem. For the first issue, Cybermoda will remind users to go to a larger space for a better experience. To solve the reading problem, Cybermoda will reveal two dimensions of reading mode; there is a switch on the screen to adjust 2D reading mode or 3D

reading mode. Last, to better understand Cybermoda's concept, for the first entry, there is a section of educating the users by using video to understand better what Cybermoda is and how easter egg works. Also, there is a welcome banner with several introductions when the AR mode active. The user behaviour is not easy to train, but subtly implanting the concept and guiding the user is also the duty of new generation application.

For the second round of testing, I invited five fashion insiders; their job titles are fashion designers, show producers and PR. Their opinions are more about the commercial and the utility of brands. The questions and the background story are different compare to normal users. It also confirms with my purpose to verify the commercial aspect of Cybermoda. After the interview with them, they react naturally differently. Also, their feedback is totally in another way. First of all, they all approve the accessibility and sense of participation. It will get more people involved in the fashion show. At the same time, it will bring more exposure which is what the brands and designers eager. However, also the concern about the quality of the 3D model. The texture of the garment is not correctly shown on the App. From brands or designers point of view, their first task is the sale. They will choose the way it can perfectly show their products. In the other hand, they also agree that the 3D model will be the trend. During the writing, in October 2020, Mugler reveals their new fashion film with the 3D model of the supermodel Bella Hadid. They have to use body-mapping cameras to gather the data of model and bring the digitalised her into the scene with full sci-fiction feeling.

After the user testing, the pros and cons of the current version of Cybermoda are clear. Moreover, the data broadens the direction. In the next chapter, this thesis will be detailed to explain the possibilities and opportunities in future.

CONCLUSION

Under the pandemic situation, remotely working is the most direct way to keep the society operating. In Italy, fashion is one of the essential industry. Also, fashion show as the most significant activity for the fashion industry needs to evolve with the times. After the analysis with the history and definition of the fashion show and the current technology, which can help to solve the issue that the fashion industry faces. This thesis reveals Cybermoda.

Cybermoda is an augmented reality application, designed for insiders of the fashion industry and fashion. Providing an attractive platform for fashion lovers to learn professional opinions from worldwide fashion insiders interactively is the purpose. It shows the models and garments in the three-dimension environment by augmented reality technology. Moreover, fashion enthusiast can acquire fashion knowledge from different insiders' or characters' identities. For example, from the buyer's perspective, users will know the information of material, highlight design point, colour trend and design concept. The information shows on the banner with the models at the same time. It provides a new direction for fashion industry under the pandemic or even for the future. During

the design period, I have used lots of design thinking and interaction design basis. This application is a hybrid subject project. Also, it proves that how interaction design can influence other subjects of the design field. In future, the chance of innovation will also be based on combine difference design direction together. Back to the initial motivation for designing Cybermoda, the variable element system is the foundation. Cybermoda is one of the projects that follow the theory. This theory will help to build an interactive experience for more design projects.

FUTURE WORK

Cybermoda is not perfect, and this project is not finished yet. In the future, there will be lots of possibilities for it. During the testing, lots of users declared they positively expect more improvements and innovations on Cybermoda. Combine with the current barrier of technological developing and the potential improvement in future; this chapter describes some imaginations about Cybermoda on the following words.

First of all, most testers complained about the space, size of the 3D model and the 3D model's anchor. For solving this problem, Cybermoda is imported World Tracking, which allows the App to detect the surface in the real world and place the model with AR illusion. Also, in future, it can import the coaching overlay. The ARCoachingOverlayView is a visual instruction for helping users detecting the environment at initial, can help people to fix the anchor's issue. After that, about the content, Cybermoda in future can apply more easter egg identities and regular characters. As the recording of user testing, some users desire more scenes to interact with it. Also, like a fashion show app, enough content no matter garment or information is the first task.

After the user testing, Cybermoda also updated into the second version. During the testing, lots of users do not understand what Cybermoda's meaning is and what should they understand. Therefore, in the second version, there is another procedure, the invitation system. Each user whom first time enter the Cybermoda will receive an invitation. This invitation as an image anchor on the App, and will trigger the introduction and instruction system. After the introduction, users can press the button to enter the main content.

