

The Arrival of the Body That Perceives

The exploration of sexuality and identity through auto-ethnographic narratives in Mixed Reality environments

Muchao (Mona) Cui

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Abstract

The purpose of this practice-led research project is to speculate about how immersive and interactive media could nurture narratives about sexuality and identity by using practice-led design approaches.

To understand the core of this creative enquiry, the contextual review investigates sexuality and identity through the lens of Queer Phenomenology. Queer Phenomenology has also inspired the understanding of body and embodiment, which provided angles through to comprehend immersive and interactive media. An autoethnographic approach was adopted as a creative and qualitative research methodology and this has provided the source of the narrative. Autoethnography, along with an action research methodology, was utilised to design the experience.

This project experiments with the possibility that Mixed Reality (MR) environments can be used to invite a bi-curious audience to reflect on their sexuality and identity if provided with the agency to do so. Narratives in MR provide an altered reality, wherein an audience can have novel experiences and perceive sexuality and identity differently. The project presents an interactive prototype of the proposed Mixed Reality experience.

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the Acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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Introduction

The title *The Arrival of the Body that Perceives* comes from Sara Ahmed in *Queer Phenomenology*¹, though this practice-led research project derives from my personal confusion, isolation and frustration about how to define myself sexually. Being a female Chinese young adult, I have faced many obstacles in my attempts to construct a positive sexual identity owing to my culture and its social structure. I am passionate about experimenting with multimodal storytelling and embodied interaction to create a space for Chinese bi-curious people² to better understand ourselves. Therefore, this research project experiments with the possibility that narratives in a Mixed Reality environment can engage Chinese bi-curious people and allow them to explore their sexuality and identity through multimodal storytelling and virtual embodiment.

The advent of emerging technologies, such as Virtual Reality and artificial intelligence offers interaction, immersion, navigation and participation as extensions to traditional storytelling. Storytelling in Mixed Reality (MR)³ environments provide an altered reality to audiences, whereby they are able to gain new cognition and perceptions through the immersion and the interaction with the physical and virtual stimuli. According to Ahmed, one's lived experience of inhabiting the body in different spaces can shape and redirect perceptions of sexuality and identity. MR experiences can provide an altered reality where the audience can re-inhabit their body,⁴ forming new sensations and perceptions to re-imagine sexuality and identity.

¹ Sara Ahmed, *Queer Phenomenology : Orientations, Objects, Others*. (Duke University Press, 2006).

² While anyone may be able to engage with and relate to this work in some way, I am particularly interested in developing this project for a Chinese audience.

³ Described variously as either Mixed Reality, MR or hybrid reality, this term refers to any technology that isn't a fully immersive VR system, but instead Augmented Reality or augmented virtuality.

⁴ Sara Ahmed, *Queer Phenomenology : Orientations, Objects, Others*. (Duke University Press, 2006).

The design outcomes of the research encompass a developed script for a proposed experience in a MR environment, and an interactive media prototype. Due to the constraints of the research time frame, the limited access to equipment and facilities, and the unprecedented crisis of the COVID-19 pandemic, this thesis is focused on critical contextualisation and a practice-led ideation process that responds to the design objectives. Some of the components of the work were not to be able to be fully developed, particularly the virtual reality aspect of the interactive experience and user testing.

Original Design (Pre-COVID-19)

The original project aimed to create an MR-based interactive experience that situates a participant in an in-situ physical environment that looks like a minimal bedroom. There are three scenes in the experience, each with a different mode of interactivity/immersion. The first scene introduces the user to an interactive documentary sequence via a touchscreen interface that introduces the historical context of sexual identity in China. The second and third scenes use Virtual Reality. The second scene introduces the personal perspective of being a sexually disoriented person in China. The third scene invites the audience to participate in a space of freedom, expression and liberation. At the end of the in-situ experience, the audience is invited to connect with a wider community via the project website/community.

Revised Design (due to lockdown conditions)

As it was not possible to continue development in Virtual Reality the prototype submitted for examination uses the format of a web-based interactive prototype to demonstrate the narrative structure of the experience. This prototype develops one of the scenes (interactive documentary) in some detail. It also contains some volumetric filmmaking

samples (demonstrating the aesthetic qualities of volumetric filmmaking) and indicates storylines, triggers, transitions and basic interactions.

The thesis is structured in four parts:

Part One, The Contextual Review, introduces the conceptual framework of my project, discusses the relevant theories and knowledge underpinning my practice, and arrives at the hypothesis that an immersive, interactive and participatory narrative space could allow Chinese sexuality explorers to construct a positive identity.

Part Two introduces the methodological framework I employed to pursue the enquiry, including auto-ethnography, action research, and corresponding methods.

The ideation of this project and the iterative development process are unpacked in Part Three, Description of Practice.

Finally, the Discussion and Reflection section evaluates the learnings I gained about storytelling in a MR space, and the limitations of an auto-ethnographic creative practice.

Situating the Researcher

Sexual identity runs through our lives, consciously or unconsciously. The past becomes more important as I age, not only because my own experience has increased, but also because this starts to create life curves and to create meaning. When I assemble my lived stories, the past illustrates who I am and how I got here.

I recall that when I was in kindergarten, nursery teachers requested each girl to hold hands with a boy so the teachers could line us up manageably. In primary school we were, in the same way, requested to line up according to the distinction of sex. However, teachers said we had grown up and should not hold hands with the opposite sex freely. When I entered high school, it was as if by our nature girls spontaneously formed groups to watch boys playing basketball in order to show off their masculinity.

As a Chinese person who grew up in Mainland China, Confucian values also manifested as submissiveness and the emphasis of disciplining themselves in terms of sexual ethics and family connectivity, such as obeying the parents, having male descendants and keeping the harmony.⁵ This mindset further exacerbates patriarchy in Chinese domestic households. The absent role of my father in my family, but his nonetheless dominant attitude, his scolding, and even his physical violence towards me promoted my unhealthy romantic relationships with boys – I was in a toxic relationship for years. I felt awful, but I accused myself of not loving this partner and not responding to his "intense love" enough. I was buried in the conventional conception of being female – I was intimidated and frustrated by his upset, thinking it was my fault. I was

⁵ Amy Adamczyk and Yen-hsin Alice Cheng, "Explaining Attitudes About Homosexuality in Confucian and Non-Confucian Nations: Is There a 'Cultural' Influence?," *Social Science Research* 51 (2015/05/01/ 2015), <http://dx.doi.org/https://doi.org/10.1016/j.ssresearch.2014.10.002>.

trapped in it for two entire years, and I didn't get over it for a further two years until I met a girl.

It was this encounter that made me wonder whether I was wrong in the first place. Is it because I am attracted to girls, that I felt uncomfortable with my first boyfriend? What on earth is falling in love? If feelings for both boys and girls are real, what is my sexual identity, and how can I find out?

China doesn't provide real sexual education in schools and I also experienced the difficulty of acquiring positive knowledge about homosexuality on the internet. Films, TV shows that portray queer lives are fraught with interference and have no presence in the public due to China's harsh censorship regulations regarding film media. In recent years I was also witness to a series of LGBTQ movements and gatherings that were cancelled or disrupted by administrative departments, and to the failure of same-sex marriage legalisation in mainland China since our first attempt in 2001.

Later in my life, once I entered tertiary education and observed these happenings from an intellectual point of view, I began feeling more frustrated, lost, and even furious.

The bitter truth is, a part of our minds are always entangled in the voices that instruct us. We are formed by the culture we are immersed in. We are assimilated into the political ideology to which we belong. We receive instructions about what is allowed and what is taboo within mainstream constructs. We very likely have no idea how our minds genuinely perceive and how our bodies genuinely respond. Particularly in China, where Confucianism is the absolute value and collectivism is highly worshipped, people tend to ignore and devalue their individualism. It is not surprising that I was lost and disorientated.

Foucault demonstrates that sex as a matter of intellectuality was called into an existence once people start facing it rationally through the Confession.^{6 7} Therefore, I argue, it is of notable significance to create a space or a juncture, where people can eliminate all conventions and let go of social and political identities.

It is from this embedded position that I began this creative enquiry into sexuality and identity. My background as a documentary filmmaker facilitates me in finding the dramatics that exist in real life, and in genuinely listening to people. I embarked on this journey with my personal narrative, aiming for an investigation of sexuality and identity by revisiting past lived experience and acquiring new perceptions about them. Through my personal narrative perspective, I represent the Chinese bi-curious female, adding my own voice to the underrepresented group. But I am not solely representing myself; my stories provide a glimpse of the Chinese social, cultural and historical impacts on contemporary LGBTQ issues.

Additionally, my self-exploration pathways provide references for other Chinese bi-curious females because we share the same social, historical and cultural landscapes. I would like to use these shared experiences to create a collective space, where Chinese bi-curious people, regardless of gender, can unite, connect, wonder, explore and reflect on sexuality and identity.

⁶ Michel Foucault, *The History of Sexuality*. Pelican Books (Penguin., 1981).

⁷ Even though The Confession is part of Catholicism and therefore a Western construct, it relates also to a Confucian paradigm in terms of a patriarchal pattern.

Contextual Review

+ Introduction to the Research Problem

How might an auto-ethnographic narrative in MR allow audiences to engage with and reflect on sexuality and identity?

This project investigates how auto-ethnographic research initiates a creative and critical interdisciplinary narrative design about sexuality and identity, especially in MR environments. This evolves into and arrives at a conceptual framework encompassing three interconnected components that require contextualisation:

The first is how auto-ethnography, as both the nature of the creative practice and design methodology, directs and informs this research project.

The second is what sexuality and identity mean through two different lenses – *phenomenology*, and *body and embodiment*.

The third is how interactive and immersive media influence storytelling, speculating from aspects of interaction, immersion and Extended Reality, followed by case study analyses of multimodal (immersive and interactive) works.

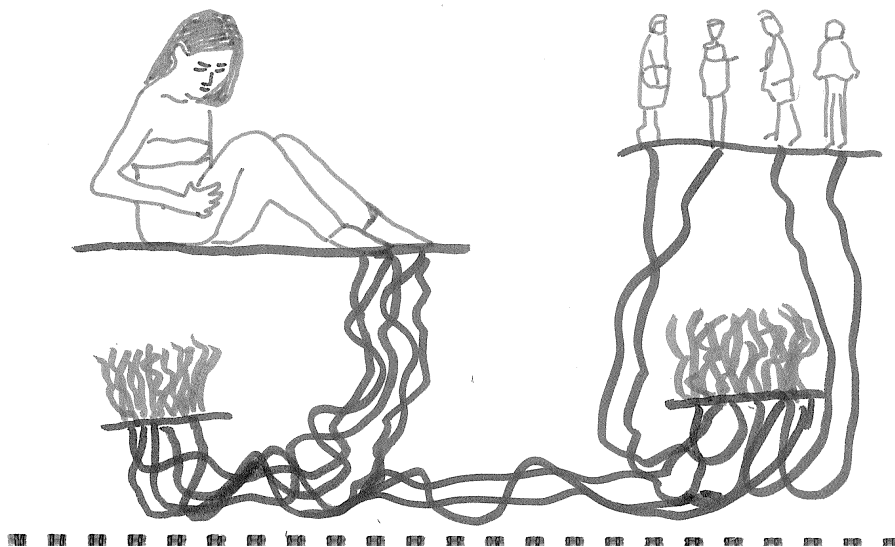
+ Auto-ethnography

I have carried out this creative project with the aim to explore my sexual orientation, so I adopted an auto-ethnographic lens to undertake the research. As Carolyn Ellis writes, auto-ethnography, “as a form of ethnography, is part *auto* or *self* and part *ethno* or *culture*” and “something different from both of them, greater than its parts.”⁸ We come to know,

⁸ Carolyn Ellis, *The ethnographic I: A methodological novel about autoethnography*. Rowman Altamira, 2004.

identify and interpret personal and cultural stories, which perspectives give auto-ethnographic stories artistic and analytic features.⁹ So I understand by this that conducting an auto-ethnographic research involves reflexive storytelling, while maintaining an attitude of linking the personal stories with broader contexts.

Auto-ethnography is the nature of this creative practice as I, the researcher, am using my personal experience for research resources. I have composed a piece of autobiographical writing, *Situating the Researcher*, at the beginning of the thesis to position myself in relation to the relevant social, cultural and historical contexts. By doing this, I am sharing my own experience of being sexually curious with others. Directed by autoethnography, I believe that by narrating my/our personal experiences, I/we are being present in the social contexts we are living in. The conjoined position of being the researcher and the subject at the same time engenders deep self-reflexivity, which enables us to take apart and examine the struggles Chinese bi-curious women have, in order to explore our true sexuality and identity.



⁹ Tony E. Adams, Stacy Holman Jones, and Carolyn Ellis, *Autoethnography : Autoethnography* (Oxford, UNITED STATES: Oxford University Press, Incorporated, 2014), 1-2.

Figure 1 depicts that the researcher looks inwards, and as the thoughts go deeper, there is a greater commonality that can link with others within the same context. Using a set of interconnected methods, I managed to bring out my own story of being a Chinese bi-curious female, but I am not solely representing myself. I am also representing other Chinese women, as my personal story is linked to our shared contexts. The theme in this creative practice explores sexual confusion, the conflict between the individual being who is sexually oriented, and the obstacles that society, culture and history may present, and ultimately how these sexuality explorers may find their true identity. In the designed story world, the audience would be encouraged and prompted to contribute their stories and add their voices too. This is one of the few collective ethnographic projects for Chinese lesbians and bisexuals who are questioning their sexuality and identity.

Auto-ethnography is also the fundamental methodology used when conducting the research and designing the artefact. I will explain how I utilised auto-ethnography to design this research in the next chapter.

+ **Sexuality and Identity**

Sexuality is a broad term involving the interrelationship of biological, psychological, and sociocultural dimensions.¹⁰

While we are apt to consider sexuality as the biological distinction of humans concerning the human reproductive system that we are born with, Foucault suggested an insightful alternative: that sexuality is a condition of the time and place where we are being, and indicates how bodies and

¹⁰ Greenberg, Jerrold S., Clint E. Bruess, and Sara B. Oswalt. *Exploring the dimensions of human sexuality*. (Jones & Bartlett Publishers, 2014), 4-10.

sexuality are socially established.¹¹ His inquiry sharply places the body and sexuality in relation to social contexts and disrupts the perception that the body is prearranged, fixed, or biologically and materially living outside of culture.

Sexuality also indicates erotic, physical, emotional, or spiritual feelings and behaviours.¹² The phenomenological perspective on understanding sexuality considers sexuality as a way of inhabiting ourselves and being inhabited by the world. This theory supports the fluidity of sexuality, as sexual interest stands on sexual desire or the quality of arousal. The physical or other characteristics of a person, and a person's aesthetics or movements can create a closeness between two people, regardless of sex.

- **Queer Phenomenology**

The creative practice of this project aims to help bi-curious people explore their sexual orientation. Sara Ahmed states, "If orientation is a matter of how we reside in space, then sexual orientation might also be a matter of residence; of how we inhabit spaces as well as "who" or "what" we inhabit spaces with."¹³ Sexual orientation can be considered from a phenomenological angle to speculate the spatiality of sexuality. It implies that the "proximity" between body and objects shapes our perception and creates the signs of an orientation. Understanding sexuality and identity from a queer perspective, we can infer that if our orientation turns our bodies against the objects that are thought of in heterosexual contexts, then homosexuality arises. In other words, experiencing and reflecting on whether our bodies are "in line" with the "natural" or "the norm" leads to re-imagining sexuality and identity.

¹¹ Michel Foucault, *The History of Sexuality*, Pelican Books (Penguin., 1981); Michel Foucault and Alan Sheridan, *Discipline and Punish : The Birth of the Prison.*, Second Vintage Books edition. (Vintage Books, 1995).

¹² Anne Bolin and Patricia Whelehan, *Human Sexuality : Biological, Psychological, and Cultural Perspectives*. (Haworth Press, 2008), 32-42.

¹³ *Ibid.*, 1.

“The experience of living in, perceiving, and experiencing the world from the very specific location of our bodies, is defined as *embodiment*” in the book *Sexuality and Embodiment*.¹⁴ Next, I will further elucidate on body and embodiment to understand how the lived experience of inhabiting can shape and redirect the perception of sexuality and identity.

- **Body and Embodiment**

Merleau-Ponty proposed that people conceptualise through their bodies – that it is the body itself, not cognition, that has the capability of genuine experience, and described the lived body as a “body-subject”.¹⁵ Thus the body forms sensations and an understanding intuitively, rather than that our consciousness and cognition make sense of it, because the body is always interacting with the world directly.

From a social constructionist point of view, social norms and discourse can become interwoven with the body, and eventually shape and instruct our bodily feelings, behaviours, and compoment.¹⁶ This theory can be used to understand Chinese lesbians’ and bisexuals’ relationships with their bodies under the contexts of Confucian values, patriarchy and authority’s obscure attitudes. Women’s bodies are the centre of attraction to male and an commitment to reproduce. Women tend to devalue themselves while scarcely questioning their sexuality. Eventually they are prone to forming an internalised heterosexual identity.¹⁷

¹⁴ Tolman, Deborah L., Christin P. Bowman, and Breanne Fahs. “Sexuality and Embodiment.” *APA Handbook of Sexuality and Psychology* 1, (2013), 760.

¹⁵ Merleau-Ponty, Maurice. *Phenomenology of perception* (Routledge, 2013).

¹⁶ Bartky, Sandra Lee. *Femininity and domination: Studies in the phenomenology of oppression* (Routledge, 2015); Bordo, Susan. *Unbearable weight: Feminism, Western culture, and the body* (Univ of California Press, 2004); McLane, Janice. “Throwing Like a Girl and Other Essays in Feminist Philosophy and Social Theory.” *Radical Philosophy Review of Books* 7 (1993): 1-4.

¹⁷ Chow, P. K., and S. T. Cheng. “Shame, Internalized Heterosexism, Lesbian Identity, and Coming out to Others: A Comparative Study of Lesbians in Mainland China and Hong Kong.” *J Couns Psychol* 57, no. 1 (Jan 2010): 92-104.

But if bodily experience is formed by the dominant discourse, then do people have a chance to extricate from its governing power? *Agency* is another psychological concept that is pertinent to embodiment. According to D. Stanley and his fellows, *Agency* is a capacity to recognize and enact choices, that is, “the ability of human beings to create viable lives even when they are constrained by social forces”.¹⁸ Although “personal identity is partly influenced by one’s social identity as mirrored how one is valued by significant others,”¹⁹ a sense of selfhood is also a product of a deep-seated auto-ethnographic development.²⁰ The theories articulated above bolster the confidence to re-think and re-imagine one’s selfhood, including sexuality, through providing an altered, redesigned environment where objects are otherwise not visible or reachable within the arena of heterosexuality. There the sexuality explorers can not only observe but also directly acknowledge that their actions could make a difference.

Within the understandings of sexuality, body and embodiment that I have reviewed, I intended to engage audience’s bodies in a queer experience. In the space of the interactive and immersive work that this project proposes, I have created virtual backgrounds of Beijing LGBTQ venues, using palace walls to imply authority’s obscure attitudes, and Confucian temples to hint at the rooted sexually distinctive roles in Chinese culture. An audience immersed in this space might feel self-conscious, and realise the specific position of where they are located in the world. These images provide them with another layer of reality, and could also give a hint of their embodied identity and sexuality. In order to make the audience break away from the dominant influences, I would construct a very different space and story world compared to the harsh reality of repressed identity they are experiencing in China. In this space, the audience would be involved in

¹⁸ Eitzen, D. Stanley, Maxine Baca Zinn, and Steven J. Gold. "Integrating professional socialization and training for sociology graduate students." *The American Sociologist* 30, no. 4 (1999), 56.

