Return to Reality: Speculative Design of Interaction Ritual Chains and Exploration of Alone Together

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Abstract: "Alone together" is an ever-changing "wicked problem." In this research and practice, the author tries to combine experience design, referring to the theory of "interaction ritual chain theory," and creatively add interactive experience to discursive works, so that the audience can think between the real and the virtual.

Keywords: Speculative design; Interaction ritual chain; Alone together; Installation art

1. Background

In the post-epidemic era, more technologies point to people to explore the construction of virtual world socialization. Interactive devices such as Extended Reality (XR), holographic projection, and brain-computer interface (BCI) have expanded the boundaries of human behavior in a virtual world that breaks down the limitations of space and time, and concepts such as Metaverse, Web 3.0, and CRI have been brought to the market's attention one after another. On the one hand, people are beginning to envision a brighter future for communications technology, but on the other hand, they need to reflect on the inevitable negative impacts.

The metaverse, a concept of a large-scale, integrated, sustainable, and interconnected online world, is gradually becoming a hot topic at the forefront of technology. In this digital world, which is similar to the existing one, people are beginning to envision a brighter future of communication technology, looking forward to a whole new social experience. However, as the metaverse develops in depth, it is also necessary to reflect on the inevitable limitations and risks involved. One of the most prominent issues is the addiction and mental health issues that can result from overuse of the metaverse. Compared to the real world, social interaction in the metaverse is more convenient and efficient, but at the same time, it is also easier for people to indulge in it. Immersion in the virtual world for a long time may lead people to ignore real-life social relationships and even develop psychological problems such as loneliness and anxiety. Therefore, how to maintain a healthy mental state while enjoying the convenience brought by the metaverse has become an urgent problem for us to solve.

2. Research analysis

Sherry Turkle, a scholar who has studied the relationship between technology and humanity in-depth, warned about the negative impact of technology on society back in the 1990s. The concept of "alone together" proposed by her accurately describes the phenomenon of group loneliness that is prevalent in modern society. This phenomenon refers to the fact that despite being in a crowd, we often feel lonely and at the same time afraid of being bound by intimate relationships [1].

In Turkle's view, people in modern society crave connections with others but also want to keep a certain distance. They want to be together, but at the same time they want to be "somewhere else." This ambivalent state of mind leads to the emergence of group loneliness. Although people are physically close to each other, their thoughts and emotions are often far away from each other.

Turker's view is supported by a large number of empirical studies. For example, in recent years, with the advancement of smartphones, people have increasingly relied on virtual social interactions rather than physical face-to-face interactions. Although this way of socializing is convenient, it can easily lead to alienation from interpersonal relationships. People often can only see each other's words and pictures in the virtual world, but cannot feel each other's real emotions and attitudes. This kind of social interaction, which lacks real emotional communication, can easily lead to feelings of loneliness [2].

Many scholars have focused on the social phenomenon of "alone together" through internet technology, but with different interpretations. Hartmut Rosa, in *The Birth of a New Alienation: A Theoretical Outline of a Socially Accelerated Critique*, provided a profound analysis of this phenomenon. He pointed out that although these high-tech products have brought us great convenience, they are also gradually bound by the accelerated production of society, as if they have fallen into a whirlpool from which they cannot extricate themselves. In this process, we gradually alienate ourselves from the space, things, behaviors, time, self, and society of the past, forming a new phenomenon of alienation.

Rosa's theory reveals a core problem of modern society: the rapid development of science and technology has accelerated the pace of social production and life, and people have lost their perception of the past and the future in this acceleration, and even their grasp of the present has become blurred. We are surrounded by our myriad of information, but struggling to find true meaning and value. This phenomenon of alienation is not only reflected in the psychological level of the individual but also in the structure and culture of the whole society [3].

At the same time, Jean Baudrillard made another thought-provoking point in *Simulacra et Simulation*. He argued that postmodern culture is so full of imaginative activity that the natural world has disappeared and that the whole of postmodern society can be described as a transcendent realm. In this realm, imagination itself is reality, and the line between reality and imagination becomes blurred.

Baudrillard's view further reveals another important feature of the Internet age: the rise of virtual worlds. On the Internet, it is possible to create a wide variety of avatars and scenarios that are not only intertwined with real life but even replace reality at some point. One can showcase one's virtual life on social media, experience different characters and adventures in virtual games, and even feel a whole new reality in virtual reality.

However, this transcendent imagination also brings with it a series of problems. When too obsessed with the virtual world, it is possible to ignore real needs and problems in real life. Users may lose their sense of true selves in pursuit of virtual identity and satisfaction. In addition, the infinite possibilities of the virtual world can also cause users to fall into an endless pursuit and comparison, losing the pursuit of true happiness [4].

The emergence of this social phenomenon is another aspect of technological development. On the one hand, the reason for this comes from social mechanisms; the consumer society has created a new type of human connection, coupled with the urbanization after the digital revolution, and the ubiquitous objectification of

entertainment has flooded people's lives. On the other hand, from a personal point of view, the changes in the relationship between people and the media, the bias of self-perception brought about by the Internet, and the long-term dependence on the media, make people feel anxious and lonely. The negative impact of technology as a productive force determines the inevitable alienation between people in the production relations of the consumer society [5]. As a result, attempts to use technology and design to address this situation generate conflicting ideas. Shirley Turkle also pointed out that "one can understand what the internet has changed, but not what it cannot replace; our remiss is not so much trying to build something new, it is that we do not allow ourselves to think about what technology will dismantle" [2].