Some users consider the models are not realistic. There are two directions to solve this problem. First of all, improve the model even more realistic, here I used CC3 to create the character which is used a lot as a 3D character software for CG animation. In the future, with higher precision of the 3D model and better effect of the gravity of garment, this problem can be solved. However, during this procedure, Uncanny Valley is one of the problems of building the 3D model. Upon reaching the uncanny valley, our affinity descends into a feeling of strangeness, a sense of unease, and a tendency to be scared or freaked out.48 To avoid the dead zone of the uncanny valley, a 3D model needs to near hundred percent similar to human or converted changing the model, not like a human at all. Then, there is another way to improve the models, adding some unrealistic elements and bring more empathy and engaging experience. For example,

instead of using the human appearance model, Cybermoda can import the cartoon character, or film characters to evoke the sense of empathy from users. Moreover, it depends on different design concept from brands, compare with the traditional fashion show, Cybermoda can place the virtual character on the stage, which can be a creative element for the future.

About the reading experience, in the future, Cybermoda can provide two modes of reading, 2D and 3D. Some of the users' feedbacks are about that during reading, holding the arm is not convenient, and there are some distracts in the real environment. For improving this situation, 2D and 3D mode can switch on the screen is not only presenting a better reading experience but also instead only using 2D, keeping the 3D mode is giving a more fluent using flow for users.

Then, talking about the target users of this App. First of all, the original target is the insiders of the fashion industry as an information-sharing platform for the public. After the user testing, I have found that this App can be used in more than just sharing platform. It can be used as an education tool. For fashion student or fashion enthusiastic, they can learn from it. On the platform, there are lots of fashion insiders to share their opinion and also provide a more visual and direct way to demonstrate. Because except some technics such as deconstruction, tailoring on fabric is mostly in 2D. Then, 3D models can help them to understand the structure and how the fabrics stitched together quickly. Therefore, as an educational platform, Cybermoda can evolve with the function such as the technic structure explanation banner.

Then, another direction of Cybermoda can be the ordering platform since one of the most pillars of Cybermoda is unlimited of location. The buyers and press can access the late design without the distance barrier. It can help buyers or press to get the information on time. Therefore, as an ordering platform, it can have more functions such as the entry for ordering online, or the online seminar for designers to explain and communicate with the press and buyers.

Moreover, if the direction of Cybermoda becomes more as an entertainment, it can involve the virtual influencers and have additional functions such as taking photos and sharing into the social media. Also, by adding the anchor of geographic locations, it can arouse the users' desire to use. Additionally, it can also provide the customised function for increasing the potential. Also, for following the trend of e-commerce, if Cybermoda provides the online purchasing system, it can have a virtual fitting system. At November in 2020, CLO reveals their fitting and try-on feature which allows users to embed the fitting viewer into the website with a virtual environment. Users

can select the avatars with customised shapes and sizes.

In total, the potential development directions are various. As the tester GAO said, Cybermoda corresponds with the technology and the times. It can significantly increase the confidence by technology development. I can imagine Cybermoda present without the limitation of the device and truly achieve the Multi-Reality in future.

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Interview with experts or insiders of fashion industry

Lanyu
Stylist
Paris

Q: Can you explain me your role during a fashion show producing.
A: In the defile day, my duty is the communication work in backstage, but only focusing on the garments, such as confirm model's look is matching with the plan. And make sure all the process works as plan. It's a teamwork. And even, we have to continually work even not at defile day.

Q: Did you watch the Milano Digital Fashion Week in July?
A: I didn't do much, but I think it brings to us a special experience, I think this pandemic situation brings lots of changing of producing to the industry, such as this MDFW. I think this changing is expectant.

Q: Do you think Traditional Fashion Week will substitute by Digital Fashion Week?
A: Not entirely. But it will remind the brands, how to express in an innovative way. In my opinion, fashion is a physical thing. The physical experience and senses are both important, not only for visual. For example, the quality and feeling of textile, just through media, is really hart to feel.

Q: Someone think fashion show is a visual stimulus, what do you think?
A: I don't think it's a stimulus, it's a way to express, to present.

Q: If just choose one of five senses, what will you choose?
A: Visual. I cannot only choose to touch. I think in future, the new direction is changing the way of launching the fashion show, not as before. So in future, the fashion week will not be the fashion show in traditional definition.