¹⁹ Albert Bandura, "Toward a psychology of human agency." *Perspectives on psychological science* 1, no. 2 (2006), 170.

²⁰ Bandura, 170.

novel activities and interactions to experience bodily sensations and ultimately re-imagine perceptions of themselves.

+ **Interactive and Immersive Storytelling**

The term ‘interactive multimedia’ originated in the 1990s when interactive content was created and produced on CD-ROM systems. As more technology-lead mediums and platforms emerged, such as VR technology and artificial intelligence, the reframing and repositioning of the word ‘interactive’ has contributed to a rising interest in ‘experiential storytelling’ and ‘alternate realities’.

- **Extended Reality**

Virtual Reality (VR) is a computer-generated environment where people can feel and believe they are transferred to another realm. In this imaginary environment, technology also allows people to use five senses to immerse, interact and perceive. Deriving from *Reality-Virtuality Continuum* by Paul Milgram,²¹ MR environments are combinations of physical objects and virtual stimulus that contain many more diversities, possibilities and flexibilities. To some extent, VR and MR portray an altered perception of reality.

Where VR and AR differ is in the perception of our presence. VR creates artificial worlds that are indistinguishable from the real one, while MR augments reality or virtuality through the use of technology that is not fully immersive. Even though the created worlds are not material, they are real to our perception. According to Husserl’s term “positional act”, VR provides audiences access to a second world, where they are immersed in and believe in the existence of an object in the scene. In the case of MR or

²¹ Paul Milgram et al., “Augmented Reality: A Class of Displays on the Reality-Virtuality Continuum,” ed. Hari Das (Photonics for Industrial Applications, Boston, MA, 1995), 282–92.

generic Augmented Reality, the subjects do not fully immerse themselves into a second world but they do perceive superimposed digital elements in the virtual environment.

Paul Milgram proposed a *Reality-Virtuality Continuum*; Figure 2 is a diagrammatic reproduction.²² It demonstrates the transitions and connections from the reality to the computer-simulated environments where the former represents the completely real, and the latter the completely computer-simulated. The between includes all potential varieties and combinations of real and virtual objects.

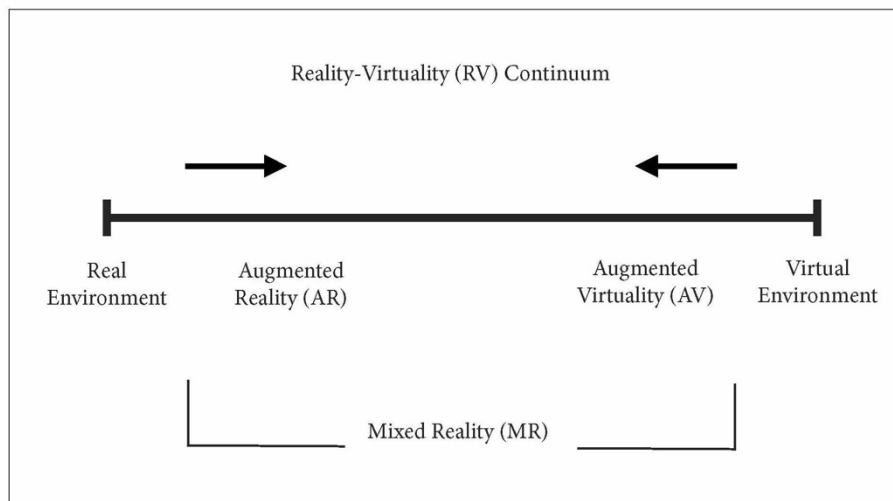


Figure 2 Reality-Virtuality Continuum, diagramme, P. Milgram

In terms of storytelling for the purposes of sexuality and identity exploration, I have explored the potential of the Reality-Virtuality (RV) continuum to represent the continuum of sexual identity in an embodied way.

Sexuality is seen as being a spectrum too (see Figure 3). People can place themselves on any point of the spectrum, not necessarily exist as opposite

²² Paul Milgram et al., "Augmented Reality: A Class of Displays on the Reality-Virtuality Continuum," ed. Hari Das (Photonics for Industrial Applications, Boston, MA, 1995), 282–92.

endpoints. If we associate the Reality-Virtuality continuum and the sexuality spectrum together, we get the idea of placing the binary understanding at the endpoint of Reality, and the non-binary understanding of sexuality at the endpoint of Virtuality.

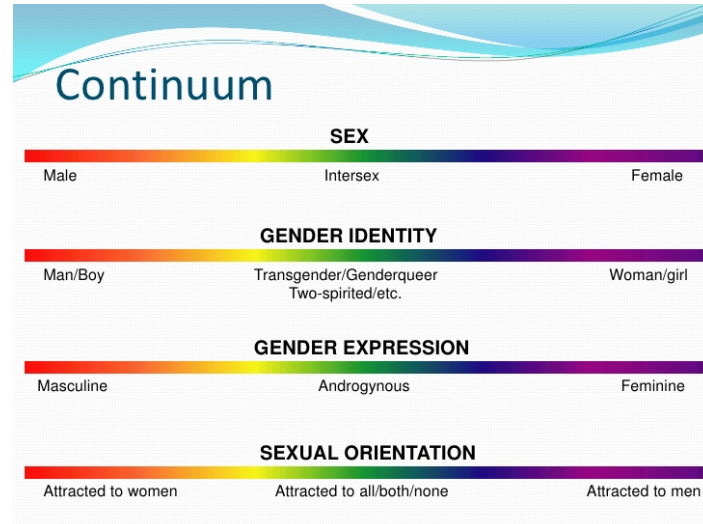


Figure 3 Aspects of Identity Spectrum, diagramme, <https://scalar.usc.edu/works/index-2/media/the-gender-spectrum>

To understand this idea, *Through the Wardrobe*²³ provides a reference. It is a documentary Mixed-Reality installation that explores the daily considerations nonbinary people make in expressing their gender through clothing. This project mixes audio interviews with hand-drawn animations in an Augmented Reality setting. It is integrated into a physical bedroom-like surrounding, where the audience are prompted to try on real clothing. I appreciate that this artwork engages with materialistic reality, augmented/imaginary reality, and both virtually and physical interactivity to activate and inspire the audience. In this way, this work leads the audience towards an exploration of gender expression in two levels of reality; one is stiff and binary while the other is vibrant and diverse. It opens possibilities of expressing gender beyond binaries that do not exist in real life.

²³ Rob Eagle, documentary Mixed-Reality installation, <http://throughthewardrobe.net>, retrieved on 17 October 2019.

My target audience is bi-curious people, either Chinese or among other ethnicities. Sexuality and identity to them may mean something vague, far away and disembodied, and they may lack the tools or resources to explore sexuality and identity in their real lives. What they are cognisant of and experiencing in their real lives might be obstacles towards a different orientation.²⁴ Sexuality and identity exist in bi-curious people's unconscious, which can be understood as existing in their altered perceptions. This project proposes to give complementary materials and resources in altered or imaginary reality to a bi-curious community, with the aim that through these encounters with an imagined reality they may acquire new perceptions or a greater understanding of their sexuality and identity.

+ **Documentary**

John Grierson first proposed a definition of the documentary in the 1930s as the "creative treatment of actuality."²⁵ This means documentary filmmakers use documentary to communicate a message, not of imagined things, but of real things. The representation of reality is the filmmaker's selective view of the world and unavoidably reflects a given subjectivity or point of view. Therefore, documentary is based on truth but also on an artificial construct. The arena of the conventional documentary are bolstered because of the advent of digital platforms and emerging technologies, not only in the light of linear stories structure, but also in the distribution for various delivery channels. Various extents of interactivity are achievable and are reshaping the relationship of documentary storytelling and reality.

Documentaries have different modes, as defined by American documentary theorist Bill Nichols. The six different modes he discusses are the

²⁴ Sarah Ahmed, *Queer Phenomenology: Orientations, objects, others*, (Duke University Press, 2006).

²⁵ John Grierson, "The Documentary Producer," *Cinema Quarterly* 2, no. 1 (1933): 7–9.

expository mode, the participatory mode, the observational mode, the performative mode, the poetic mode, and the reflexive mode.²⁶ My work would conceptually fit with and combine the performative and reflexive modes, as I have used my own narrative performance. The work builds on the relationship between myself and my audience, encouraging them to reflect on their perceptions and to re-imagine their sexuality and identity. It would present questions and approach the topic with uncertainty, then encourage thoughtful consideration of the material.

Documentary has long been understood and practiced as a means of knowing the material, social world. My work fits into the category of documentary because it tries to understand the status of Chinese bi-curious women, using personal subjectivity and linking to collective contexts. I will review the intersection of autoethnography and documentary in the next section.

- **Autoethnographic Documentary**

As stated above (p.7 *Autoethnography*), the nature of this creative practice is auto-ethnographic. In the Methodology chapter, I will explain how I used auto-ethnography as my methodological framework to carry out this research and design the creative practice component. Here I explain how my work responds to the field of autoethnographic documentary.

Regarding autoethnographic documentary, Elizabeth Bruss wrote that:

In autobiography, the logically distinct roles of author, narrator and protagonist are conjoined, with the same individual occupying a position both in the context, the associated ‘scene of writing’, and within the text itself.²⁷

²⁶ Bill Nichols, *Introduction to Documentary*. (Indiana University Press, 2001).

²⁷ *Ibid.*, 300.

In response to this idea, I analysed my own subjectivity and lived experiences. Specifically, I, as both the researcher and the subject, reflected on and documented my story of being sexually curious to present the context that has led up to the opposition of homosexuality in China. Internalised heterosexism often results from this repression, as lesbians absorb mentally and internalise the mainstream opinions into the composition of themselves, resulting in self devaluation.²⁸ By the way of reflecting and expressing my individual experiences, I attempted to employ creative practices to bond with people in the broader shared historical, social and cultural backgrounds.

I would like my audience, moreover, to have a greater agency in exploring sexuality and identity. Traditional documentaries employ the format of the moving image. I would like to extend it from an audiovisual medium to sensory and embodied medium to better explore the theme of sexuality.

- **Interactive/Immersive documentary Case Studies**

Interactive and immersive media greatly expand documentary possibilities, facilitates web documentaries such as (Highrise),²⁹ immersive journalism (*Project Syria*),³⁰ and immersive installations (*teamLab Borderless*).³¹ Judith Aston defines an interactive documentary as “a term used to describe the new possibilities for both the construction and representation of ‘reality’ brought about by the human-computer interface”.³²

²⁸ P. K. Chow and S. T. Cheng, "Shame, Internalized Heterosexism, Lesbian Identity, and Coming out to Others: A Comparative Study of Lesbians in Mainland China and Hong Kong," *J Couns Psychol* 57, no. 1 (Jan 2010), <http://dx.doi.org/10.1037/a0017930>.

²⁹ Highrise, Katerina Cizek, multimedia documentary, <http://universewithin.nfb.ca/mobile/notsupported.html>, retrieved 20 July 2020.

³⁰ Project Syria, Nonny de la peña, Virtual Reality experience, https://store.steampowered.com/app/491790/Project_Syria/, 2013.

³¹ TeamLab Borderless, interactive and immersive exhibitions, <https://www.teamlab.art/e/?type=pickup>.

³² Judith Aston, "Encyclopedia of Social Media and Politics," by pages 704-704, 3 vols. (Thousand Oaks: SAGE Publications, Inc., 2019).

Knowing how to specifically construct and represent ‘reality’ in my story is crucial to my research. Therefore, I conducted case studies of interactive and immersive storytelling experiments. In doing this, I aimed to analyse multimodal storytelling strategies and carry on my own storytelling methods, based on criticism and inheritance of them. I discuss aspects of interactivity and immersion in order in the next paragraphs.

A media professor at the University of Westminster, Sandra Gaudenzi, suggests a classification of web documentaries³³ based on different levels of interactivity:

semi-closed (the user can browse but not change the content), semi-open (the user can participate but not change the structure of the interactive documentary), or completely open (the user and the interactive documentary constantly change and adapt to each other).³⁴

Examples are *Welcome to Pine Point* (semi-closed),³⁵ *Journey to the End of Coal* (semi-open),³⁶ and *Holograms for Freedom* (completely open).³⁷

In terms of the interactivity between audience and the story, *Karen*³⁸ (Figure 4) gave me significant inspiration.

³³ The web documentary integrates a combination of multimedia assets (photos, text, audio, animation, graphic design, etc) with web technologies. Compared to a linear narrative where the destination of the story is pre-determined by the filmmaker, a web documentary provides a user with the experience of moving through the story via clusters of information. Melahat Hosseini and Ron Wakkary, “Influences of Concepts and Structure of Documentary Cinema on Documentary Practices in the Internet,” 2004.

³⁴ Judith Aston and Sandra Gaudenzi, “Interactive Documentary: Setting the Field,” *Studies in Documentary Film* 6, no. 2 (2012): 125–39.

³⁵ Welcome to Pine Point, Paul Shoebridge and Michael Simons, web documentary works, <http://pinepoint.nfb.ca/#/pinepoint>, retrieved on 10 Feb 2020.

³⁶ Journey to the End of Coal, Samuel Bollendorff and Abel Ségrétin, web documentary work, <http://www.honkytonk.fr/index.php/webdoc/>, retrieved on 10 Feb 2020.

³⁷ Cristina Rodriguez, Daniel Rodriguez, Guillermo Santaisabel, Javier Urbaneja, augmented project, <https://www.youtube.com/watch?v=ehwBUe5O3zg>, video clip, retrieved on 5 Nov. 19.

³⁸ Karen, Blast Theory, application, <https://www.blasttheory.co.uk/projects/karen/>, retrieved on 28 May 2020.

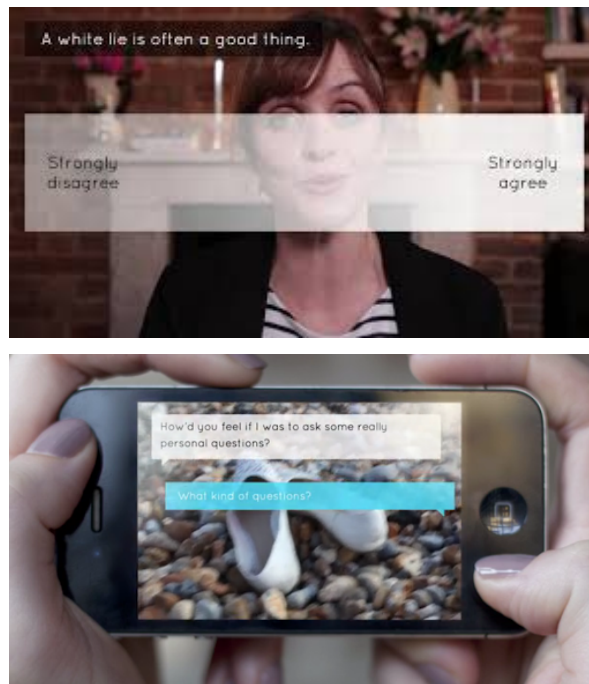


Figure 4 Application Karen, screenshots, M. Cui, 2020

Karen is an experimental dialogic mobile application that mixes gaming and storytelling by using a data report. When the audience begins the experience, the character asks some questions to get an understanding of them. It creates an intimate and personal experience in which the audience interacts directly with the character. *Karen* invites the audience to reflect on their own personalities. When we are thrilled about how much the application is tailored to us, we begin to think deeply about our new technology-dominant world. Although this application uses complex programming techniques and big data to realise its objectives, the fascinating part is that the audience receives personalised storylines and experiences. From this point on, I explored existing interactive documentary editing software, such as *Wonda*³⁹ and *Klynt*⁴⁰ to create pathways of unfolding the story based on an audience's choice to make an individualised experience. This solution serves my project as the script and storyline are developed from my own story rather than by the audience's

³⁹ Wonda, immersive experiences editing solutions, <https://www.wondavr.com>, retrieved on 29 May 2020.

⁴⁰ Klynt, interactive editing and publishing application, <https://www.klynt.net>, retrieved on 29 May 2020.

answers. Through organic and effective prompted pathways however, the audience can still be given opportunities and a space for self-reflection.

The immersive experience brought about by live exhibitions and installations enhances the emotional, cognitive and empathetic impacts of storytelling on the audience.

*A Journal of Insomnia*⁴¹ is a multiplatform project that includes a web documentary composed of impressions and reflections from insomniacs, and a live interactive installation. On the website, audience can unfold the experiences of one of four heroes/heroines who contribute their own accounts with wakefulness, at the same time watch nearly 2000 stories from other insomniacs. In situ, the audience are invited to enter a black box through a tilted doorway to experience insomnia. Inside the black box, the audience is submersed in darkness, surrounded by specially designed music and spatial sound effects. This immersive environment allows the audience to be separated from ordinary disturbances and be more focused on absorbing the atmosphere, which requires different reflections. It proves that a physical immersive environment gives a nuanced contribution to storytelling.

With the advent of immersive technologies such as HTC Vive, Oculus rift, HoloLens and Google cardboard, we are moving into virtual immersive storytelling. *Tree*⁴² is a VR journey from the perspective of a tree. It transforms audiences into a rainforest tree with arms as branches and the body as the trunk, an audience experiences the tree's growth. It immerses audience into the lifespan of a tree, from a sapling to a matured tropical wood, and witnesses its predetermined course. This sensory journey augments virtuality through haptic feedback and on-site smells so users

⁴¹ A Journal of Insomnia, Hugues Sweeney, multiplatform project (interactive documentary and interactive installation), 2013, https://www.nfb.ca/interactive/a_journal_of_insomnia#/insomnia, retrieved 5 Nov. 19.

⁴² Tree, Virtual Reality experience, <https://www.treeofficial.com>, retrieved on 28 May 2020.

have an illusion that their arms become branches and their bodies the trunk. This project explores haptic experience, augmenting virtuality with physical stimuli. The multimodal nature of perceptual senses is related to **immersion**, and “immersion is intended to instil a sense of belief that one has left the real world and is now ‘present’ in the virtual environment.”⁴³ From this viewpoint, I decided that my incorporation of Virtual Reality technology was intended to deliver a cognitive awareness of “living in” or “existing in” the altered reality space where audience are engrossed.

+ Conclusion

The contextual review clarifies how this creative enquiry relates to and is embedded in the different fields of scholarship I have discussed above.

Figure 5 below shows the relationships between each core context:

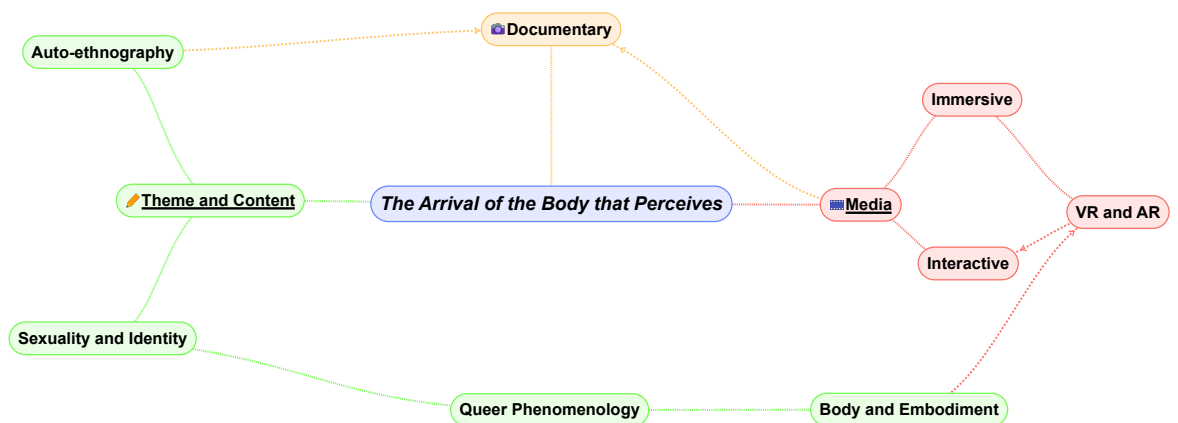


Figure 5 Contextualisation of the research, diagramme, M. Cui, 2020

This contextual inquiry, when entwined with my own ideas, has supported me in knowing more clearly the project’s objectives. These contexts opened up paths to explore a set of auto-ethnographic methods for sexuality and identity that instigate discovery and engagement with the body and embodiment that immersive and interactive media brings.