Due to the globalization and popularization of Internet products, group loneliness as a social phenomenon derived from Internet products is widespread among people, but the response of loneliness phenomenon to specific individuals varies from person to person [6]. Combined with the research and analysis of many scientists and sociologists, it can be deduced that the social phenomenon of "alone together" brought about by virtual technology is a "wicked problem" that is difficult to define, contradictory, ever-changing, and incomplete [7]. As long as technological products exist, and as long as the system of the consumer society continues, the traditional "design thinking"-oriented "problem-solving" will not be able to fundamentally change this composition, and it is usually impossible to preside over the system design from the designer's point of view [8]. The system design balances the focus on "people" and "systems." Therefore, there is an urgent need to find a new design language to explore this social phenomenon.

3. Concept innovation

The virtual world built by Internet technology will have dominant social attributes in the future. Therefore, after stepping out of the framework of traditional design thinking, the form of "speculative design" with the purpose of "asking questions" creates the future through the dystopian "fallacy method" of content creation [9]. By creating a future kingdom through dystopian "fallacious" content, we can further discuss and debate the possibilities of virtual socialization and inspire and encourage people to imagine freely. This work is seen as a catalyst for redefining our relationship with reality. Specifically referring to "Speculative Design, Fiction, and Social Dreams," the conceptual construction of the work is divided into three steps: critical thinking, scene creation, and scene materialization [10].

This work aims to guide the audience to reflect on the gap between socialization and extended reality technology, and to inspire them to make genuine social changes in their behavior. However, proof-of-concept and literature reviews found that adopting this approach to speculative design often uses this method to guide the audience's thought patterns. When evaluating the effectiveness of the audience experience, incomprehensible design presentations often significantly reduce audience engagement. The author attempts to challenge this dispute of "useless design" by introducing interaction ritual chain theory into the design concept, so that the design can break through a single narrative mode and explore on top of discourse design. At the heart of this approach is a direct change in viewer behavior patterns, and transformation of the viewer from a passive viewer to a participant, enabling them to interact with the installation and produce an immersive experience within it. Through participatory interaction, the audience can gain a deeper understanding of the message conveyed by the installation and apply it to their own lives and behaviors. This design approach not only enhances the audience's sense of engagement, but also promotes their thinking and understanding of social phenomena (**Figure 1**).
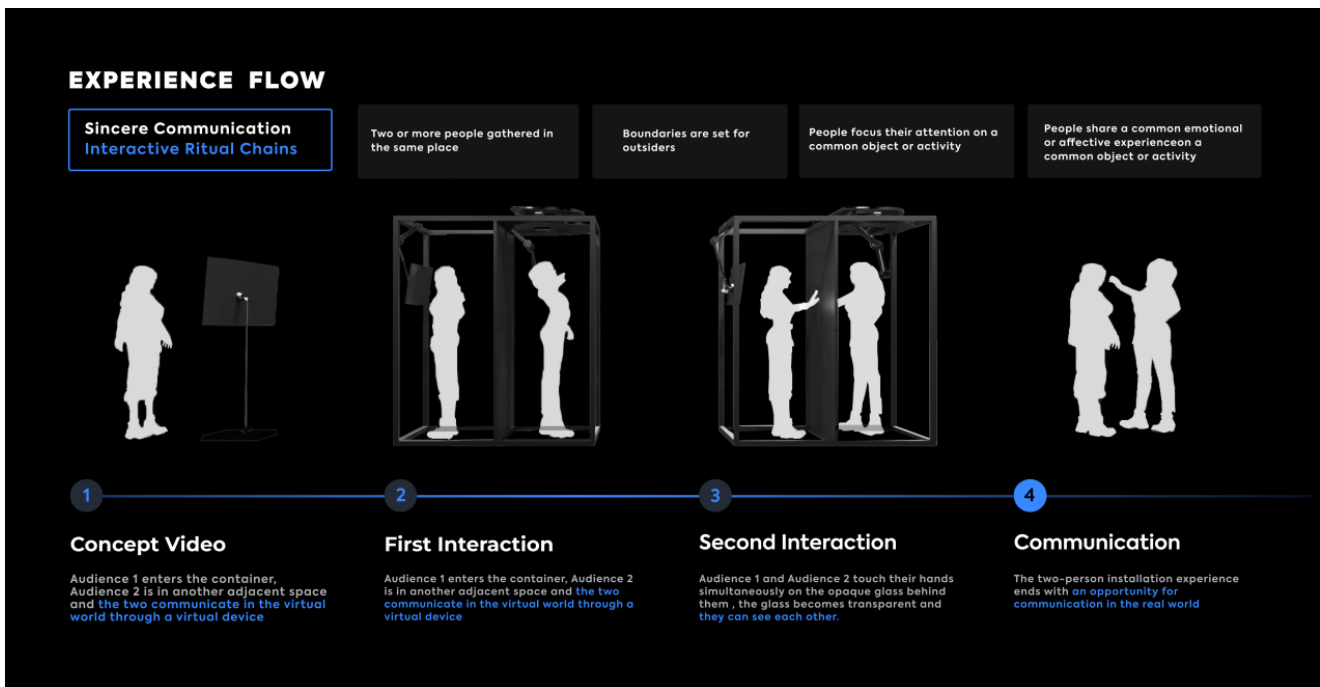
EXPERIENCE FLOW