Q: Have you watch some fashion film? How do you think this express way?
A: Recently? I watched Celine, Valentino, Gucci, Dior, and Chanel. I think in the industry, it does't change the traditional way of fashion show launch. Now it has to be changed, it's a new start. Even though I don't know how it will look like in future. But I think it will force the company to examine how to express and what to be expressed during this special period. In future there will be more interactive way to express, not only visual, or by video, more unexpected way.

There is a huge difference between attending personally and remotely. In traditional way, it's only aimed at few people's experience. But how to express the information to mass people, it's still seeking. This feeling is like, attend the film premiere and watching Netflex at home on iPad. The traditional way of catwalk is still stereotyped, and it's bored. Invite, entry, show social and left.

Q: How do you think social media influence fashion show?
A: It's significant. Models are losing their jobs. I'm not sure this effect is from social media or pandemic. For me, it will remind me to think, what exactly this industry need, and to communicate. What's the meaning of the industry. Because this pandemic influences in a different way in different aspect of fashion industry, but all of them are significant. I will ask myself, is it a really necessary thing for everyone, and why?
Q: Did you find the answer?
A: Still thinking, but like, during the pandemic or war, the first thing abandoned is cloth.
Q: Like all the people wear the uniforms, but also during liberation clothes is the easiest way to change. This is the low cost way to change.
A: Exactly, the lowest cost of a personal label.

Q: Do you think fashion show is an exclusive activity?
A: Attending the defile for different people have different meanings. Because of the different standing of attendance, the society or media gives fashion show a different definition, it will brings the exclusive feeling for mass people. Maybe this is the result of combine fashion and other industry, like entertainment. At first time, it is a professional activity for inner industry, because fashion show at first, is proceeded for people who want to buy the garments. But by the development of society, it needs to involve more people inside. During this process, there is a conflict point. It need the attention from mass people, but also need to keep the distance with the normal life.

Mitchel
Luxury Store Consultant
Milan

Q: First, can you briefly introduce yourself?
A: I am Mitchel Tanyaradzwa and currently based in Milan just strolling through the world of fashion in an Italian way.

Q: How the COVID-19 pandemic situation influence your work?
A: The COVID-19 pandemic has affected so much the fashion industry but of course brands are really trying to find ways to reach out and staying in touch with their clients by thinking of new ideas and thanks to online shopping and Instagram the fashion industry has managed to get hooked on that. I mean yeah there haven't been fashion week in a cultural way we are all used to. The pandemic has affected my work in the sense that you don't get to have a lot of projects but then it also gave me time to build up on my ideas and reinvent them to be more bold.

Q: During your work, when you interact with clients, what do they think the most?
A: All clients want to get something they are happy with, something that will compliment their style. So it's funny working around that getting to know someone through their style

Q: From you perspective, what do you think about fashion show?
A: I love fashion shows it's an unbelievable moment for me especially when diversity is in it I go crazy. It's such a deep feeling seeing the new collections and trying to figure out how a designer come up with that as I see models passing by. Also I love to see people who attend fashion shows their style is always on top of the world it's a different world.

Q: When will you pay close attention about fashion show?
A: I always pay close attention to fashion shows cause the world is evolving so I try as much as I can to be updated.

Q: If you are the show producer, what will you change?
A: If I was a show producer I would emphasize more on diversity it's still lacking I want to see more people of colour out there showing their talents

Q: What do you think the impact from social media, such as instagram, twitter.
A: Social media is playing a huge role I have made so many good friends that work on fashion industry through Instagram and I'm so grateful. Social media is helping so much cause if you have a content creator that creates outfits you like then all you got to do is follow them and engage more with their content and yes the next thing you improve your style too. Social media it's a good and bad place so it's up to the user to choose where they wanna take their energy. People are making money moves through social media.

Q: According to the recent situation, how do you think the evolution of digitalisation influences the fashion show or fashion industry?
A: Digitalization is playing a big role cause now just a photo can communicate a lot of emotions which is also good for the brands cause they get to make more money but of course after investing in the digital works because it's a social media world now we are communicating more with photos. It's a way of also capturing clients

Q: What do you expect about fashion show in future?
A: I love how the fashion shows are right now like I said I hope to see more people of my colour taking space too.