⁴³ Daniel R Mestre, *Immersion and Presence, Le traité de la réalité virtuelle*. Paris: Ecole des Mines de Paris, 309-38, 2006.

Ultimately, I would incorporate forms of multimodal documentary to portray the exploration of sexuality and identity.

This creative project, *The Arrival of the Body that Perceives*, aims to create an immersive, interactive and participatory collective space for Chinese sexuality explorers to construct a positive identity through connecting with others in this invisible community. In this space, they can feel free to have conversations and to bodily approach others they like to validate their feelings about people of different sexualities.

Methodology

This thesis is a practice-led exploration with the primary focus of generating knowledge about or within the research.⁴⁴ My creative enquiry, *How might auto-ethnographic narratives in MR engage Chinese bi-curious audiences and allow them to reflect on sexuality and identity* is supported by two methodological frameworks – auto-ethnography and Action Research.

This creative practice has been motivated by knowing more about oneself in terms of sexuality and identity. Duncan proposed that auto-ethnography is a method of qualitative research that merges autobiography and ethnography, providing a self-reflexive way of knowing.⁴⁵ An auto-ethnographical lens enabled me to revisit my lived experiences and unconscious memories, and rediscover myself. It also enabled me to allude to relevant social and cultural issues, which provided agencies for others to resonate with. Turning inwards, I have carried an interconnected approach to exploration, questioning, seeking, collecting and (re)discovering. Those approaches are not limited to audiovisual, text or verbal descriptions, but instead I expanded them into multisensory forms to present the embodiment of sexuality and identity. Here, instead of using autoethnography as a linear or structured script, I would like to see it as fragmented spaces accumulated together of some sort, but spaces that can be used flexibly and loosely. In the subsequent narrative design process, I can rearrange them as how important I understand and interpret them.

Action Research is another methodological framework I utilized. Action research is defined by O’Leary as “Research strategies that tackle real-world problems in participatory, collaborative, and cyclical ways in order to

⁴⁴ Hazel Smith and Roger T. Dean, *Practice-led Research, Research-led Practice in the Creative Arts*. (Edinburgh: Edinburgh University Press, 2009).

⁴⁵ Margot Duncan, "Autoethnography: Critical Appreciation of an Emerging Art," *International Journal of Qualitative Methods* 3, no. 4 (2004), <http://dx.doi.org/10.1177/160940690400300403>.

produce both knowledge and action.”⁴⁶ This guided me when conducting iterative design processes to improve interactive and immersive storytelling in a MR space, which led to progressive approaches to the problem, yet they are not conclusive or absolute. The spiral model of planning, prototyping, reflecting and acting generated my new knowledge and understanding about storytelling in MR. Through reflecting and evaluating earlier versions of script and storytelling, I might yet find that the original design is insufficient, that new questions have emerged and that the prototype keeps evolving.

Figure 6 below demonstrates the particular cycle of how I utilised action research, particularly in this practice.

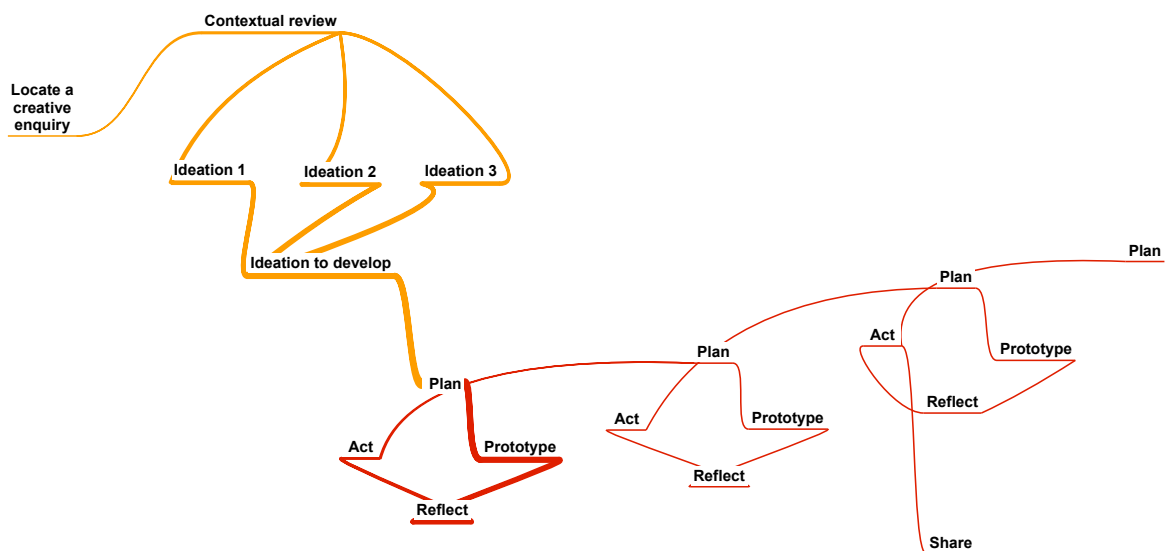


Figure 6 Action research model, diagramme, M. Cui, 2020

In view of the auto-ethnographic nature of this creative enquiry, myself, as the designer and researcher, worked with my own lived experience, and located a creative enquiry I decided to explore. After a phase of rough ideation, I then entered the iterative design process which began with planning an aspect of the project to test. A variety of actions were then involved to seek answers or solve the problems. Specifically, I used various prototypes to improve the engagement of storytelling in MR space. Then I

⁴⁶ Zina O’Leary, *The Essential Guide to Doing Research*. (London: SAGE, 2004).

evaluated and reflected on the prototype, through which process new knowledge and understanding was generated. The findings influenced the future direction of the research, and I then needed to adapt the design and implementation of the evaluation plan. The next circle of action research then began. These stages overlapped; it is a continuous learning process.

Due to its auto-ethnographic nature and sensational theme, I integrated bodily findings into the reflection steps to understand the flaws in the process. As Richard Shusterman proposed, “artistic, practical and political action requires humanity’s primary tool, the body, and that such action could be improved partly by improving this instrument.”⁴⁷ To achieve this, I immersed myself in physical maquettes and virtual prototypes, and reflected on how I could improve the richness of the somatic presence in the project.

Though there were no participants involved in this project, it was still situation-based and context specific. By combining auto-ethnography framework with Action Research, I managed to use myself to link to the target audience, who share the same cultural and social contexts with me and have a common purpose.

In the following paragraphs, I will specify the methods I used to elucidate how these two methodological frameworks are interwoven, and how they enabled me to create a participatory MR narrative space to reflect on sexuality and identity.

⁴⁷ Richard Shusterman. “Somaesthetics.” *The Encyclopedia of Human-Computer Interaction*, 2nd Ed, (2013).

Methods

+ **Reflexive fieldwork**

According to Pole and Hillyard, “fieldwork is an intellectually and technically challenging total experience aimed at capturing meaning.”⁴⁸ Conducting fieldwork is highly curiosity-driven and I aimed to gain an insight into what sexuality and identity means and feels like to Chinese bi-curious females. Secondly I tried to analyse and link those initial ideas to broader cultural, social, and political contexts. The fieldwork in this research is reflexive, because the ultimate goal is to know better and more deeply the inner self, while engaging and interacting with various external activities.

Fieldwork in my creative enquiry specifically emphasises the collection of footage, feelings and reflections I gained when I engaged in the exploration of sexuality and identity. My fieldwork comprised some LGBTQ iconic venues, themed exhibitions, archives, and, conceptually, my own lived experiences. The tools I used to do fieldwork encompass 1) an immersion in relevant locations and events and diarising, and 2) archival photographs and their reinterpretation, and 3) photographing.

+ **Case Study**

In the contextual review process, I critically reviewed creative works to study how contemporary multimedia storytelling incorporates new technologies and develops experimental ideas to engage with an audience. This allowed me to step into other practitioners’ cornerstones, to avoid unsuitable storytelling models and to incubate my own ideations. After a

⁴⁸ Christopher Pole and Sam Hillyard, “What is Fieldwork?”, *Doing Fieldwork* (London: SAGE Publications Ltd, 2016), 1-18.

contextual review, I confirmed the design objectives and brainstormed multiple ideas. In the early stages, my understanding, which was gathered from cases studies, helped me to eliminate some possibilities, thereby saving them from further development.

+ **Photographing and Volumetric Filming**

The camera captures a pre-existing reality, and these pre-existing moments of lived experience can present to us the avoided details, the unconscious self, and lasting cultural contexts.⁴⁹ Therefore, when I revisited archival photographs (Figure 7), I adopted a new lens and position to look back, to reinterpret the narratives in those photos. This process provided an opportunity to reflect, to make sense of life and to extend my emotions.



Figure 7 Birthday 1999, film photograph remakes, M. Cui, December, 2019

Susan Sontag notes photography's role as a form of collecting the world and constructing experience as we encounter it – a means of “note-taking.”⁵⁰ Cameras can create a visual record of objects that feature queer lives, and also record cultures and the ways people feel about them.⁵¹ I employed Polaroid instant photographing because a Polaroid camera produces tangible images on film, enhances the photo's cinematic\ and sensational feeling – it naturally and aesthetically provides altered reality

⁴⁹ Gerald John Davey, “Understanding Photographic Representation: Method and Meaning in the Interpretation of Photographs” (PhD, Iowa City, Iowa, USA, University of Iowa, 1992), <https://doi.org/10.17077/etd.eajsi9sx>.

⁵⁰ Susan Sontag, *On Photography* (New York: Penguin, 1979), chap.6, Overdrive eBook.

⁵¹ Brickell, Chris, and Judith Collard. *Queer Objects*, 13. Otago University Press, 2019.

to me, especially on set. This particular effect, for example in Figure 8, enhanced my emotional and creative responses to these key moments of my life.



Figure 8 "Body self-observing", Polaroid photography, M. Cui, January 4, 2020

Volumetric video (Figures 9, 10, 11) is a burgeoning modality of video that is distinguished by recording moving images of real people that exist in three dimensions, allowing them to be approached from any angle at any time.⁵² This specific filming technology enables me to put lifelike human performances into MR environments.

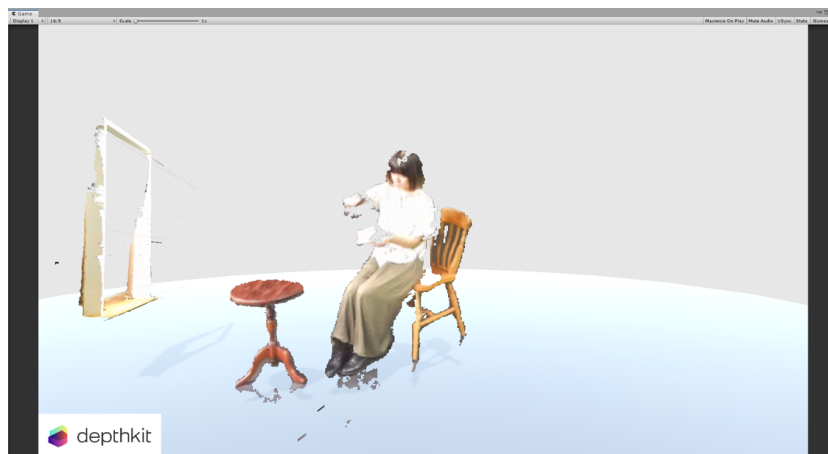


Figure 9 Volumetric filming 1, screenshot, 2020

⁵² James George, The Brief History of Volumetric Filmmaking, <https://medium.com/volumetric-filmmaking/the-brief-history-of-volumetric-filmmaking-32b3569c6831>, 2017.

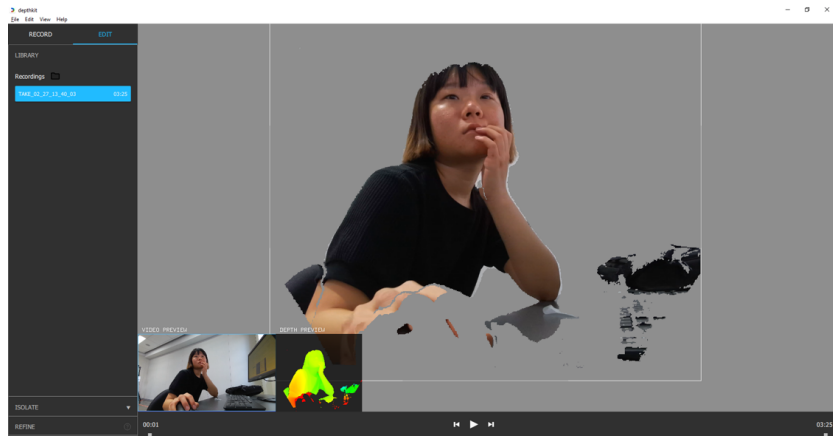


Figure 10 Volumetric filming 2, screenshot, 2020

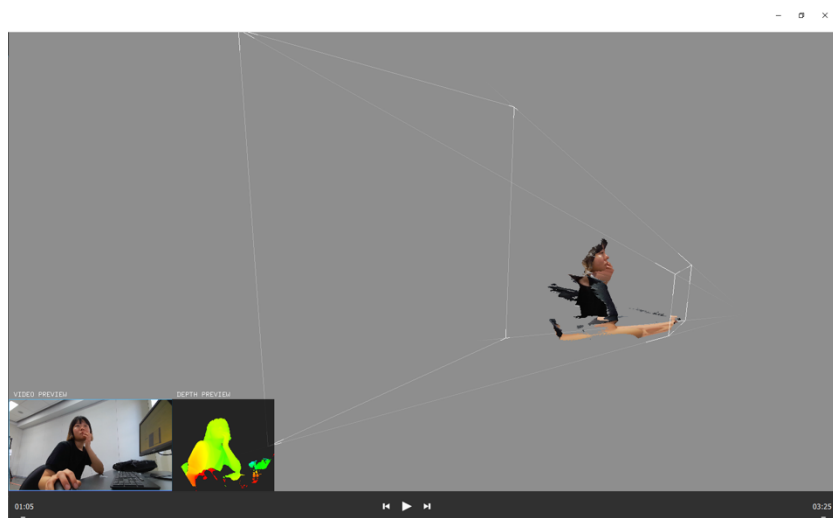


Figure 11 Volumetric filming 3, screenshot, 2020

The accessibility to Kinect camera and Depthkit software gave me a lower barrier to get started with volumetric filmmaking, while empowering me to explore different stylized representations ranging from the glitchy and holographic to the photorealistic (for filming process see Figures 12, 13, 14). Its aesthetics also align with my sensitive and intimate story tone.



Figure 12 Volumetric filming setup 1, photographic documentation, 2020



Figure 13 Volumetric filming setup 2, photographic documentation, 2020



Figure 14 Volumetric filming setup, photographic documentation, 2020

+ **Scriptwriting**

I wrote different scripts to develop the narrative, refine the storytelling direction and the emotional arc. The screenplay is intended to be interpreted on the basis of the subsequent production process, including communicating ideas with peers, pitching to producers, filming, and post editing. Therefore, based on my autoethnographic writing, I transformed my internal thoughts into a more descriptive language, using visual and action aspects of the story. Additionally, I adapted the conventional format for traditional media productions and explored new script formats that have better applicability to MR experiences. (For an example of scripting see Appendices p.81-82 and p.85-93).

+ **Storyboarding**

Creatives use storyboard as a visual representation of lens-based artworks to detail specific actions and camera shots. Specifically, when designing Chapter Two of the immersive experience where the virtual protagonist performs in front of audience, I used drawings and images to represent each plot point and to describe actions and dialogues within each stage of the experience. Additionally, I paid attention to the protagonist's moving trace in the space and simulated the audience's viewing angles. My main emphasis was not how detailed the drawings were, but to test out how the space would be used.

+ **Prototyping**

Prototyping is the process of building experimental elements that aid in the development and testing of concepts. It is an integral part of design thinking. I used prototyping methods at various stages of my practice, including sketches for the ideation stage, storyboarding, roleplaying,

model-making and finally, the development of an interactive web-based prototype.

+ **Slow Storming**

In addition to using analytical reflection to propose a new course of action and improve the practice, I experimented with soma-embodied approaches to reflect and test progressive outcomes and to generalise a new circle of action. Slow-storming⁵³ is an alternative design method of brainstorming proposed by Kristina Höök. In short, it involves engaging with your own bodily experience instead of insights based on statistics or user behaviours and then to slowly, thoughtfully generate ideas. Through immersing the body in a physical and virtual maquette, I was able to transform my tacit knowledge into results that became more empathic. Those ideas joined each phase of reflection and generalised next the progressive prototyping.

The mixed method approach was an appropriate framework for my creative enquiry because the nature of this methodology is to generalise new knowledge throughout the process and to make developments that further critical reflection and the documentation of practice.

⁵³ Kristina Höök, Ken Friedman, and Erik Stolterman. *Designing with the Body: Somaesthetic Interaction Design*. Cambridge: The MIT Press, 2018. muse.jhu.edu/book/62337.

Description of Practice

Before describing the artefact's development, I will briefly introduce the design of the final artefact/prototype.

I had originally intended to develop a prototype of the MR experience using Virtual Reality and volumetric filmmaking. But due to COVID-19 I was unable to access equipment for an extended period of time. Therefore, it was necessary to change direction and create a prototype using a web-based interactive storytelling creation platform, EKO Studio.

The original design was for:

An MR-based interactive experience that situates a participant in an in-situ physical environment that looks like a minimal bedroom. There are three scenes in the experience, each with a different mode of interactivity/immersion, which engage the user to be immersed in a narrative that is physical (embodied) as well as virtual. The final script for this experience can be seen in Appendix 3 (page 98).

I am using a Mixed Reality space to represent the feeling of being sexually disoriented. If approached on the *Reality-Virtuality Continuum*,⁵⁴ being sexually disoriented sits at the end of reality. The audience navigate their way and try to be orientated in a MR space, as they keep struggling between their obstacles and their true selves. By having the experience, at the extreme end of virtuality users would exist in a utopian world, where they would be immersed in and connected to their formerly absent true sexuality and identity. The sexuality and identity that users cannot explore freely in the real environment may be re-imagined in the virtual world.

⁵⁴ Paul Milgram et al., "Augmented Reality: A Class of Displays on the Reality-Virtuality Continuum," ed. Hari Das (Photonics for Industrial Applications, Boston, MA, 1995), 282–92.

The web-based prototype submitted for examination uses the format of a web-based interactive prototype to demonstrate the narrative structure and interactive elements of the experience, but does not use virtual reality.

+ **Autoethnographic Inquiry**

The project began with practice-led auto-ethnographic research with a focus on embodiment and queer phenomenology. In Appendix 1 (Autoethnographic Exploration and Experimentation) I have documented this phase of autoethnographic inquiry, which involved photo collaging (exploring ideas around travel and liminal spaces), visiting and reflecting on queer spaces (bodystorming⁵⁵) and exploring somatic presence as well as reflecting writing.

An important focus for my autoethnographic inquiry was my bedroom, where I conducted a self-interview and experimented with Polaroid photography. This process led me to explore the possibilities of interacting with a virtual self.



⁵⁵ See page xx for a description of this method.



Figure 15 Developing process, Polaroid. M. Cui, April 2020⁵⁶

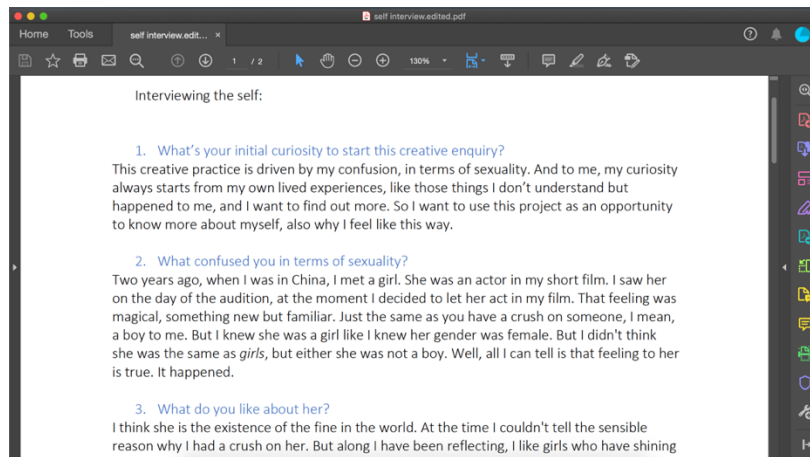


Figure 16 Transcript of interviewing the self, texts, M. Cui, 2020

Self-interviewing (as documented in Figure 16) is a method used in the process for the initial investigation of the individual story. It is metaphorized as a mirror into the innermost thoughts, awareness and perceptions.

⁵⁶ I realised it's impossible to film yourself in the mirror because the mirror reflects the flashlights and makes other parts underexposed. In the third picture, I turned the camera directly to myself. I shook it, shook it and shook it. The imagery gradually developed.



Figure 17 Self-interview setting. Photograph documentation. M. Cui, April, 2020

Autobiographic writing is another form of self-interpretation, only it is completely literal and non-verbal. I attempted to reflect on myself, to rethink my past stories, some of which I may not have thought about before. Writing reflexively, I constantly referred to and absorbed knowledge from relevant literature and creative practices, which helped with recall and resonance. Figure 18 shows my writing process. It is also my speculative and explorative journey towards being oriented. I am directed by, and discussing with, other pioneer practitioners and intellectual neighbours.

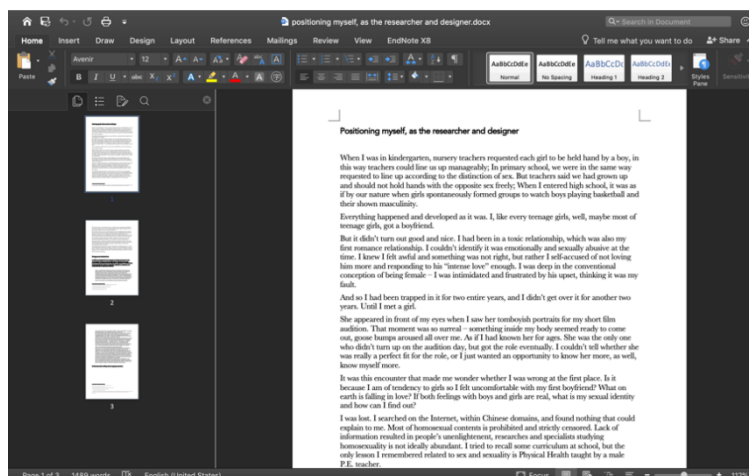
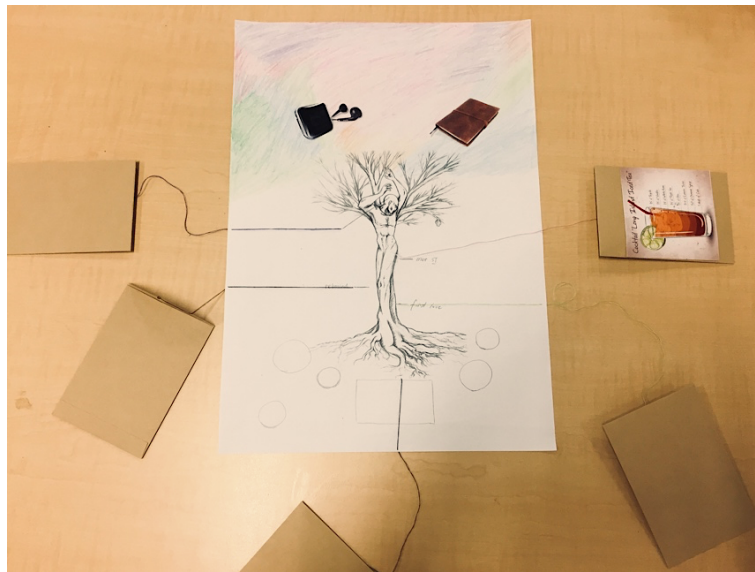


Figure 18 Autobiographical writing, texts, M. Cui, November, 2019

I put these fragmentary pieces of lived experience into tangible story containers (shown in Figure 19). These multimedia narratives serve the purpose of assembling and reflecting past lived experience. This loose and participatory model invites others to contribute their own stories. In this sense, auto-ethnography managed to expand to ethnography as my own insider knowledge of cultural experience connects with others about aspects of their own cultural lives.



places and times, which means a lot to her, and she will tell them the stories that happened to her there. She wishes people would really try to reflect on their sexuality and identity, and make efforts to understand the underrepresented and marginalised LGBTQ community. She will invite her audience to partake in liberating activities.

+ **Multisensory Exploration**

Sexuality includes physicality and emotions. Certain sensory feelings at some moments can recall past experiences.

A short episode of my life appeared in front my eyes. I was invited to stay at her house when I travelled to her city for an exhibition. The house's main room was a rotunda. It allowed us to walk in circles as much as we pleased. I felt she was always around and near me. A sense of intimacy was in the air. We sat down and did our own work from noon, to sunset, to night (documented in Figure 20). It was a very important turning point for my journey of sexuality exploration. I wished it could have lasted for longer. We had a glass of wine and a Danish pastry (Figure 21). Since then, the smell of wine and raspberry pastry has bonded the sexy texture to me.

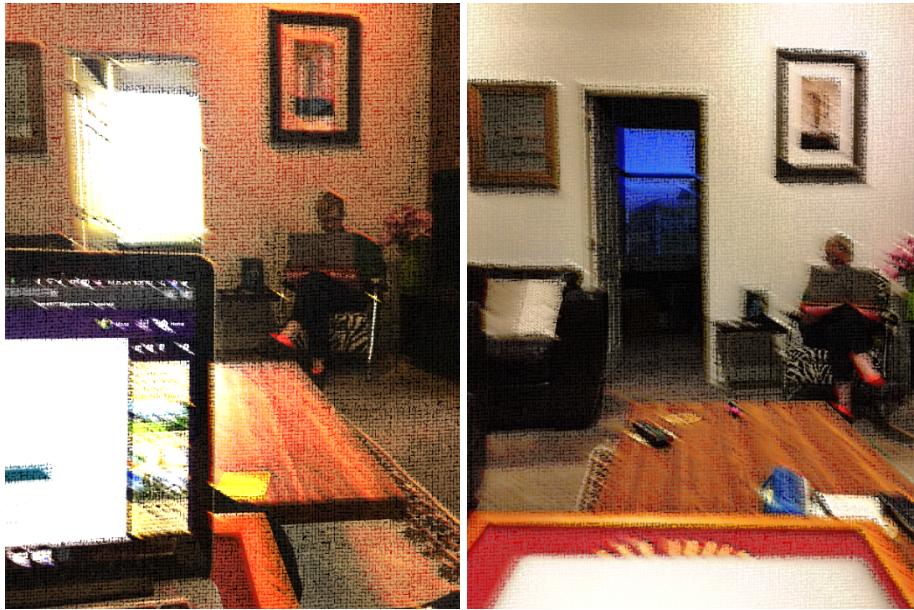


Figure 20 Noon sunset night, photographic documentation, M. Cui, 2019

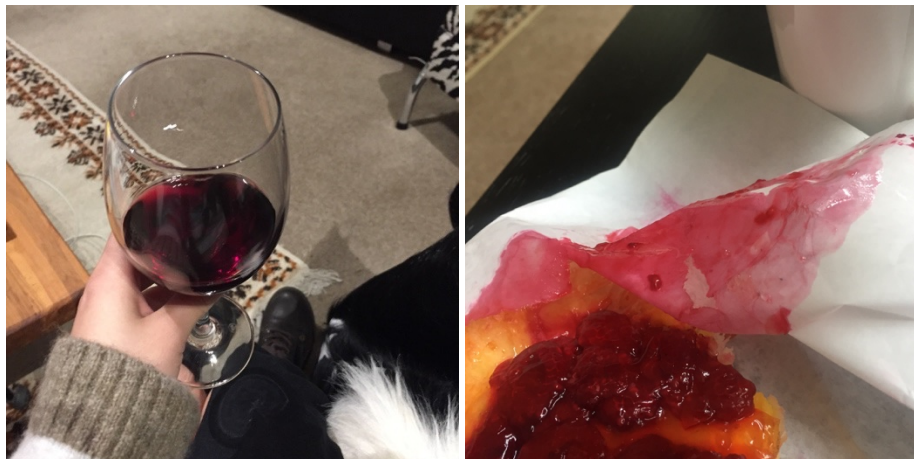


Figure 21 Red taste, photographic documentation, M. Cui, 2019

I recalled I accidentally had a cup of butter coffee. For a long time, I feel coffee that has a similar smell to semen, if I sniff it hard. I threw up all day once when I had a sip of butter coffee. Its salty and warm taste remaining in my mouth made me feel abominable. It tortured me inside.

Then I made the butter coffee personally, and photographed the bodily experiment process of making it, touching it, tasting it and immersing in it (see Figure 22). I realised the smell helped emotions and thoughts to form. I also felt my hearing and seeing was sharpened. My perception

became more vivid. The smell ignited and enhanced other human senses. Therefore, I decided to recreate the multisensory experience in situ.



Figure 22 Embodied taste: Butter coffee, experiment and photography, M. Cui, December 4, 2019

+ **Design Iteration 1**

After exploring earlier stages using a set of auto-ethnographic methods, I became clear about the objectives of this creative practice, which is to create an immersive and interactive collective space for Chinese sexuality explorers to construct a positive identity through connecting others in this invisible community. In this space, they can feel free to have conversations and bodily approach others they like to validate their feelings about people of different sexualities.

I started this creative practice by writing a synopsis that outlined the story I wanted to tell (synopsis in Appendices p.72). I reflected on it and realised it failed to present a clear storyline, or communicate how audiences would experience the story through interactions.

In Iteration Design 2, I aimed to demonstrate concretely how audiences are potentially able to explore sexuality and identity through bodily interactions and sensations.

+ **Design Iteration 2**

In the second iteration, I presented the storylines from the aspect of levels of reality. Using three layers of reality (physical reality, Augmented Reality, Virtual Reality) as the story advances, the users moves through different layers of reality and modes of interaction and immersion.

The movement of the audience through these layers of reality is intended to reflect the sexual identity continuum, mirroring Paul Milgram's concept of *Reality-Virtuality continuum* (p.15).

During this design phase, I learnt that one big difference between conventional scriptwriting and VR scriptwriting is that I must consider the audience's point of view. I reflected that writing in the first-person would better suit and communicate what audiences would likely experience in the story world. The space mock-ups also helped me identify some user-experience problems (Appendices p.75-78).

In the next iteration, I adjusted the script into a consistent first-person point-of-view, and the script became action-based rather than scenario-based.

+ **Design Iteration 3**

After the adjustments, I decided to test the design's efficacy. I understand that immersive and interactive media gives control and power to the audience, though at the same time it might confuse and disorient them. Subsequently, I did sketch storyboarding and 3D storyboarding to simulate

the experiences in order to visually test, reflect and evaluate the pitfalls and defects.

I realised then that the Augmented Reality experience component is disruptive. Although it served the role of bridging physical reality and Virtual Reality, it also broke the smooth transitions between different realities. I regrouped the levels of reality in the experience, and introduced an online platform at the end of experience (Appendices p.80-84). In this sense, it also expanded the project into a transmedia project.

+ Design Iteration 4

In my fourth iterative design, I incorporated an existing script template (see Figure 23) from 360 online videos.

360 VIDEO SCRIPT – Viar360.com

TITLE	Interactive lesson on X		
AUTHOR	John Smith		
VERSION	1.1		
DATE	5/28/2019		
Insert brief			

SCRIPT

Scene	Audio	Visual Direction	Scene Representation
Scene 1	Instructor: Hi. Thank you for joining us for this immersive lesson on X. Today we'll learn about ...	<ul style="list-style-type: none"> - Fade from black to the instructor - Instructor speaks into the camera - Write the name of the lesion above the instructor's head - ... 	
Scene 2
Scene 3
Scene 4
...

Figure 23 Script template, charts, VIAR360, achieved at May 2020, <https://www.viar360.com/examples-demos>

The bird's eye diagramme (Figure 24) clearly shows elements in the immediate proximity or in the surrounding area, according to the distance from the audience's point of view. By adding multiple blocks of different colours to the circles, I could demonstrate the changes over time. I added

another column of action and interaction alongside audio and visual to better demonstrate my project.

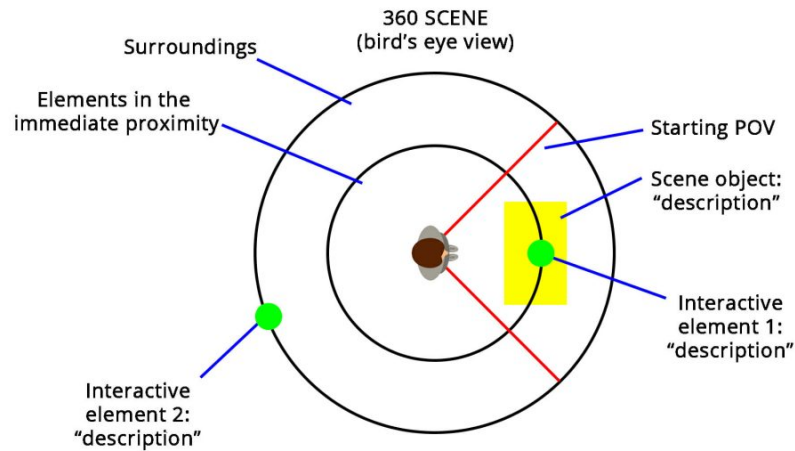


Figure 24 Location and proximity, diagramme, VIAR360, achieved at May 2020, <https://www.viar360.com/examples-demos>

Then I roleplayed to rehearse the entire experience. Roleplay (documented in Figure 25) enabled me to step into the audience's shoes to improve the disruptiveness. In the scenario the role play practice, the "laptop" simulated the "interactive element 1"; "cardboard goggles" simulated the audience and starting POV; "controllers (our own hands in the role play scenario)" simulated the "interactive element 2", and the real environments are "surroundings".



Figure 25 Role play 1, photographic documentation, M. Cui, June 2020

Through role play with real people, I realised some actions I expected from the audience may not happen, for example, I expected them to talk to the pre-programmed person out and loud in situ so their voice and actions would be recorded. When doing role play, I associated my bodily feelings with those in my earlier field work in the Ellen Melville Centre. Therefore I changed the last chapter by removing the programmed person, instead of straightforwardly guiding them going online to tell and contribute their own stories.

I finished the fourth iteration of the script (Figure 26). (Complete version in Appendices p.96-104).

TITLE	The Arrival of the Body that Perceives			
AUTHOR	Mona Cui			
VERSION	4.0			
DATE	15/06/2020			
Objectives: Create an immersive and interactive collective space for Chinese sexuality explorers to construct a positive identity though connecting others in this invisible community. In this space, they can feel free to make conversations and bodily approaching to others they like to validate their feelings to people of different sexuality.				

SCRIPT

	Audio	Visual Direction	Action/ Interaction	Scene Representation
Scene 1	<ul style="list-style-type: none"> - Sound from the docent: Hi. Thank you for joining us for this immersive experience. Please feel at home and make yourself comfortable. - Then, a soap opera about Chinese heterosexual romance comes to play. 	<ul style="list-style-type: none"> - The TV shows "welcome" page. - Then TV plays the soap opera. - A <u>spotlight</u> is turned on, at the area of TV, and the remote control. - Another <u>spotlight</u> is turned on, at the area of the cushion on the bed. 	<ul style="list-style-type: none"> - Walk into a room that contains a <u>single bed</u>, a <u>small table</u> with a <u>TV</u> on top, aside with a <u>VR headset</u>. 	

Figure 26 Action script new format, tables, M. Cui, 2020

By this time the audience’s emotional journeys became clear and specific. These are shown in Figure 27 below:

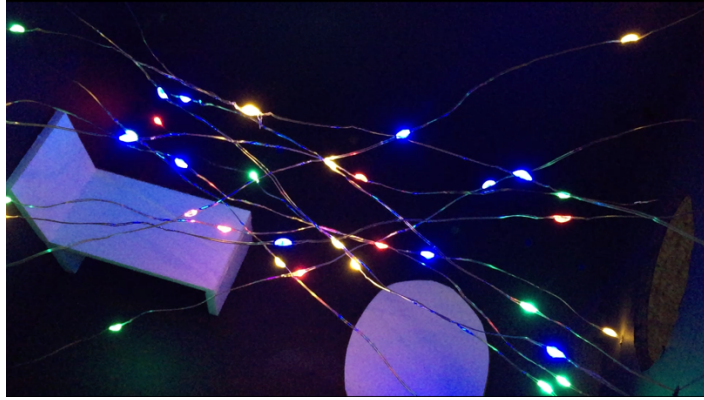


Figure 28 Maquette iteration 2 with lights, photographic documentation, 2019

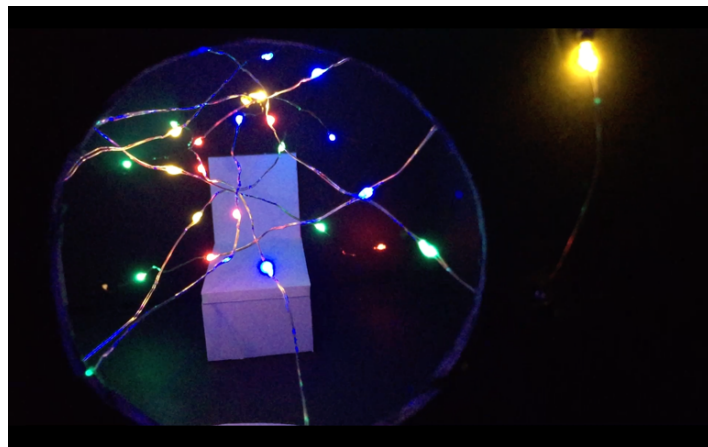


Figure 29 Maquette iteration 2 with lights 2, photographic documentation, 2019

Later, I used cardboard to make a miniature physical representation of the story world (Figure 30).



Figure 30 Physical maquette, photographic documentation, M. Cui, 2020

By observing and playing with this maquette, I began exploring how to better introduce virtual elements into a tangible space.

II. Virtual Maquette

In the next step of prototyping, I tried to expand it into a 3D virtual environment by employing Microsoft Maquette Beta software (Figure 31).