Olivier Blanc
Creative Director & Show Producer
Paris

Q: First of all, can you please introduce yourself?
A: My name is Olivier Blanc, I am a Creative Director, Designer and fashion illustrator. I have worked with my own business since 2006 in England. Later I went to China to work as Programme Leader and Senior Teaching Fellow in China.

Q: Your background are broad, between these roles, during the fashion show, will you have different experience?
A: The design process and creative process is more or less similar. You have an audience that you need to satisfy with good designs, good music and good lighting. You also need to think about the "wow" factor, what will make the audience amazed by what they see or discover during the catwalk.

Q: When the first time you get into a show producing process, what's your role?
A: as a creative director, the first thing you need to do is choose a theme for the show (depending on what you show during the catwalk) and then you choose a team that you are going to work with.
Q: How about as a show producer?
A: it is more or less the same function. art director, creative director, fashion how producer

Q: so how did you become a fashion show producer/creative director/ art director?
A: through the years with my business. I worked on different projects then met different people and opportunities got created. After that people ask you because you have done it before.

Q: Did you count how many shows you produced?
A: not really. Because there were shows I was the creative director for and there were shows where I was a consultant for.

Q: Which show do you like the most that you produced or you participate as the design team?
A: There were a few shows in England and also in Beijing that I enjoyed as the music and the lighting were in synchronisation which gave the designs real life. for me the musics and the lights give the bits necessary to a good rhythm. the audience need to have movement or people get bored.

Q: How did you achieve this concept in the past?
A: by selecting a good team and by overviewing every aspect. I always make sure that everyone does their job correctly and that they follow the creative plan. A fashion show is a visual story: images, lights, sounds. I work and select the 3 things myself. I work from my vision.

Q: Yes. Talking about team, did you work with with a production company? like a fashion show agency.
A: You work with a model agency, a production (light and sound) company. But sometimes, light and sound will be at the venue. So it depends on the venue and the budget as well

Q: I see, so do you always have sponsors for show?
A: again, it depends on the people and companies you work with. sometimes yes and sometimes no. if you are short in business, you may search for some sponsors. If you want more coverage you may also ask sponsors to help with this.

Q: is the pr work also be the show producer's job?

A: The producer will overview this to make sure people know about the show. but this job will be done by PR people for which it is their specialty.

Q: Understand. PR as an isolated department supports the show. Right?
A: The PR people can be part of the team that the director leads. or the director can hire an external company.

Q: Right, is the graduation show different from the commercial show?
A: not really, Graduate fashion show operates the same way as any other fashion shows. The difference may be the budget but again that depends on the universities and companies.

Q: Understand. I've been one time for our graduation show. It's just too much workload. I can imagine.
A: yes, of course, because you have the work of different designers. so there are a lot to accomplish a show.

Q: Can I ask, during the show, what will you do?
A: before the show, you have different rehearsals to make sure everyone knows what they are doing. During the show, you check that all is good but there is nothing you can do anymore so you let the show happen and be a success.

Q: Do you get the feedback after the show?
A: you ask for feedback but because it a creative thing you will have many people giving you different point of views which are not always useful. What I do, is during the show I observe the audience and see how they react to light, sound, music, designs etc. I take notes for the future shows.

Q: ahaha. really? will you feel pressure from the company or designer work with?
A: not so much pressure, but I want things to be perfect, like the vision I had at the start.

Q: right, so the fashion designers actually don't get involved so much during the show producing?
A: it depends. if you are a designer and want to direct your own show you can. but sometimes it is better to work with someone from outside who will have a fresh eye on your work.

Q: For fashion show, what do you think the impact from social media, such as instagram live?
A: it is fine and a good PR tool. but if I am a spectator, I prefer to watch the show with my eyes, not through my phone.

Q: Do you think online live fashion show will replace the physical catwalk?
A: NO! People love the glamour of going to a fashion show, watching it live does not make you feel like you are somewhere. Imagine: I watched the Chanel show live. yeah, nice. Imagine: I was invited to go to the Chanel fashion show and sat down with all the celebrities. WOW WOW. this is why, it will not disappear. The same applies to parties, art galleries, spectacles, even KTV haha

Q: But according to the recent situation, how do you think the evolution of digitalisation influences the fashion show?
A: it will evolve for sure, but audience will still go, even if restrained, and brands need people to come. it is part of the glamour of the whole thing.