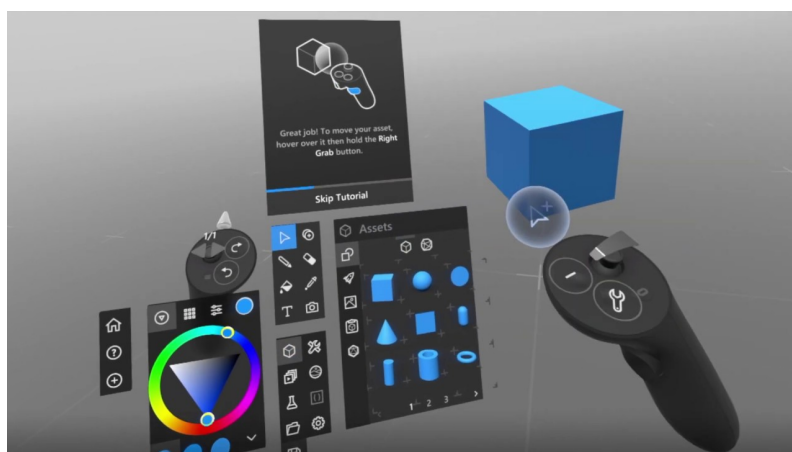


Figure 31 Using Microsoft Maquette, screenshot, M. Cui, 2020

This software's engaging and immersive environments helped me test the feasibility and capacity of my initial assumption, to find its flaws and refine

them in the next circle of action research. And, ultimately, my practice outcome deployed prototyping formats to communicate with external parties and present my research outcome.

III. Scene building

I integrated, edited volumetric footage in Unity, tested with VR headset and exported the final experience.

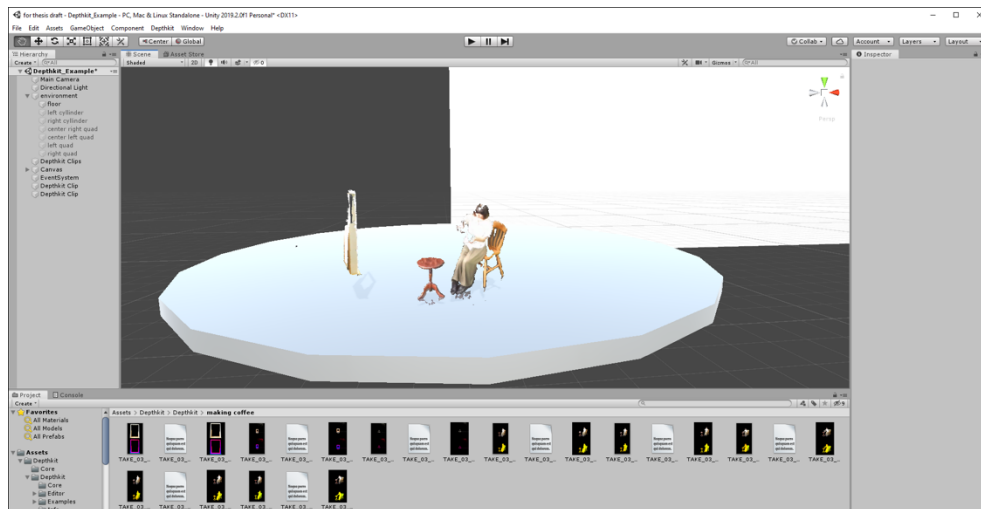
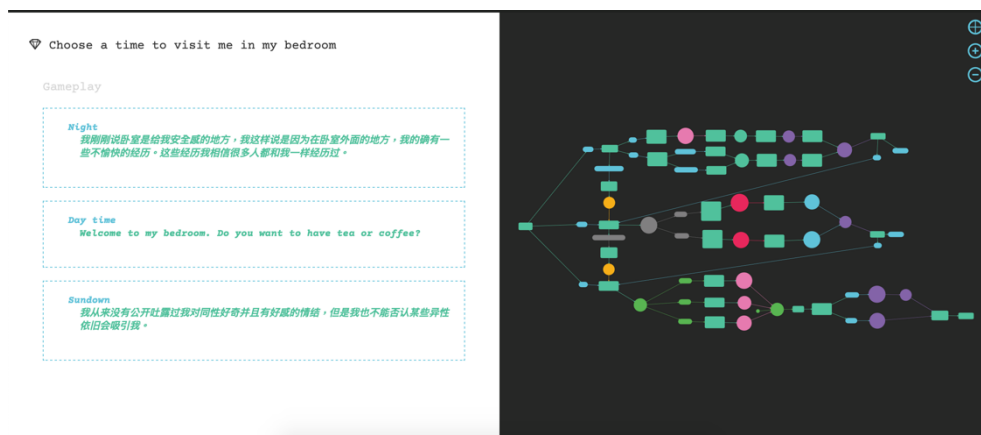


Figure 32 Post-production in Unity, screenshot, 2020

IV. Interactive documentary pathway

I used an online platform *Celtx* to project the narrative pathway.



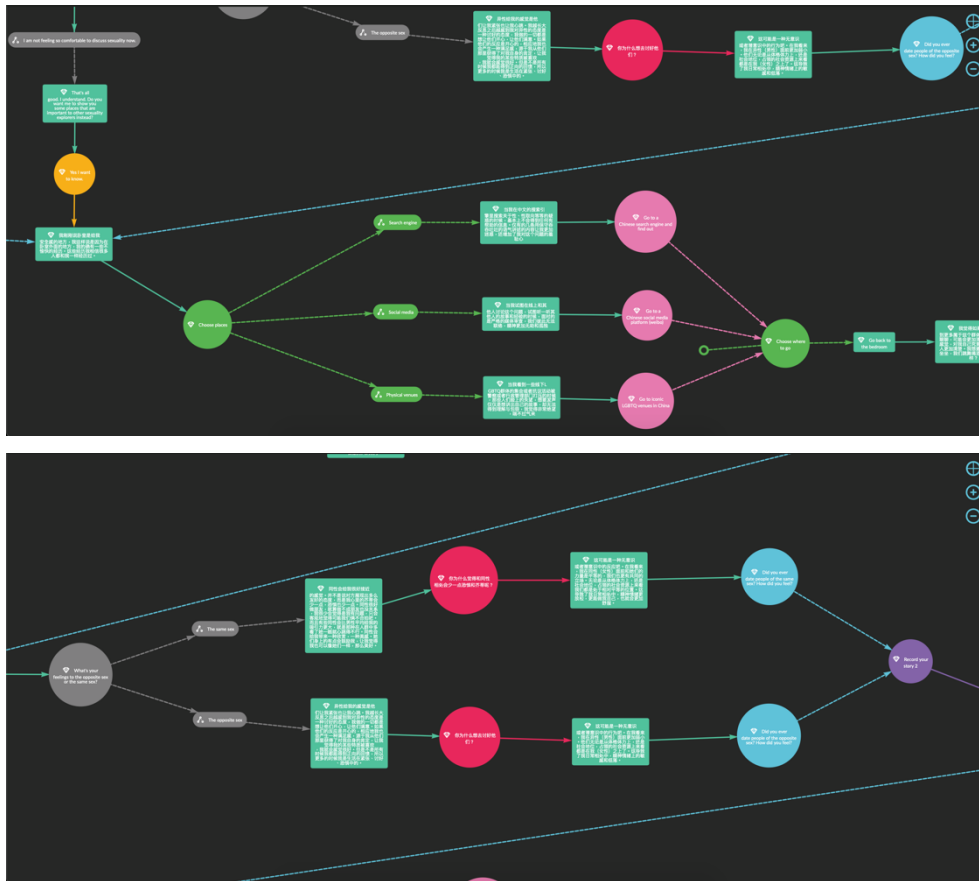


Figure 33 Branch pathway demonstration, diagramme and texts, M. Cui, 2020

V. Roleplay

I used roleplay to test rehearse the user experience and improve the disruptiveness.



Figure 34 Role play 1, photographic documentation, M. Cui, June 2020



Figure 35 Role play 2, photographic documentation, M. Cui, June 2020

Discussion and Reflection

Looking back at the methods I used to carry out the research, I critically reflect that auto-ethnography as a research method has both advantages and disadvantages. One advantage is that it is an evocative and intimate perspective from which to investigate a particular phenomenon. The humanity existing in auto-ethnography is touching, respectful and beautiful. It is a valuable and powerful storytelling tool, especially for an underrepresented community to express their marginalised situation. At the same time, I feel it brings an unavoidable vulnerability to the researchers. Auto-ethnography exposes the researchers' inner feelings and thoughts, which require honesty and courage to disclose. I personally struggled at times in revealing certain things about myself because of feelings of possible judgment, or the uncertainty and ambiguity of certain thoughts. But chances are that the researchers may be so engrossed with bringing out the richness of auto-ethnography that they feel challenged to grasp the balance between the requisite disclosure and unnecessary suffering.

Regarding delving into interactive and immersive storytelling, especially switching to this from a traditional documentary filmmaking background, I appreciate that I have learnt much about a more fundamental design thinking framework. The philosophical worldview behind action research has influenced my epistemological and ontological views, and thereby influenced my understanding of creative practices. For practice-led researchers, **knowledge is generated from practice!** It took me almost my entire Master's timeframe to truly understand and grasp this nuanced meaning. I used to believe knowledge is pre-existing; that I would only get started once I fully mastered that knowledge. In the past I would only go onto a film set once I was one hundred percent confident. Because of this I missed many opportunities to deploy a sufficient iterative design process. What I could have done differently is to try various tools, materials and experiments about storytelling in extended environments, including trying out more software,

playing with more possibilities, making a diary and reflecting on those experiments. I would have been braver and enjoyed making mistakes.

In terms of what I learnt about interactivity and immersive storytelling, I think my understanding of its capability and potentiality has changed along with the way I designed the experience. My initial research question was *How might an auto-ethnographic narrative in MR allow audiences to engage with and reflect on sexuality and identity*. I had expected my designed experience would “mould” audience behaviour and would have a huge influence on audiences thereby changing them. Now that I have reflected my initial expectations, I have realised that I cannot manipulate the audience, but I can put myself in their shoes and try to re-think my design. I can now design more engaging ways to provide the audience with agency and encourage them towards certain activities. Designing an interactive experience is more like building a relationship of creators and users. It is humbling and, respectful, but still informed, expressive and thoughtful.

Being isolated due to COVID-19 also reminds me of the inaccessibility of MR experiences, particularly at this time. The installations of MR require a high-level of logistics and distribution support, which makes them hard to transport inter-regionally, therefore it is hard to reach large numbers of people. This problem also causes difficulty for researchers studying artworks in regions other than when they live. This causes them to rely on online resources to peruse these projects while certain features such as multisensory stimuli are not accessible. It will remain a problem until more advanced technologies become cost effective.

Conclusion

My personal sentiments, passion and curiosity are contained in this research and creative exploration. I aimed to design a MR experience that tells my autobiographic stories, at the same time as engaging audiences and enabling them to reflect on sexuality and identity. Instead of accomplishing a fully functional experience, this project ended up focusing on scripting, storyboarding and prototyping, which are the core components of such an experience. Although the outcomes of my research are not able to provide the audience with coherent interactions and immersion, and in the sense this research does not involve comprehensive user testing, my research and enquiry is supported by storytelling through scripts, storyboards and prototypes. As a traditional documentary filmmaker in my past practice, I have realised the human and material cost of making interactive and immersive experiences is huge, so effectively communicating ideas in the early development stage is important. This comprehension has increased the research outcomes' meanings and the significance of experimenting with new means of scripting, storyboarding and prototyping, especially in a MR experience.

In my research, I managed to primarily understand the relations of sexuality and identity to Extended Reality (practically indicating interactive and immersive media) from philosophical perspectives. The contextualisation has supported the legitimacy and validity of using interactive and immersive media to provide embodied experiences for explorations of and reflections on sexuality and identity. Other scholars and designers may build their projects on this foundation. Setting off from there, I conducted auto-ethnographic research and blended my own stories into the narrative. Using the action research framework, I iterated the scripts and made the experience less disruptive. I found the 3D storyboarding and fast prototyping succeeded in helping visualise abstract concepts, confirm flaws in original scripts, adapt and make iterative decisions.

In the future, I hope to collaborate with essential creative and technical personnel to fully accomplish the artefact. By then I could invite the Chinese or maybe the larger LGBTQ community to approach the experience, and my research might be able to bring more insights of co-creation between interdependent parts involved in the production and consumption of interactive and immersive media.

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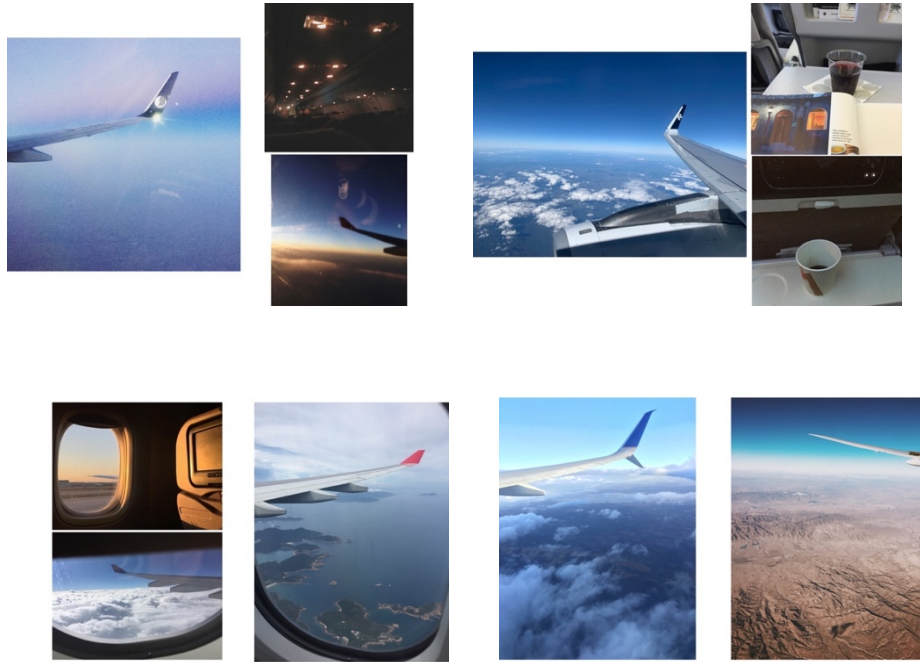


Figure 37 In the Air, photographs collage, M. Cui, 2019

I wondered why these photos touched me so much. Queer Phenomenology⁵⁷ gave me clues and contextualised my feelings. We are migrant bodies. Migration is described by Ahmed “as a process of disorientation and reorientation: bodies ‘move away’ as well as ‘arrive,’ they re-inhabit spaces.”⁵⁸ I am fascinated by the differences between “moving away” and “arriving”. Travelling by airplane (Figure 37) to me doesn’t imply that I am desperate to land in another place. The real enjoyment and excitement is that I live in the middle of somewhere in the sky. An airplane cabin is a liminal space – I may exist in some non-territorial airspace, and even though I fly domestic, I separate myself from the social and the cultural. I am ultimately being with myself as pure existence. Looking out from the airplane cabin, the lines between me and the sky are the window shade and the airplane’s contour.

⁵⁷ Sarah Ahmed, *Queer Phenomenology: Orientations, objects, others*, (Duke University Press, 2006).

⁵⁸ *Ibid.*, 9.

This caused me to realise that I would like to create such a space where we can purely spend time, share a close moment with our crush regardless of sex, and leave behind the social and the cultural. Our bodies draw closer to or away from another body, listen and talk to another body, interact with the objects they have touched, or even just wander around the space. We inhabit a dream-like space, and disorientate and reorient our bodies to acquire direction and an interpretation of sexuality and identity.

+ The Dawn

I would like to design a space and invite other people in, so I did some research about how the existing LGBTQ spaces invite people in.

Firstly, I went to an iconic queer space in Auckland – the Ellen Melville Centre. During the Auckland Pride Festival, the atmosphere in front of Pioneer Women’s Hall was amazingly inclusive. I felt like I was *invited in* by its vibrant atmosphere. As one of the main venues of the pride events, this space was adapted and re-decorated to enable people to feel comfortable in wandering around, reflecting and connecting. I immersed myself in that space, extended my body and mind while reflecting inwards, diarised, and engaged in very slow movements (documented in Figure 38). I tried shifting my attention to different parts of my body to attain somatic presence.

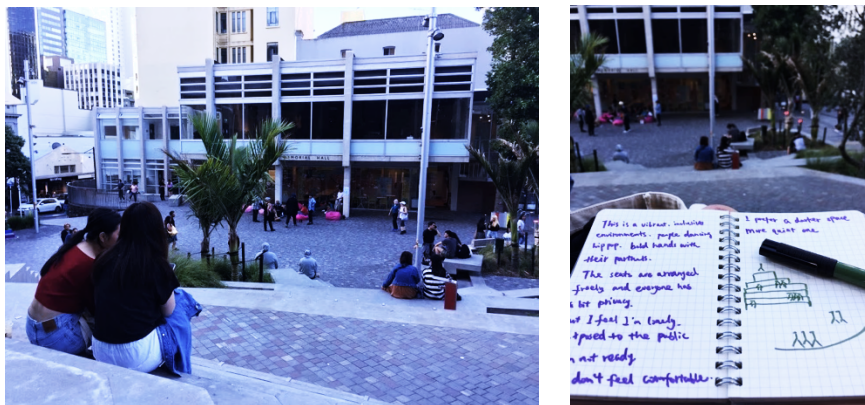


Figure 38 Attaining somatic presence, photographic documentation, M. Cui, 2020

I sensed and identified that this space wasn't ideally suitable for the self-exploration of sexuality and identity, although people were surrounded by an openly proud LGBTQ community. The noisiness and closeness of being with others could easily leave a confused individual feeling more isolated, shy or self-conscious. Figures 39 and 40 augment the vibrance through using special filters. I was sitting on the steps alone. I knew I was craving for maybe a free hug or some kind of physical interaction to make myself feel emotionally sheltered. The reflections I gained were that it would be helpful to create a relatively small, settled, quiet space to settle minds and bodies.

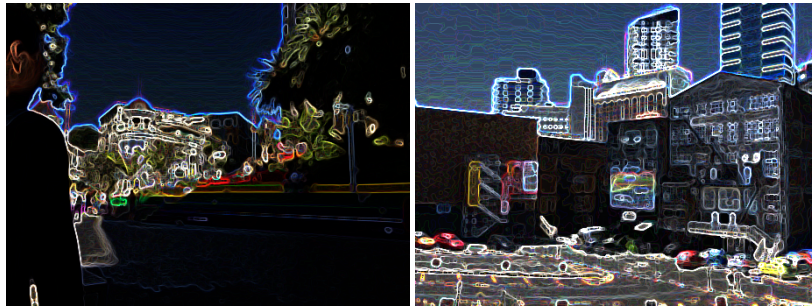


Figure 39 Snapshots at fieldwork, The Ellen Melville and Mayoral Drive, photographic documentation, M. Cui, 2020

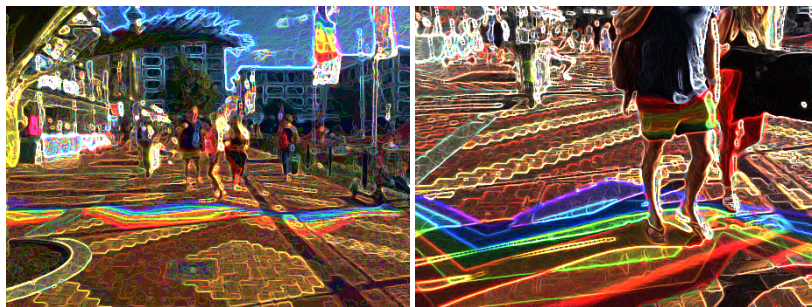


Figure 40 Snapshots at fieldwork, Viaduct Harbour, photographic documentation, M. Cui, 2020

Then I came back to my bedroom.

My bedroom is my little sanctuary all the time. When I broke up with a boyfriend, I stayed in my bedroom alone crying for days, reminiscing. When dad tried to hit me, I hid in my bedroom and locked the door. It is

on my bed where I wake up that I feel my body present every day. I lie in my bed and think of the person I like, smiling. I shut door and fear outside my little bedroom. Inside the bedroom, there is only myself in the entire world. It is the desirable space to spend time with myself, and reflect inwards with my thoughts.

Before conducting the self-interview, I took some Polaroid photos. This moment resembles a classic scenario in Snow White when the Queen interrogates the mirror who is the fairest person in the world? Here, I asked myself, who is my favourite one of all? Then I pushed the shutter button.



Figure 41 Under-exposure failure, Polaroid, M. Cui, April 2020⁵⁹



Figure 42 Flashlights failure, Polaroid, M. Cui, April 2020⁶⁰

⁵⁹ I did not push down the flash button for the first photo because I thought the room was bright enough. I shook it, shook it and shook it. Nothing came out.

⁶⁰ In the second one I pushed the flash button, and I intended to shoot the reflection in the mirror. I shook it, shook it and shook it. Nothing came out, except for a cloud of white noise.



Figure 43 Developing process, Polaroid. M. Cui, April 2020⁶¹

Waiting for a Polaroid photo to develop is a long period of psychological time. I was reminiscing about stories from my childhood and adolescence. When I waited for the first photo to be ready, my mind re-constructed many stories, even though the photo turned out black. The sparkly white noise in the second photo was soon visible; it looked like an amalgamation of the rainbow. It initiated the storytelling of my perceived present. While the third photo started to develop colourfully, I believe it represented my imagined future, my wishes, my free self, my true self. My mind wandered in another liminal space, a virtual mind world.

Afterwards, I interviewed myself standing on the bed with a mirror. Figure 44 is a brief transcript of the interview. It looked like I interviewed the virtual person on the other side of the mirror, but in fact I had a sensual

⁶¹ I realised it's impossible to film yourself in the mirror because the mirror reflects the flashlights and makes other parts underexposed. In the third picture, I turned the camera directly to myself. I shook it, shook it and shook it. The imagery gradually developed.

conversation with my inner self to speculate virtuality. The virtual is a kind of potentiality that becomes fulfilled in the actual. It is still not material, but it is real. Just like I could not film the reflection of myself, but I was able to film the real person.

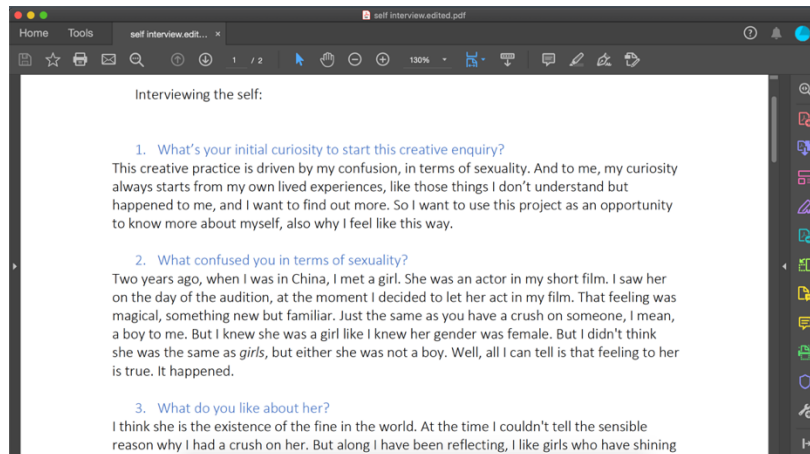


Figure 44 Transcript of interviewing the self, texts, M. Cui, 2020

Self-interviewing (as documented in Figure 45) is a method used in the process for the initial investigation of the individual story. It is metaphorized as a mirror into the innermost thoughts, awareness and perceptions.



Figure 45 Self-interview setting, Photograph documentation, M. Cui, April, 2020

Interviewing the self:

1. What's your initial curiosity to start this creative enquiry?

This creative practice is driven by my confusion, in terms of sexuality. And to me, my curiosity always starts from my own lived experiences, like those things I don't understand but happened to me, and I want to find out more. So I want to use this project as an opportunity to know more about myself, also why I feel like this way.

2. What confused you in terms of sexuality?

Two years ago, when I was in China, I met a girl. She was an actor in my short film. I saw her on the day of the audition, at the moment I decided to let her act in my film. That feeling was magical, something new but familiar. Just the same as you have a crush on someone, I mean, a boy to me. But I knew she was a girl like I knew her gender was female. But I didn't think she was the same as *girls*, but either she was not a boy. Well, all I can tell is that feeling to her is true. It happened.

3. What do you like about her?

I think she is the existence of the fine in the world. At the time I couldn't tell the sensible reason why I had a crush on her. But along I have been reflecting, I like girls who have shining qualities. It's different from liking boys who have some good qualities. For girls, they are who I admire and who I want to be. They boost me to become a better girl that I want to be, and that's exciting to me. But for boys, looking for boys with good qualities makes sure they treat me well, so we can have a happy relationship. That's all, it's not so... hmm so when I question myself why I like boys, I find I can't tell a sensible reason.

4. Have you dated boys before? And how was it? How do you feel for boys?

Yes, I had a few boyfriends before, and I have a boyfriend now. How do I feel for my boyfriend... hmm, I have to say I like him, I can't say I don't have feelings for him, and even I love him. But having a relationship with the man is not a constant pleasure. I would say it's complicated emotions sometimes. I am always insecure, not assertive and easily being manipulated by my boyfriends. Maybe that's my problem, like, I like to please them. I feel empowered when I make them happy. But sometimes when I am alone, reflecting, I don't like who I am.

5. So are you saying you feel inferior to men?

Hmm... I don't know. That's a very definite statement. In the workplace, I definitely don't feel so. I believe women can achieve as much as men, sometimes even more and better than men. But when it comes to sexual relations, I do feel less strong than men, both physically and emotionally. I need to look up to see their eyes, and they have much stronger strength. And they can leave and go away whenever they want. I am afraid of being dumped or abandoned... In the meanwhile, it explains why being in a relationship with a man also brings me excitement and achievement, like if they like me and would like to stick to me.

6. Do you reckon dating women doesn't have the same problem?

I never dated girls so I don't have a say actually. But I feel way more comfortable interacting with the female. I am more expressive, more relaxed, more being myself. And I feel safe...

Figure 46 Self-interview transcript, texts, M. Cui, April, 2020

I am the researcher, the designer, and also the interviewee and the participant; therefore the conversation with myself involves constant role changing, self-criticism and self-analysis. At the same time, self-interviewing brings me the most intimate, private and safe space with my self, as the whole process happens with only myself present, without anyone else's involvement or interruption. If interviewing the self is seen as

a performance, I am portraying the “self” through asking, talking, and hearing.

Autobiographical writing is another form of self-interpretation, only it is completely literal and non-verbal. I attempted to reflect on myself, to rethink my past stories, some of which I may not have thought about before.. Writing reflexively, I constantly referred to and absorbed knowledge from relevant literature and creative practices, which helped with recall and resonation. Figure 47 shows my writing process. It is also my speculative and explorative journey towards being oriented. I am directed by, and discussing with, other pioneer practitioners and intellectual neighbours.

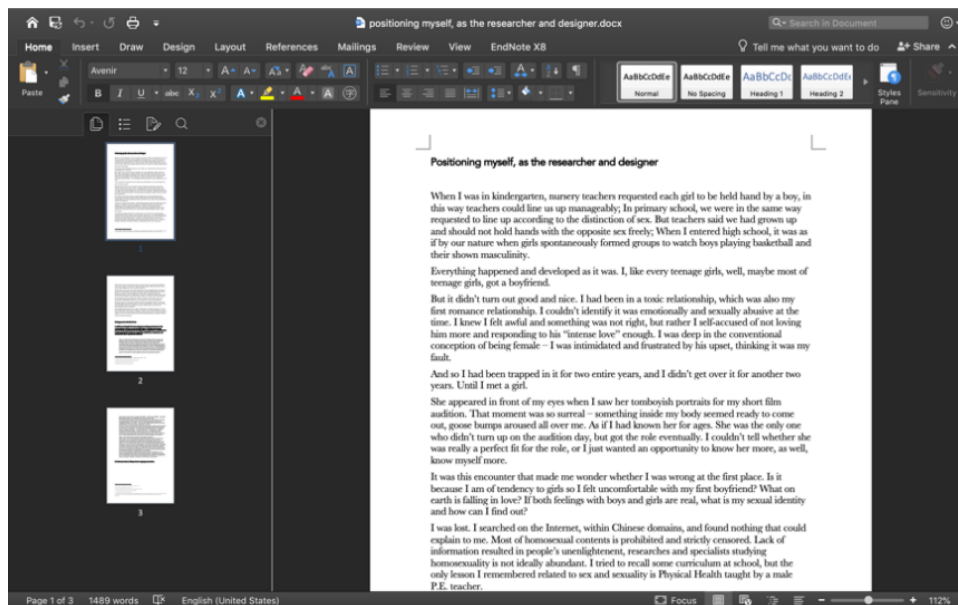


Figure 47 Autobiographical writing, texts, M. Cui, November, 2019

I put these fragmentary pieces of lived experience into tangible story containers (shown in Figure 48). These multimedia narratives serve the purpose of assembling and reflecting past lived experience. This loose and participatory model invites others to contribute their own stories. In this sense, auto-ethnography managed to expand to ethnography as my own insider knowledge of cultural experience connects with others about aspects of their own cultural lives.

Appendix 2 – Script Development: Draft Scripts and Storyboarding

Design Iteration 1: Draft Script 1

The first draft of idea is shown below:

Tagline: The Arrival of the Body that Perceives

Synopsis: In a bedroom setting, the audience will see the phantom of a young Chinese female lying on a bed, and they can lie down next to the virtual character. They will know this character's story of being a young adult, a child and an adolescent in the dawn, afternoon and midnight respectively. The audience can initiate questions and have conversations with the character by using their body to activate triggers located either in props or in spatial locations. Those triggers will form a string of lights to show how the audience are reorienting their bodies to acquire direction.

The first draft managed to give an overview of what the audience would see and know in the experience, and give a hint that the experience is interactive. In the meantime I realised that it failed to present a clear storyline as in, for example, what audiences will experience over time, and how they reveal the storyline through interactions. Moreover, it didn't manage to demonstrate concretely how audiences are potentially able to explore sexuality and identity through bodily sensations.

In order to further develop the concepts and ideas, I heightened the key aspects in the first version, which had required further work. They are:

- *How will an audience know the character's story?*
- *What will the audience be experiencing over time? What are they doing, seeing and hearing?*
- *Where are those triggers located and how are they working?*

- *What does the idea of “a string of lights to show how the audience are reorienting their bodies to acquire direction” mean? Is there a better or clearer way to be in line with Queer Phenomenology?*
- *How do I manage to demonstrate ideas from the Contextual Review to give audiences many layers of reality, and what do they perceive in each reality?*

To clarify these problems, the synopsis needed to be changed to some extent.

Design Iteration 2: Script Draft 2

I designed three layers of reality in the first iteration. The first chapter used physical reality, where the audience had the opportunity to watch a heterosexual soap opera and then a national broadcast regarding banning homosexual content in mass media. The second chapter was located in Augmented Reality, where the audience used smart phones to scan the room and have access to an augmented story world. The third chapter was fully in the Virtual Reality spectrum, where the audience entered a dream-like nightclub and made bodily approaches to people of a different sexuality. This idea bridged three layers of reality, creating a more gradual transition. This could slowly lead to a utopian world where people might explore their true identities.

I would explain to the audience what each layer of reality contains and give a clue to what they would experience. The second iteration of the script is shown below:

- 1- *The space consists of three layers of reality; one in reality, one in Augmented Reality, and one in Virtual Reality.*
 1. *The physical space is a characteristic Chinese girls' dorm. A very small bunk bed (see Figures 49 and 50) with unwrinkled sheets and a tidily folded blanket. It's night time. There is a television playing a heterosexual romance tv show, and then playing the national news broadcast about banning depictions of homosexual content on mass media. The audience is invited to lie down on the lower bunk. They will experience a sense of depression, dullness.*

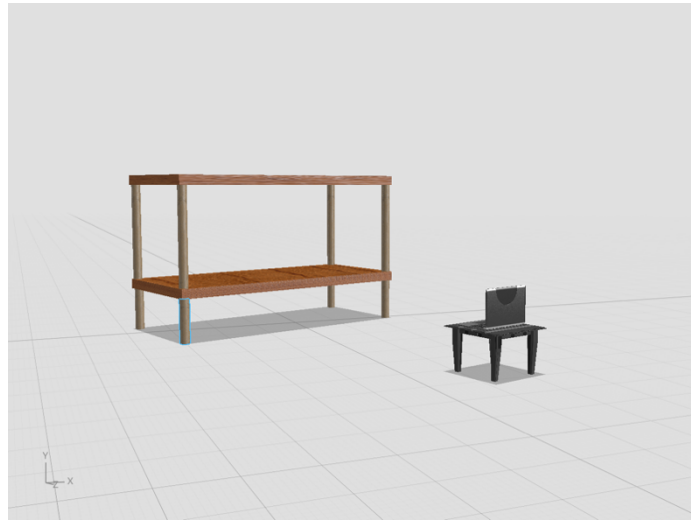


Figure 49 Bunk bed mock-up 1, M. Cui, 2020



Figure 50 Bunk bed mock-up 2, M. Cui, 2020

After the national news broadcast finishes, the space transforms into its second chapter – Augmented Reality. There will be a projected girl walking into the dorm; she is your roommate. She will get on the upper bunk. She turns off her lights, but then come her sobs. On the bottom of the upper bunk, there will be a smart device to prompt the audience to initiate conversations with the girl. In this chapter, the audience will get to know about personal confusion and the struggle with romantic life, sexuality and identity. Through those question prompts, the audience are also given an opportunity to reflect on their own sexuality and identity.

At the end of chapter two, the projected girl expresses her wish to get to know more people experiencing the same situation as her. In the third chapter, the audience are prompted to put on a VR glass. The bedroom setting will change into a vibrant night club (see Figure 51 for visual

reference). The audience will see many live avatars dancing, talking to each other and virtually dating. Those avatars are other people who are also using this space at the same time. The audience's figures will be animated and rendered as ethereal figures formed with vibrant lines and shapeshifting. Everyone's actions will be recorded and then transformed into the virtual world. Instead of dating people face to face, they are putting on VR goggles, and dating each other's avatars. This makes it easier for those who are sexually curious to explore and connect. Their actions and conversations will be recorded and uploaded into a web-based platform, so that everyone around the world can access this collective story space.

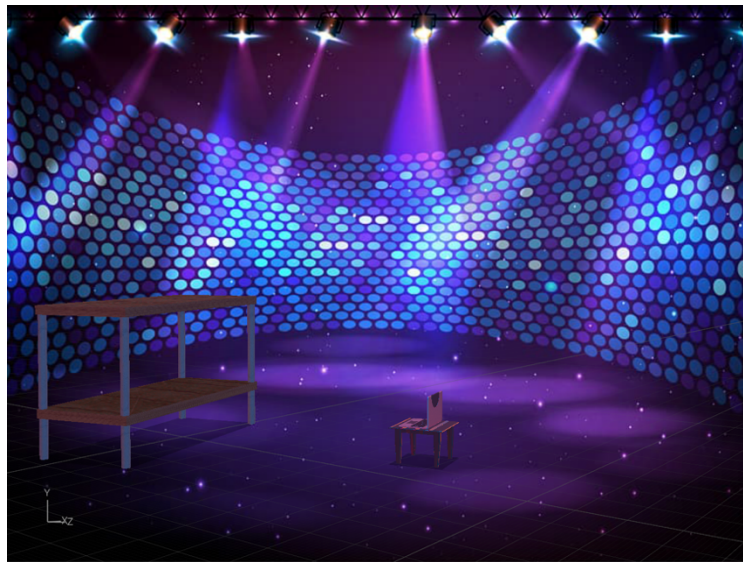


Figure 51 Nightclub mock-up 1, M. Cui, 2020

2- The MR space encompasses two interactive components:

1. The bottom of the upper bunk (Figure 52).

A digital interactive screen is located on the bottom of the upper bunk. Audience will use this device to communicate with the protagonist. There will be a series of pre-set questions and programming in this device. These questions lead to various pathways of storylines, so the storytelling is non-linear and interactive. After the audience initiates a question, the stereo player plays the matched answer.



Figure 52 Bunk bed mock-up 3, M. Cui, 2020

- II. *The nightclub dancing space interactive component (Figure 53).
To achieve this feature, technical support involves motion capture and live programming.*



Figure 53 Nightclub mock-up 2, M. Cui, 2020

When I finished the second script iteration and reviewed it, I found that I had been constantly switching between the perspective of the creator and of the audience. It caused problems because of messing with the roles of either the observer or the protagonist that audiences would play with. I realised that one big difference between conventional scriptwriting and VR scriptwriting is that I must consider scenarios from the audience's point of view. This problem is ultimately rooted in the audience's autonomy in

interactive and immersive media. I would like my audience to participate in the story as the protagonist, and to perceive the story from their own sensory point of view. I reflected that writing in the first-person point-of-view would better suit and communicate what an audience would likely experience in the story world. Also, the scriptwriting needs to show what the story is that is being revealed, and ensure that this is embodied. Therefore, I wrote the next script iteration from the first-person point-of-view, and the script was more action-based rather than scenario-based.

The space mock-up shown in Figure 54 helped me identify some user-experience problems, for example the interactive device located at the bottom of the upper bunk. Those visual representations mocked the point of view from the audience so they would have to lie down, look up and reach out their hands to the screen. During this process, they would be likely feeling disembodied from the story world and be self-conscious of their body and minds. In order to bring a smoother and more embodied experience, I decided to move this interactive component forward to connect with the television section. After the television finishes, the audience would use the remote to unfold the storyline directly from the television screen.



Figure 54 Bunk bed mock-up 3, M. Cui, 2020

In order to further develop the concepts and ideas, I heightened the key aspects in the second version, which required further work. These were:

- To write the script from a consistent first-person point-of-view.
- Script to be action-based.

Design Iteration: Action-Focused Script and Storyboarding (Draft 3)

I then embarked on practice with the aim above. Prior to dabbling in immersive media, I studied and worked in documentary filmmaking and video production. Stories are an important aspect of culture, and storytelling is central to human existence.⁶² I believe that without story content, novelty tends to disappear very quickly. Compared to my old workflow in traditional filmmaking, I think the advent of immersive and interactive media does not change writing, rather it has added a series of new tools for staging and editing. These include compelling interactions and the use of *agency* within a narrative. I used a variety of scripting techniques for this MR experience, from an action-oriented script from a first person point of view to 3D storyboarding, and detailed scene by scene descriptions breaking down each scene into character, interactions and technical specifications.

I assembled the initial design ideas into a standard, action-oriented script format. Writing a script is the first step in transforming the raw information existing in our heads into stories. It is also a method to communicate with peers and other team members. In the first script iteration, I mainly focused on giving the audience *agency* to engage them – to interact or react, rather than simply perceive. And I chose a first-person point of view, which means audiences would experience the story through the eyes of a character. In this way, the viewer is more embodied, perceiving the story without being directly implicated.

I broke down the script into actions (in Figure 55):

⁶² Frank Rose, “The Art of Immersion: Why Do We Tell Stories?” *Wired*, March 8, 2011, <https://www.wired.com/2011/03/why-do-we-tell-stories/>.