Q: Do you think fashion show need to be exclusive?
A: yes and no, exclusivity brings "special", and special sells brands.

Q: What do you think about Milan digital fashion week in this month?
A: i think it is interesting because it keeps the buzz going and also the interest in fashion.

Q: Do you think interaction between audience and fashion show need to be change?
A: I think it is changing already. Social Media is pushing change.

Q: right, what do you expect for fashion show in future?
A: ah, More grandiose, more live.

Q: what's the most frustration during your show producing that you want to change?
A: people not pulling their weight, people not following the plan, but saying this you can fire them.

Q: what's the obstacle that you cannot change but you want?
A: nothing really.Bobbi
Brand Founder (Rabbithole London)
London

Q: First of all, can you introduce us Rabbithole London from your perspective?
A: For me, Rabbithole London is not only limited to the garments or clothes, it's more like a representation of circle culture. From the brand's product style, it's more about minimalism. Using the simple tailoring combines the pop element and street culture. Then, Rabbithole London is more like a platform, from ourselves to extend, absorb, and communicate with people or things which we are interested in. After that, we express it in our way. This is about brand culture ecology.

Q: What's the marketing strategy for now?
A: Mainly we're cooperating with the offline buyer store.

Q: Who is your target customer group?
A: Someone wants to physically feel the nature of the product itself, such as textiles, tailoring.

Q: Especially for who? Maybe a persona?
A: I didn't think about it.

Q: Has the brand organized the fashion show before?
A: We appeared in a showroom in 2016. For the runway, we didn't.

Q: How long?
A: We proceeded SS and AW, each of them for 1 week.

Q: How is the result?
A: Pretty good, at that time, we have 16 distributors out of China.

Q: Why didn't keep doing the showroom?
A: The inner team of the brand has some issues. It causes us to have to break for one year.

Q: How is the cost of the showroom? Was it expensive?
A: Not really, because we defined ourselves as a lightweight brand, so we don't have such a big scale. But the most important thing is that showroom providing a platform for actually feeling the product and also communicating.

Q: From your point of view, what is the biggest barrier to arrange a show?
A: First of all, from the product, we still have some gaps. Second, we didn't have a good chance, and finally, must be cost.

Q: Can you explain the "gap"?
A: Such as the rememberable point, or something different from other brands.

Q: Until today, is the brand solving this problem? or by these years practices, for this issue, what's your plan to answer this question?
A: In fact, this process is difficult. We need to keep the original things and also find the new exit. We keep looking for it, but the balance between these two elements is difficult.

Q: As an independent brand, what's your expectation for the runway?
A: It might that, have enough space to show our product and concept.

Q: For the interactive fashion show, what's your thought?
A: I expect something new, something different.

Q: Have you follow Milan Digital Fashion Week? Do you think this form of a fashion show can satisfy your concern?
A: Yes, I have. This form has more possibilities. It can present something new which not appear on the conventional show.

Q: Compare the live-stream fashion show and fashion films on MDFW, what's your opinion?
A: Subjectally, I think the effect is the same, but only the manner or the mode of presenting is different.

Q: Do you think social media influence brand in a significant way?
A: Yes, huge. At earlier times, we didn't follow the trend, almost knocked out of the market.

Q: Can you describe the circumstance?
A: In 2017/18, the whole industry becomes focus the operating on social media. At that time, we still thought the product is the key point, if we can produce the high-quality garments, we can succeed. However, we are too naive. To be honest, even some brands' product just on average, but a good social media operating can make it successful, if the product is better, then the development of brand will get twice the result with half the effort.

Q: During the pandemic situation, does the brand get influences?
A: Yes, because for now, we put the focus on the Chinese market, and pandemic directly influences the retail. It slows down our development in China.

Q: How to solve this situation?
A: For now, first, we need to control the cost and reorganize the sources for trying to proceed with a less-cost way. Just survive first.

Q: What's your plan for the future?
A: The most important is still cooperating with some offline stores, and then expanding the scales of the brand influences. At the same time, we need to absorb more talents for this big family and then, we will proceed to the showroom and try to hold a fashion show in the future.