Action
I walk into a room that contains a bunkbed, a small table with a TV on top, and a door. On the TV a soap opera is playing.
I lie down on the bed and watch the soap opera. After a minute, the TV news comes on and shows national news broadcast about banning depictions of homosexual context on mass media.
The lighting in the room is dull and the room is very plain. When the TV broadcast stops, the lights dim.
I hear a knock on the door, and a girl's voice asking "is anyone in? I'm back!"
I walk towards the door. There is a smart phone aside with "use me to open the door by scanning".
(On the phone screen) A girl steps into the room, after greeting at me, she said, "I had a terrible day, I really need to lie down now."
I see the next instruction on the phone screen saying "scan the room to see where is she, check if she is okay and make conversations."
I hear the sound of the girl crying.
(Scan the bed, from the phone screen) She climbs onto the top bunk. I see a conversation box popping up "I would like to talk an intimate feeling with you." I can select "What's up" or "You'd better have a rest now."
she says, "I think I might have a crush on a girl, I am at a loss. Have you ever known what that feeling is?". I see a conversation box popping up again "Yes I had. And type below..." or "No, what does it feels like?"
.....
I see the walls transforming to various backgrounds, such as some LGBTQ underground venues in Beijing, Tiananmen Square
.....
(In this chapter, through prompted conversations, I know her love story with both boys and females, her family's influence on her romantic relationships. I am given the opportunity to reflect on myself too, and write down my answers.
She says, "what's others stories? I believe there are many people like us out there. Let's host a party at our dorm and invite them in!"
She continues, "I know some people might not want to expose their identity. Put on the goggles, then we will see them in costumes, or whatever identity they want to be."
I put on the goggles. I see the physical dorm room turns into flashy nightclub. The bunkbed turns into animated one and remains at the same place.
I see the girl dancing, wandering in the space.
Then I see other people joining in.

Action
I walk to them, see conversation buttons on them. I click on the buttons, I hear them talking their feelings and experiences, or anything they want to share.
I see a bar counter in the space. I stand in front of it.
There is another preprogrammed person. It prompts several questions for me to contribute to this collective story world. Questions such as "Tell me your love story in a few sentences, whether homosexual or heterosexual." "What's the moment of your heart pumping like when you have a crush on the same-sex, if applicable." "say anything you want to other people in this community." At the mean time, my actions are recorded.
I leave the bar counter. I am free to continue wandering in this space, or leave.

Figure 55 Action Script, texts, M. Cui, 2020

After finishing the paper script, I realised that it was crucial to test its efficacy. Immersive and interactive media gives control and power to the audience; at the same time, it might confuse and disorient them. The creator's role is to design and build the style of storytelling in MR environments and audiences then unfold the story by participating with and in it. In other words, a VR audience has autonomy and freedom. Writers and directors can't force participants to partake in stories in specific ways as in traditional films or documentaries. Subsequently, I did sketch storyboarding (see Figure 56) and 3D storyboarding to simulate the experiences to visually test, reflect and evaluate its pitfalls and defects.

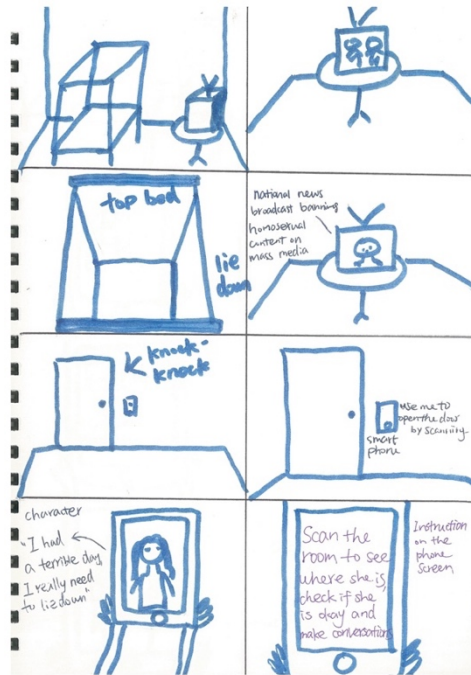


Figure 56 Storyboarding, M. Cui, 2020

These storyboarding images simulated the transitional action from the physical reality to Augmented Reality, when the audience was supposed to hear a girl saying “Is anyone in? I’m back”, followed by the sound of knocking on the door. I expected that the audience would take the hint and head off to the door, then notice a label over the phone instructing them to pick it up and scan it.

I realised I couldn't guarantee that the audience would behave in this way. I identified that the Augmented Reality experience component is rather disruptive. Although it served the role of bridging physical reality and Virtual Reality, it also broke the smooth transitions between different realities, and an audience might find it difficult to actively believe the environment they are immersed in later in Virtual Reality. So, the experience lost its functionality to engage an audience.

Because of this, I decided to leave out the Augmented Reality component. Instead, I was inspired by the music video of A-ha's *Take on Me*⁶³ and

⁶³ A-ha, “Take on Me,” 1985, music video, 4:04, <https://www.youtube.com/watch?v=djV11Xbc914>.

designed things so that, at the end of the interactive documentary component, the virtual character would come out of the screen and prompt the audience to put on the VR headset. To achieve this, the VR headset would be located on a designated platform next to the TV. Programmed lighting cues and sound cues would be ignited at the moment the interactive documentary finishes and prompt the audience to put the headset on. The character breaks the fourth wall from the video, then re-engages with the audience in the VR experience. The improved design would also provide a greater sense of realism, creating intimacy and leaving an impact on the audience.

Moreover, if introducing an audience directly to the VR environment after they finish unfolding the interactive narrative on the TV screen, the narrative about China banning homosexual content on mass media is able to present a prelude before they enter straight into the gloomier personal stories in later chapters. In this way, the slower, progressive and introductory pace would ease an audience's sensory overload with VR.

Script iteration 2: (Script iteration 1 is not in this format, therefore not displayed here).

The Arrival of the Body that Perceives

ACT I

Scene 1

I walk into a room that contains a bunkbed, a small table with a TV on top, and a door. On the TV a soap opera is playing.

Scene 2

I lie down on the bed and watch the soap opera of Chinese romance story. After a minute, the TV news comes on and shows national news broadcast about banning depictions of homosexual context on mass media.

Scene 3

I hear a knock on the door, and a girl's voice asking,
"Is anyone in? I'm back!"

I walk towards the door. There is a smart phone aside with,
"Use me to open the door by scanning".

Scene 4 On the phone screen

A girl steps into the room, after greeting at me, she says,
"I had a terrible day, I really need to lie down now."

I see the next instruction on the phone screen saying,
"Scan the room to see where she is, check if she is okay and make conversations."

ACT 2

Scene 1

I hear the sound of the girl crying.

Scene 2 On the phone screen

*She climbs onto the top bunk. I see a conversation box popping up,
"I would like to talk an intimate feeling with you."*

I can select "What's up" or "You'd better have a rest now."

*She says,
"I think I might have a crush on a girl, I am at a loss. Have you ever known what that feeling is?"*

*I see a conversation box popping up again,
"Yes I had. And type below..." or "No, what does it feels like?"*

Scene 3

I see the walls transforming to various backgrounds, such as some LGBTQ underground venues in Beijing, Tiananmen Square.

In this chapter, through prompted conversations, I know her love story with both boys and females, her family's influence on her romantic relationships.

I am given the opportunity to reflect on myself too, and write down my answers.

Scene 4

*She says,
"What's others stories? I believe there are many people like us out there. Let's host a party at our dorm and invite them in!"*

*She continues,
"I know some people might not want to expose their identity. Put on the goggles, then we will see them in costumes, or whatever identity they want to be."*

ACT 3

Scene 1

I put on the goggles. I see the physical dorm room turns into flashy nightclub. The bunkbed turns into animated one and remains at the same place.

I see the girl dancing, wandering in the space.

Then I see other people joining in.

Scene 2

I see a bar counter in the space. I stand in front of it.

I walk to them, talk to them. I hear them talking their feelings and experiences, or anything they want to share.

There is another preprogrammed person. It prompts several questions for me to contribute to this collective story world.

*Questions such as,
"Tell me your love story in a few sentences, whether homosexual or heterosexual."*

"What's the moment of your heart pumping like when you have a crush on the same-sex, if applicable."

"Say anything you want to other people in this community." At the mean time, my actions are recorded.

Scene 3

I leave the bar counter. I am free to continue wandering in this space, or leave.

Script iteration 3:

The Arrival of the Body that Percieves

ACT I

Scene 1

I walk into a room that contains a bunk bed, a small table with a TV on top, aside with a VR headset. On the TV a soap opera is playing.

Scene 2

I sit down on the bed and watch the soap opera. After a minute, the TV news comes on and shows national news broadcast about banning depictions of homosexual context on mass media.

Scene 3

I hear a door knock sound, and a girl's voice asking,
"Is anyone in? I'm back!" (through the TV)

I see a door showing up on the TV screen. I touch the door to open it.

And then a spotlight comes on to the VR headset on the TV stand.

I put on the VR headset.

Scene 4

A girl steps out of the TV screen, after greeting at me, she says,
"I had a terrible day, I really need to lie down now."

ACT 2

Scene 1

I hear the sound of the girl crying.

Scene 2

*She climbs onto the top bunk. I see a conversation box popping up,
"I would like to talk an intimate feeling with you."*

I can select "What's up" or "You'd better have a rest now."

*She says,
"I think I might have a crush on a girl, I am at a loss. Have you ever known what that feeling is?"*

*I see a conversation box popping up again,
"Yes I had. And type below..." or "No, what does it feels like?"*

Scene 3

I see the walls transforming to various backgrounds.

When it transforms to LGBTQ underground venues in Beijing, I can smell sweet candy and perfume.

When it transforms to Tiananmen Square, I can feel a cold wind.

In this chapter, through prompted conversations, I know her love story with both males and females, her family's influence on her romantic relationships.

Scene 4

*She says,
"What's others stories? I believe there are many people like us out there. Let's host a party at our dorm and invite them in!"*

ACT 3

Scene 1

I see the physical dorm room turns into flashy nightclub. The bunk bed turns into an animated one and remains at the same place.

I see the girl dancing, wandering in the space.

Then I see other people joining in.

They are doing different posing, dancing, talking.

I walk to them. They look very cool.

I hear them talking their feelings and experiences when I am close.

I can dance with their virtual figures, sit next to them and enjoy a moment, or talk to them I would like to talk.

Scene 2

I see a bar counter in the space. I stand in front of it.

There is a pre-programmed person. It prompts several questions for me to contribute to this collective story world.

*Questions such as,
"Tell me your love story in a few sentences, whether homosexual or heterosexual."*

"What's the moment of your heart pumping like when you have a crush on the same-sex, if applicable."

"Say anything you want to other people in this community." At the mean time, my actions are recorded.

Scene 3

I leave the bar counter. I am free to continue wandering in this space, or leave.

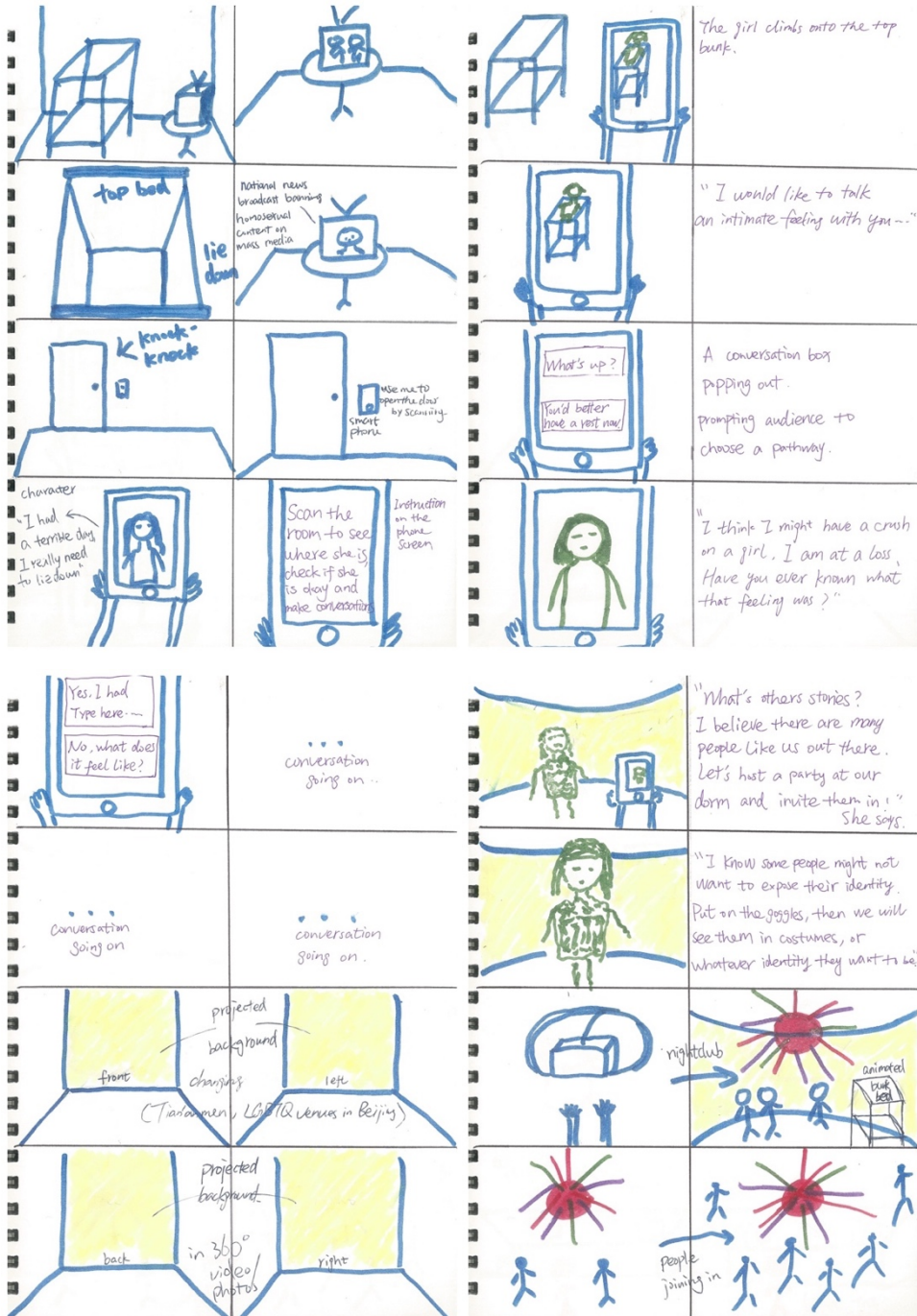
ACT 4

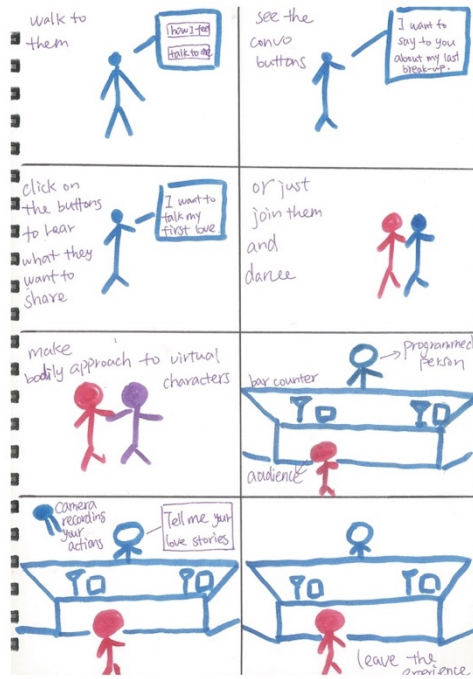
Online

I enter the project's official website. It has nightclub vibe, and looks very liberated.

I can see the stories of people around the world. I can look for my own contribution I did in situ. As well as people did only from online access.

Sketch Storyboarding:





Appendix 3 – Final Script – Bird's Eye View

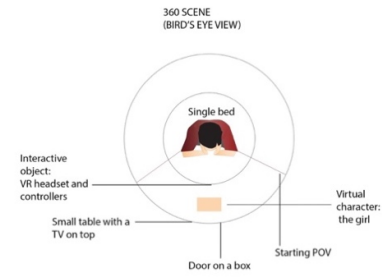
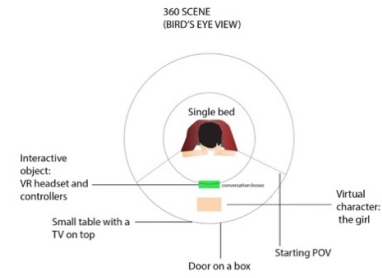
TITLE	The Arrival of the Body that Perceives
AUTHOR	Mona Cui
VERSION	4.0
DATE	15/06/2020

Objectives: Create an immersive and interactive collective space for Chinese sexuality explorers to construct a positive identity though connecting others in this invisible community. In this space, they can feel free to make conversations and bodily approaching to others they like to validate their feelings to people of different sexuality.

SCRIPT

	Audio	Visual Direction	Action/ Interaction	Scene Representation
Scene 1	<ul style="list-style-type: none"> - Sound from the docent: Hi. Thank you for joining us for this immersive experience. Please feel at home and make yourself comfortable. - Then, a soap opera about Chinese heterosexual romance comes to play. 	<ul style="list-style-type: none"> - The TV shows “welcome” page. - Then TV plays the soap opera. - A <u>spotlight</u> is turned on, at the area of TV, and the remote control. - Another <u>spotlight</u> is turned on, at the area of the cushion on the bed. 	<ul style="list-style-type: none"> - Walk into a room that contains a <u>single bed</u>, a <u>small table</u> with a <u>TV</u> on top, aside with a <u>VR headset</u>. 	

<p>Scene 2</p>	<ul style="list-style-type: none"> - The last line of the soap opera finishes. - Sound from the TV: There are not really any homosexual love stories in Chinese shows. A new regulation banned depictions of homosexual context on mass media across China. This community is invisible. But they do exist. Reveal the truth of Chinese LGBTQ community over history now. 	<ul style="list-style-type: none"> - The <u>remote control</u> flickers rainbow lights from the buttons. 	<ul style="list-style-type: none"> - Sit down on the bed and watch the soap opera. - Pick up the remote control and browse an interactive narrative component on the TV. 	
<p>Scene 3</p>	<ul style="list-style-type: none"> - Sound from the TV: A door knock sound, and a girl's voice asking, "Is anyone in? I'm back! Put on the headset and open the door please?" 	<ul style="list-style-type: none"> - See a door showing up on the TV screen. - After putting on the headset, an avatar of the door showing up. I use the controllers to open the door virtually. 	<ul style="list-style-type: none"> - Put on the VR headset after hearing the character's instructions, and with the help of the docent. 	

<p>Scene 4</p>	<ul style="list-style-type: none"> - Sound from the headset: The girl says, "I had a terrible day, I really need to lie down now." 	<ul style="list-style-type: none"> - A girl steps out of the TV screen, speaking to the user. 	<ul style="list-style-type: none"> - Put on the VR headset. 	 <p>360 SCENE (BIRD'S EYE VIEW)</p> <p>Single bed</p> <p>Interactive object: VR headset and controllers</p> <p>Small table with a TV on top</p> <p>Door on a box</p> <p>Starting POV</p> <p>Virtual character: the girl</p>
<p>Scene 5</p>	<ul style="list-style-type: none"> - Sound of the girl sobbing, and saying "Can I talk to you?" - Some ambient sound. 	<ul style="list-style-type: none"> - The girl goes to lie in the bed. - There is a <u>conversation box</u> popping up in the headset, between me and the girl. 	<ul style="list-style-type: none"> - Can select "What's up?" or "What is it about?" on the conversation box. - <u>(The pathways of the storylines will be demonstrated in branches in a separate file.)</u> 	 <p>360 SCENE (BIRD'S EYE VIEW)</p> <p>Single bed</p> <p>Interactive object: VR headset and controllers</p> <p>Small table with a TV on top</p> <p>Door on a box</p> <p>Starting POV</p> <p>Virtual character: the girl</p>

<p>Scene 6</p>	<ul style="list-style-type: none"> - Sound from the headset, the girl saying, “ I think I might have a crush on a girl. I am at a loss. Have you ever known what that feeling is?” 	<ul style="list-style-type: none"> - There is a <u>conversation box</u> popping up in the headset, between me and the girl. 	<ul style="list-style-type: none"> - Can select “Yes I had. And type below...” or “No, what does it feels like?” 	
<p>Scene 7</p>	<ul style="list-style-type: none"> - Sound of vibrant noise. 	<ul style="list-style-type: none"> - The background walls (virtual) transform to LGBTQ underground venues in Beijing. - The markers would trigger a <u>dispenser</u> in situ to emit sweet candy smell. 	<ul style="list-style-type: none"> - Walk following the markers on the floor (virtual). - Smell sweet candy and perfume. 	