Interview with testers

Emma
Sculptor
Female, 25

How would you describe Cybermoda in one or more words?
It is brand new. It attracts me to use it.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: I can interact with the model without distance. And I love the way of presenting.
Cons: First of all, I don't know what should I do to interact with the model. The mode of interaction is just two ways. And I expect more models, I just get involved, and it's done. And if there is an introduction to App, I will understand better the purpose of this App.
By the way, if it is possible to add some components on the background, just like a fashion show, it will make me more immersive.

If you could change one thing about Cybermoda, what would it be and why?
I will make the model can talk to users; it makes it more realistic.

What do you find most frustrating about Cybermoda?
This App requires much space. I need a bigger space to play with it.

Would you recommend Cybermoda to a friend?
Yes, I will. This method of interaction is new.

What do you like best about Cybermoda?
I love the interaction. It brings my attention. And the experience is fluent, and I can directly understand the detail of information, not only beautiful clothes.

Will you increase the intention after the experience of Cybermoda?
Well, when I shop online, I prefer a model to have a similar size of mine, and I can see the effect. Also, I want to make a different matching for review. If I wonder a dress and a pair of shoes, I love to see them together.

Overall, how easy to use, do you find Cybermoda?
Yes, it's easy. But as I said, the pre-introduction is essential for me.

What score would you give it out of 10?
I'll give it six. I love the way of interaction, but I want more content.

Discussion:
This App improves the accessibility of fashion show. It will attract more people to get involved in the fashion show. The ordinary people, like me, we do not have enough background in fashion or even a fashion show. The information it shows with the model just solved this problem. Make each scene clear and without effort.

Wu
Accountant
Female, 26

Would you recommend Cybermoda to a friend?
Yes, I will. I think it is interesting. If there are more scenes, it will be better.

What score would you give it out of 10?
Maybe six. More garments and gestures will be better.

How would you describe Cybermoda in one or more words?
Noisy, but in a positive way. I live alone, and one more people are dancing with the music. It makes me feel better.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: The light and atmosphere on the runway stage are too distracting. But in this way, I can watch the garment as long as I want and I can know the detail of the design.
Cons: I would not say I like to read. There are too many words. And some of the extra models make me distract also.

For the easter egg, do you want a hint during your exploring?
I prefer to explore it by myself. But if some triggers have the hint is better.

If you could change one thing about Cybermoda, what would it be and why?
I want the more lovely model to interact.

What do you find most frustrating about Cybermoda?
Space. When I was moving around the model, I need to kick the things away.

What do you like best about Cybermoda?
It can move with different gestures and with the music. I like this way.

Will you increase the intention after the experience of Cybermoda?
Suppose it can show the model with the garment in my size. Or if I can get more information about the model's height. I will think about it.

Overall, how easy to use do you find Cybermoda?

Easy. Definitely. There is no dialogue box or windows. I like this way.

Discussion:
Long times before, I have a chance to use the AR App, I'm very interested in it. But until now, I do not have experience in my life for using it. I think the technology is already mature, but I do not why it does not become popular.

Qv
Student
female, 24

How would you describe Cybermoda in one or more words?
High technology and interesting. It is a new experience for me, no matter the format or the content. But it seems still need some technological enhancement.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: Compare to the fashion show, if I am interested in a cloth, I can stop to see the details. It gives me the chance to choose.
Cons: The model is not real. I hope the model can be more realistic.

If you could change one thing about Cybermoda, what would it be and why?
The music sounds not fashion at all. It seems like a game. Very distract.

What do you find most frustrating about Cybermoda?
Space. The model actually on my bed, and I need to go to the balcony to see it entirely.

What do you like best about Cybermoda?
I like the AR experience and typeface.

Will you increase the intention after the experience of Cybermoda?
I will not. I will use this App for knowing the new fashion trend or fashion news. The platform will not influence my intention.

Overall, how easy to use do you find Cybermoda?
Very easy. The operation way and the interface are easy to understand. I do not feel difficult to use.

Would you recommend Cybermoda to a friend?
If my friend is interested in fashion, I will.

What score would you give it out of 10?
Eight points. I like this advanced format. And this interest interaction attracts me to use. And I am also into fashion, so I think I can learn and play at the same time.

Discussion:
I think for the extended content, maybe 2D is better to read. In a 3D environment, it is not easy to read. And for triggering the easter egg, perhaps I need more hint to find it. Otherwise, I won't start to see on purpose.