<p>Scene 8</p>	<ul style="list-style-type: none"> - Sound of strong winds. 	<ul style="list-style-type: none"> - Then it transforms (virtually) to Tiananmen Square. - The markers would trigger an <u>electric fan</u> to give cold wind. 	<ul style="list-style-type: none"> - Walk following the markers on the floor (virtual). - Feel cold wind. 	
<p>Scene 9</p>	<ul style="list-style-type: none"> - Sound from the headset: The girl's monologue. Her talking lets audience know her love story with both males and females, her family's influence on her romantic relationships. 	<ul style="list-style-type: none"> - There are <u>conversation boxes</u> popping up in the headset, between me and the girl. - The girl moves around in the room, while the <u>conversation boxes</u> follow her all the time, and appear between me and the girl. 	<ul style="list-style-type: none"> - Interact with prompted conversation boxes. 	

<p>Scene 10</p>	<ul style="list-style-type: none"> - Sound from the headset: The girl saying, "What's others stories? I believe there are many people like us out there. Let's host a party at our dorm and invite them in!" 	<ul style="list-style-type: none"> - These (virtual) <u>décor</u> will go to designated places by themselves. - The dull dorm turns into flashy nightclub (virtually). - The décor turn the furniture into vibrant ones. 	<ul style="list-style-type: none"> - Take the toolbox and décor box from the girl's hand. - Put those décor in places they want, and use the tools to paint with colours. 	
<p>Scene 11</p>	<ul style="list-style-type: none"> - Sound from the headset: 1) background atmosphere sound. 2) Characters dialogue. 	<ul style="list-style-type: none"> - The girl dancing and wandering in the virtual space. - Other people join in. They are doing different posing, dancing, talking. They look very cool. 	<ul style="list-style-type: none"> - Approach the characters in the virtual space. - Listen to them talking their feelings and experiences. - Dance with them, sit next to them and enjoy a moment. - Talk to them while they remain silent and prone to listening. 	

<p>Scene 12</p>	<ul style="list-style-type: none"> - Sound from the headset: background atmosphere sound. 	<ul style="list-style-type: none"> - There is a <u>bar counter</u> in the virtual space. - And a <u>pre-programmed bartender</u> standing there, showing inviting posture. 	<ul style="list-style-type: none"> - Walk to the bar counter. - Stand in front of the bartender. 	<p>Colour boxes represent multiple characters joining the space</p> <p>360 SCENE (BIRD'S EYE VIEW)</p> <p>VR headset and controllers</p> <p>Drink glassware</p> <p>Bar counter</p> <p>Virtual character: the bartender</p> <p>Starting POV</p> <p>Nightclub surroundings</p>
<p>Scene 13</p>	<ul style="list-style-type: none"> - Sound from the headset: background atmosphere sound. 	<ul style="list-style-type: none"> - The bartender hands over a <u>drink</u> to me. - When the drink finished, there is a text floating at the inner bottom of the <u>glassware</u>. 	<ul style="list-style-type: none"> - Take over a drink from the under the virtual bartender. - When I finish the drink, I see a sentence of question “what’s your story?” and a website address at the bottom of the glassware. 	<p>Colour boxes represent multiple characters joining the space</p> <p>360 SCENE (BIRD'S EYE VIEW)</p> <p>VR headset and controllers</p> <p>Drink glassware</p> <p>Bar counter</p> <p>Virtual character: the bartender</p> <p>Starting POV</p> <p>Kinect camera</p> <p>Nightclub surroundings</p>

<p>Scene 14</p>	<ul style="list-style-type: none"> - Sound from the headset: background atmosphere sound. - Sound from the headset: “Thank you again for your time today. Hope you had great experience. Welcome to keep exploring the story world online, visit thearrivalofthebodythatperceives.com 	<ul style="list-style-type: none"> - The ending page wraps up and shows the <u>website address</u>. 	<ul style="list-style-type: none"> - Leave the bar counter. - Am free to continue wandering in this space, or exit the experience. 	
<p>Scene 15</p>	<ul style="list-style-type: none"> - Sound from the computer: 1) nightclub background music and noise. 2) audio when multimedia elements being played. 	<ul style="list-style-type: none"> - The design of the website has nightclub vibe, and looks very liberated. - The website is location-based. Many dots on the map represents a person's story. - Hover on the dots would lead to detailed story in multimedia. 	<ul style="list-style-type: none"> - Enter the project's official website. - Browse the stories of LGBTQ people around the world. - Can contribute stories online too. 	

Appendix 4 – The Prototype

This web-based interactive prototype is intended to give an indication of an immersive experience by demonstrating some of the key narrative pathways, and what the immersive experience component could look like.

Screenshots below are from the web-based interactive prototype.

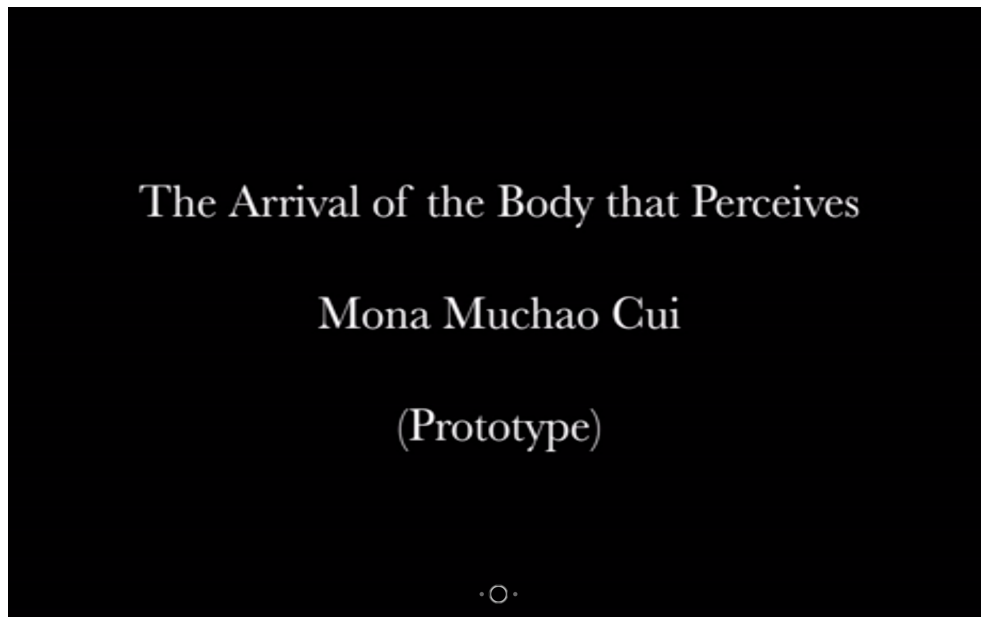


Figure 57 Prototype screenshot 1, photo, 2020

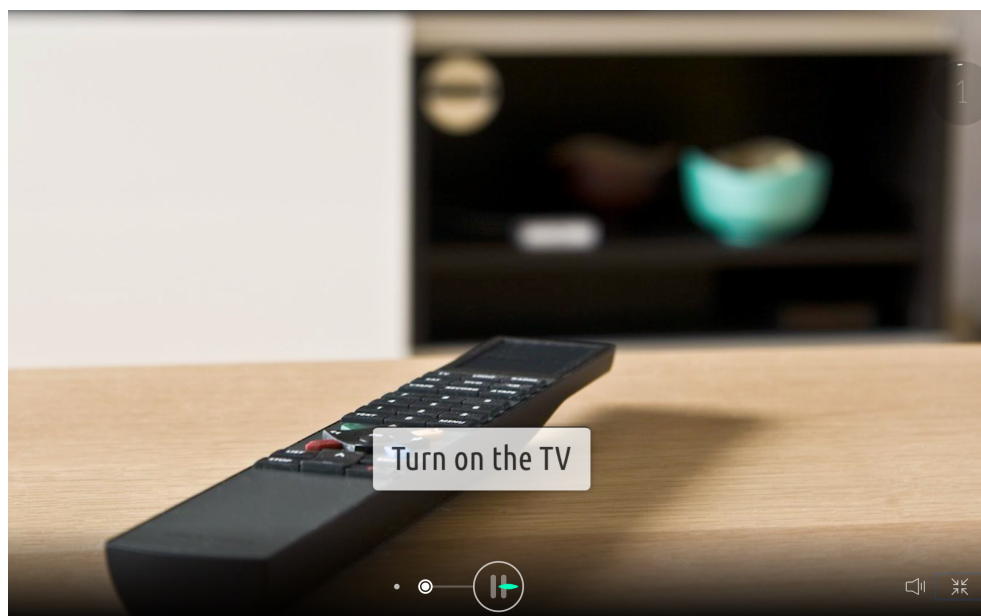


Figure 58 Prototype screenshot 2, photo, 2020



Figure 59 Prototype screenshot 3, photo, 2020



Figure 60 Prototype screenshot 4, photo, 2020



Figure 61 Prototype screenshot 5, photo, 2020

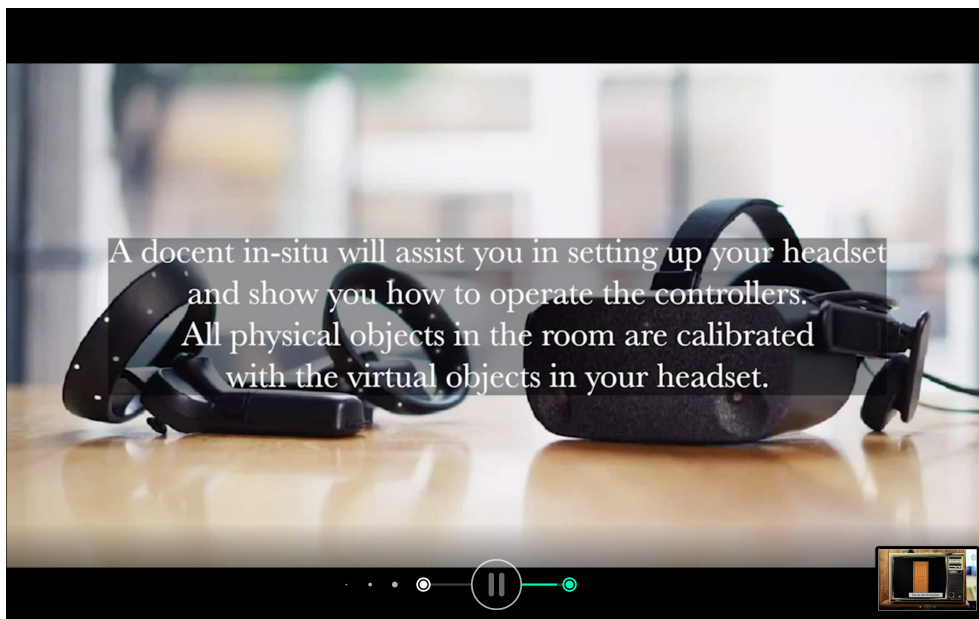


Figure 62 Prototype screenshot 6, photo, 2020

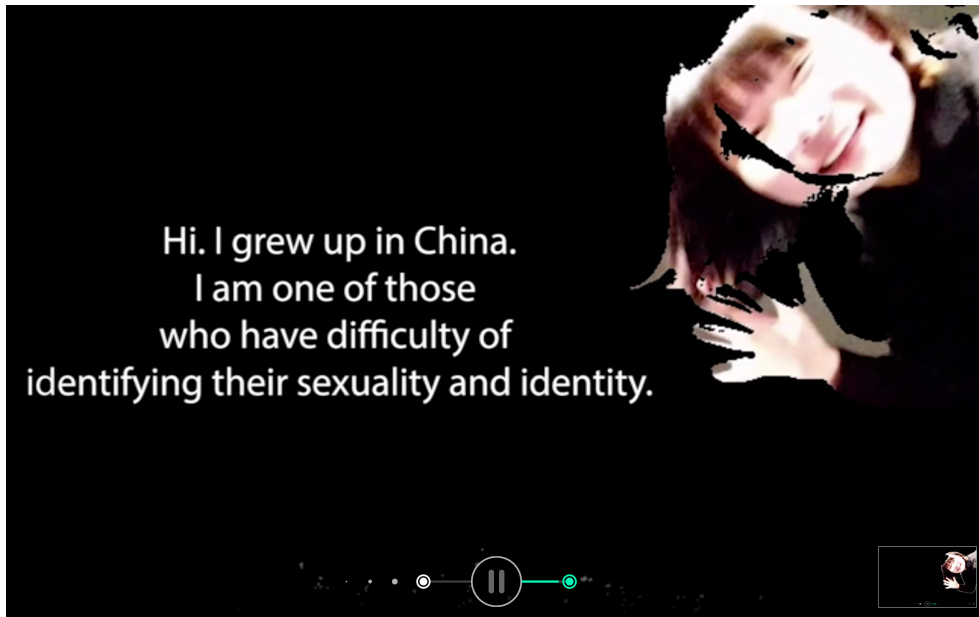


Figure 63 Prototype screenshot 7, photo, 2020

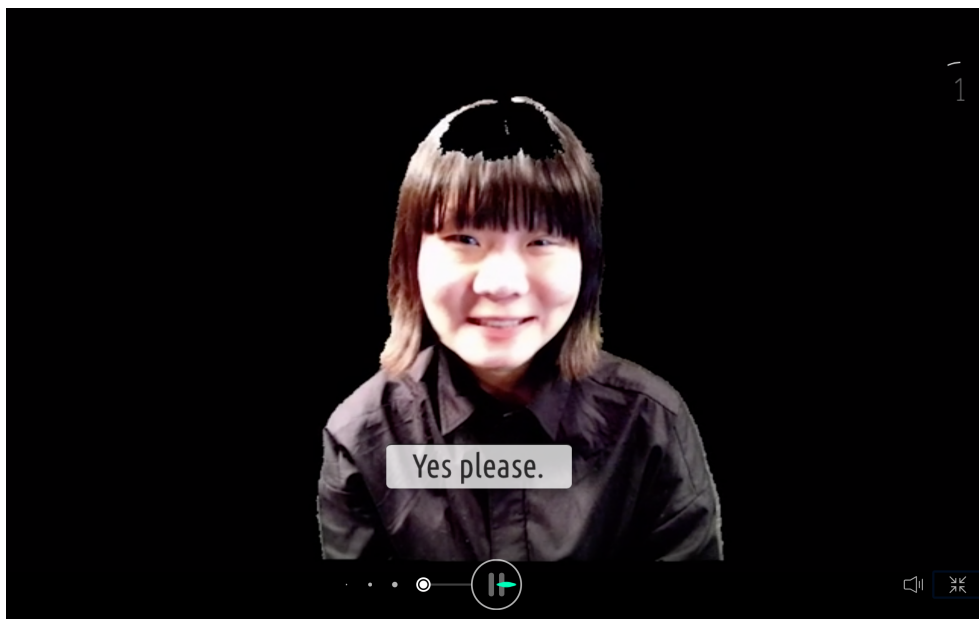


Figure 64 Prototype screenshot 8, photo, 2020



Figure 65 Prototype screenshot 9, photo, 2020

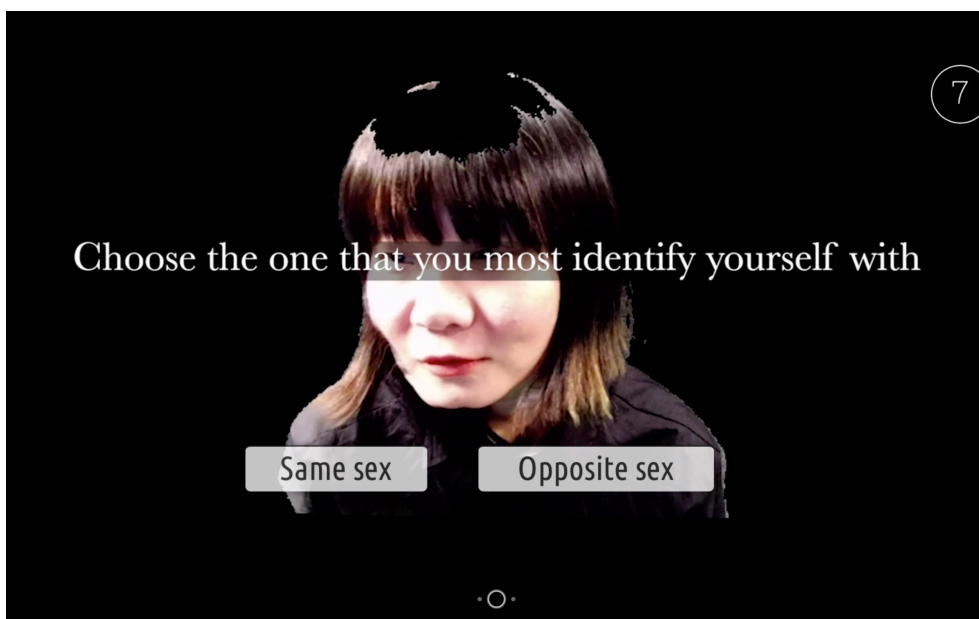


Figure 66 Prototype screenshot 10, photo, 2020

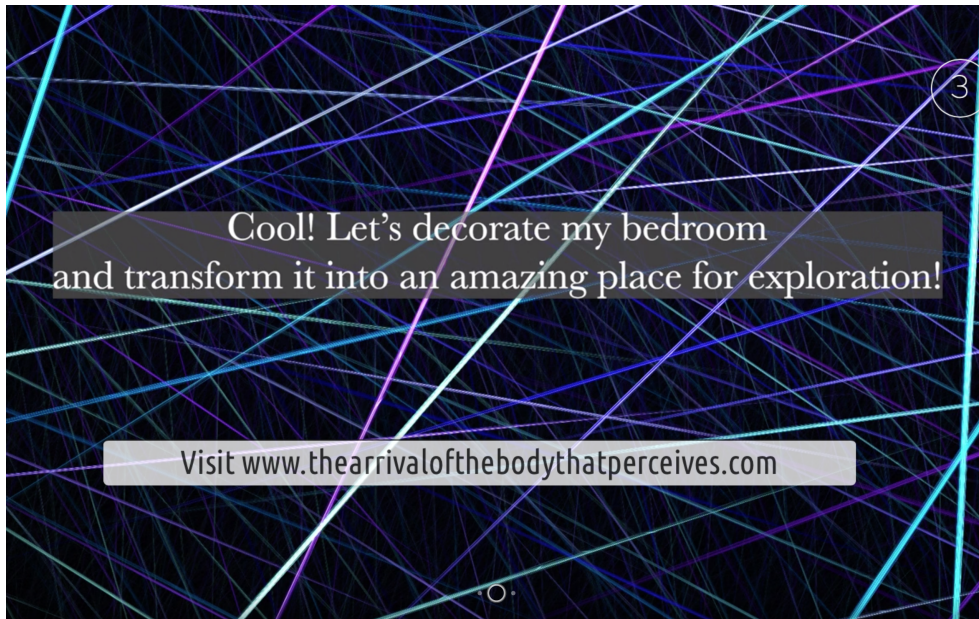


Figure 67 Prototype screenshot 11, photo, 2020