Zhang
Designer
Male, 25

Would you recommend Cybermoda to a friend?
Not really, they probably do not need it. I think, for now, I do not know why I should recommend it to others. The App is not complete, such as brand detail information.

What score would you give it out of 10?
I will give it six. From my point of view, I care about the way of presenting and interaction. It is primitive for me. There are still many opportunities for further more improvement. However, I expect some introduction of App. And the reading experience is not sufficient. Maybe the information can appear in the 2D. And perhaps more animation will be more interesting.

How would you describe Cybermoda in one or more words?
Primitive. I can imagine how the company can implant ads and commercial activities. But I did not get the point of the easter egg.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: The information of the garment helps people to understand easily. Compare to the fashion show, and the information can save in the App. And everyone can have the same experience as the fashion show with a less physical limitation. It brings more possibility.
Cons: There is not the stage scene. Stage Design is also part of the fashion show. And the 3D model still unrealistic. And there is not the performance during the show. Sometimes designers invite singers or dancers on the stage during the show.

If you could change one thing about Cybermoda, what would it be and why?
Different dimensions of the model.

What do you find most frustrating about Cybermoda?
I did not understand the easter egg.

What do you like best about Cybermoda?
The way to introduce the garment and design concept is interesting for me. Usually, we have a barrier to get

to know this professional knowledge. Fewer people will search for it during a show. Now, this information directly gives to users. It is convenient. Also, there are more opportunities for the brand.

Will you increase the intention after the experience of Cybermoda?
If there is the realistic effect after model wearing a garment, I will.

Overall, how easy to use do you find Cybermoda?
Yes, it's easy to use, except for the reading experience.

GAO
Artist
Male, 22

How would you describe Cybermoda in one or more words?
Correspond to the time. I like and want to make something like this.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: It is much way better than video.
Cons: It is not realistic. But if reality is not the purpose, then there is no need to change.

If you could change one thing about Cybermoda, what would it be and why?
If I can control the position and the size of the model, it will be better.

What do you find most frustrating about Cybermoda?
It requires highly about space.

What do you like best about Cybermoda?
I like the images, the scenes and all the visual effect. I pretty like this realistic level; if this model positively seems like a human, I will feel annoyed.

Overall, how easy to use do you find Cybermoda?
It is easy, but the content is not enough. But it seems easy to have more content in the future.

What score would you give it out of 10?
Seven to eight point. I feel fluent when using this App. Very stable. But there is still space for the improvement.

Would you recommend Cybermoda to a friend?
I will, even if I'm an artist, but I will get a notice about the cooperation between a fashion brand and other artists, like Daniel Arsham, Murakami Takashi, etc. As I said, I think this project is contemporary.

Song
Designer
Male, 30

How would you describe Cybermoda in one or more words?
Interesting. I am really into these elements and animations. At the same time, I do not have the patience to read and are about the text information.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: It is a straightforward way to understand some fashion pieces of information. It is easy to participate in it.
Cons: It lost some sense of presenting. There is no feeling of giving a fashion show. Also, it must have some hardware requirement, like it needs the iPhone to use.

If you could change one thing about Cybermoda, what would it be and why?
I prefer some introduction at the beginning and some background information.

What do you find most frustrating about Cybermoda?
My room's space is not suitable for using it.

What do you like best about Cybermoda?
I like these extra elements. For me, this is the merit because I wouldn't say I want to read. And these elements can play sound and animated that attract me.

Will you increase the intention after the experience of Cybermoda?
I'm not sure if a real person wearing it, will have the same effect. For e-commerce, I do not trust it always. I will only change my mind after I have some experience for the online shop.

Overall, how easy to use do you find Cybermoda?
It is not hard to use.

Would you recommend Cybermoda to a friend?
Yes, I will. It is fascinating.

What score would you give it out of 10?
Seven points. It is a new way to present, and more iteration will make it more attractive.

discussion：
Fashion, for me, is still staying mysterious and haughty. So this is an easy way to let me know about fashion. If there is the invitation procedure, I will feel more exquisite or like preferential treatment.

Danshu
Fashion Designer
Female, 25

How would you describe Cybermoda in one or more words?
Interesting. The first impression is that I can put my collection to demonstrate online and to see the effect. But I do not know how to use it.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: It can participate in everywhere without limitation. It can also enhance the target user group for fashion. And on different media, it can be shared and get attention.

Cons: The live-stream is more comfortable to communicate with the brand. And I like to watch the fashion show video which has a higher resolution. Cybermoda does not provide me with the high resolution of model, garment, or material. And, I cannot directly contact with the company.

If you could change one thing about Cybermoda, what would it be and why?
The requirement of space is too much.

As an insider of the fashion industry, do you think this App will help you?
Yes, this is an excellent way to present the garment. For me, the essential point is sale, so higher exposure in different media is what I considered.

Cybermoda as a commercial platform, have you seen its value?
Ideally, if I can insert my size and create an effect with my size instead of the fitting procedure, it can be a chance.

What score would you give it out of 10?
Three or four points. Because I know it is cool, but I do not understand why I should use it. Maybe some introduction will help a lot

.Yuan
Show producer
27, Female

How would you describe Cybermoda in one or more words?
Innovation and new technology. There is no such 3D format showcase before. It is interesting and correspond the trend of 3D model.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: It allows more people to get involve, and it is convenient. Normal people can participate and experience.

Cons: The disadvantage is obvious. Garments need to be shown in real texture, no matter the material or the overall feeling. Also, some of the fashion show live-stream is changing. Some scenes changing of video in a new way is also attractive. But it also depends on the network.

To sum up, the most advantage is participation and accessibility. It gives me the feeling of virtual exhibition. If some of the virtual installation cannot accomplish in the real world, but in the Cybermoda can come true. It will be more interesting. You know, the limitation of cost sometimes is the biggest barrier.

If you could change one thing about Cybermoda, what would it be and why?
I think moving around by phone is a little tired. Can it automatically find a good distance and angle to show it? Also, if it can bring the effect such as the fashion show, models walk to the users with some gestures also.

As an insider of fashion industry, do you think this App will help you?

This is an innovative experience. I can imagine it can produce many spectacle showcase at the same time without worry on the speed of model's pace. It can be preset in advanced. Also, considering about the cost, the scenes or background can be directly changed. These are the good points. They might help me in the future. However, for designer or clients, the biggest target is to show the garment. The form of garment and the texture of material are what they care about. Actually, even if take photo with the physical garment, it sometimes will not display perfectly on the screen.

Cybermoda as a commercial platform, have you seen its value?
For now, it is not positive for commercial. Because for the brand, their purpose is sale. The way to perfectly show their product is what they want. But if it can be more artistic. Just like I said, as a virtual gallery, it can be a chance. Be drama and creative.

Yuki
PR manager
25, Female

As a PR manager, I care about each activity, include the runway. First is the story or any tricks during the show. Second is the new things which appear on the show.

How would you describe Cybermoda in one or more words?
This App gives me the feeling of a computer program. Before I attended some online shows, their story and visual effect are designed ingeniously, just like the immersive game scene. But for Cybermoda, the atmosphere you want to build is not too obvious.

How does Cybermoda compare to the fashion show live-stream or the fashion show video?
Pros: The communication way of text is clear, but the content is too much. Better use graphic language to let people better understand.

Cons: The entry page is too sudden. The experience is now fluent. It is made from all 3D models. I assume the cost for future shows is not less.

If you could change one thing about Cybermoda, what would it be and why?
I will change the launch page. Most successful App has an attractive launch page. The first impression is essential for users.

As an insider of the fashion industry, do you think this App will help you?
The pandemic epidemic crisis speed up the development of digital media and the fashion industry. Using this App can help to let more people see the garments and design. This is an exciting way to help some young designers or brands. Also, in the future, there might have more experts not only from the fashion industry. It means there will be more dimensions on it, such as how a graphic designer seeing the color on the garment. Moreover, it can increase the opportunity to present the garment. It might be a better way to express the design background or the behind story.

Cybermoda as a commercial platform, have you seen its value?
For now, I cannot see the value in commercial. In my experience, most fashion designers are traditional. They prefer offline runway. Actually, what appears this year is the most significant step in these years for fashion show development. But after the pandemic, will they still choose to proceed with the online show. The answer is uncertain. For now, Cybermoda can be seen as an experiment. For now, the online fashion show application still has less value.