Sincere Communication
Interactive Ritual Chains

Two or more people gathered in the same place

Boundaries are set for outsiders

People focus their attention on a common object or activity

People share a common emotional or affective experienceon a common object or activity

1 Concept Video
Audience 1 enters the container, Audience 2 is in another adjacent space and the two communicate in the virtual world through a virtual device

2 First Interaction
Audience 1 enters the container, Audience 2 is in another adjacent space and the two communicate in the virtual world through a virtual device

3 Second Interaction
Audience 1 and Audience 2 touch their hands simultaneously on the opaque glass behind them , the glass becomes transparent and they can see each other.

4 Communication
The two-person installation experience ends with an opportunity for communication in the real world

Figure 1. The experience flow of returning to reality

Specific structural adjustments are made to the experience logic of interactive devices. Drawing on Randall Collins' "interaction ritual chain theory," the four basic elements are [11]:

(1) Two or more people gather in the same place

(2) Set boundaries for outsiders

(3) People focus their attention on familiar objects or activities

(4) People share emotions or emotional experiences

4. Design proposals

The name of the experimental speculative practice is "return to reality," which means to bring people back to reality from fiction. The author tried the strategy of discourse installation, constructing dystopian myths for the audience to generate the interactive ritual chain of words. The device is provided with two semi-enclosed spaces. Audience 1 and Audience 1 stay in two spaces; Viewer 1 is in a container for a future world created by the author. In the future, most people will use virtual devices to live and produce, and everyone's daily life will be carried out in the virtual world through the use of avatars.

In this work, the author conceives a thought-provoking scenario: the physical life of man is confined to a small container, but this container can sustain human life. The design of this scenario aims to explore the relationship between people and technology, as well as the various experiences that people may face in the virtual world, by simulating the virtual life that may appear in the future. To achieve this design, the audience was asked to wear advanced interactive equipment that mimicked the environment of the people in the container of the future.

Audience 1 wears a Rokoko [12] full-body sensory capture device for recording body data. This device is able to capture the viewer's body movements and gestures, allowing them to experience their own body sensations and movements more realistically in the virtual world. Next, viewers will also need to wear Vive VR glasses [13] to enrich the sensory experience of the virtual world. The glasses are capable of providing high-

definition virtual images, allowing the viewer to immerse themselves in a virtual environment full of detail and realism. At the same time, in order to maintain the continuous operation of the man and machine, the audience also needs to wear a variety of wiring connecting the equipment to the human body to ensure that the equipment can work stably.

Behind this design approach, there are elements that correspond to the metaverse trend. The metaverse is considered to be the future development direction of the virtual world, in which multi-modal and full-sensory interactive experiences will become the mainstream [14]. Through the use of advanced interactive devices, viewers are able to experience part of this trend, where they can ignore everything in real life and immerse themselves in a virtual world full of friends and experiences. Avatars may not be related to real identities, and people can choose different identities and roles in this virtual world, an experience that allows them to break free from the limitations and constraints of real life and get a whole new experience and feeling.

The installation in which Audience 2 finds himself becomes a bridge between the real and virtual worlds. The installation uses advanced screen technology to connect the audience to the virtual world and then captures Audience 2's dynamics through Kinet 2 [15] for real-time interaction. This interactive mode is not only a demonstration of technology but also a deep reflection on the current social model.

The choice of the screen as the presentation form of the installation is not only because the screen itself can create a unique sense of space as a physical partition, but also because the screen is a social symbol, a metaphor for the mainstream social mode of people today. In this model, people often need to communicate and interact through virtual spaces, which often lack authenticity and depth, although they have more sensory experiences.

When Audience 2 stands on the other end of the installation, their movements are captured and displayed on the screen in real time, while their avatars also meet other people in the virtual world. This kind of communication seems to be comprehensive and in-depth, but in fact, it is a superficial, hypocritical, and one-sided communication. People use all kinds of gorgeous avatars to show themselves in the virtual world, but these avatars are often just a side of people who want to show others, not their real selves.

The essence of this virtual social model is that there is always a sense of distance between the virtual image and the real image. Even as we try to simulate a more immersive virtual social model, its essence has not changed. People's communication in the virtual world is often based on superficial sensory experience, rather than real emotional communication. Although this method of communication is convenient, it can easily lead to loneliness and emptiness. Therefore, it is necessary to re-examine the current social model and find a more authentic and in-depth way of communication. We need to step out of the virtual world, face real people and things, and experience real emotional communication. Only in this way can we truly understand each other and build true friendship and trust (**Figure 2**) [16].
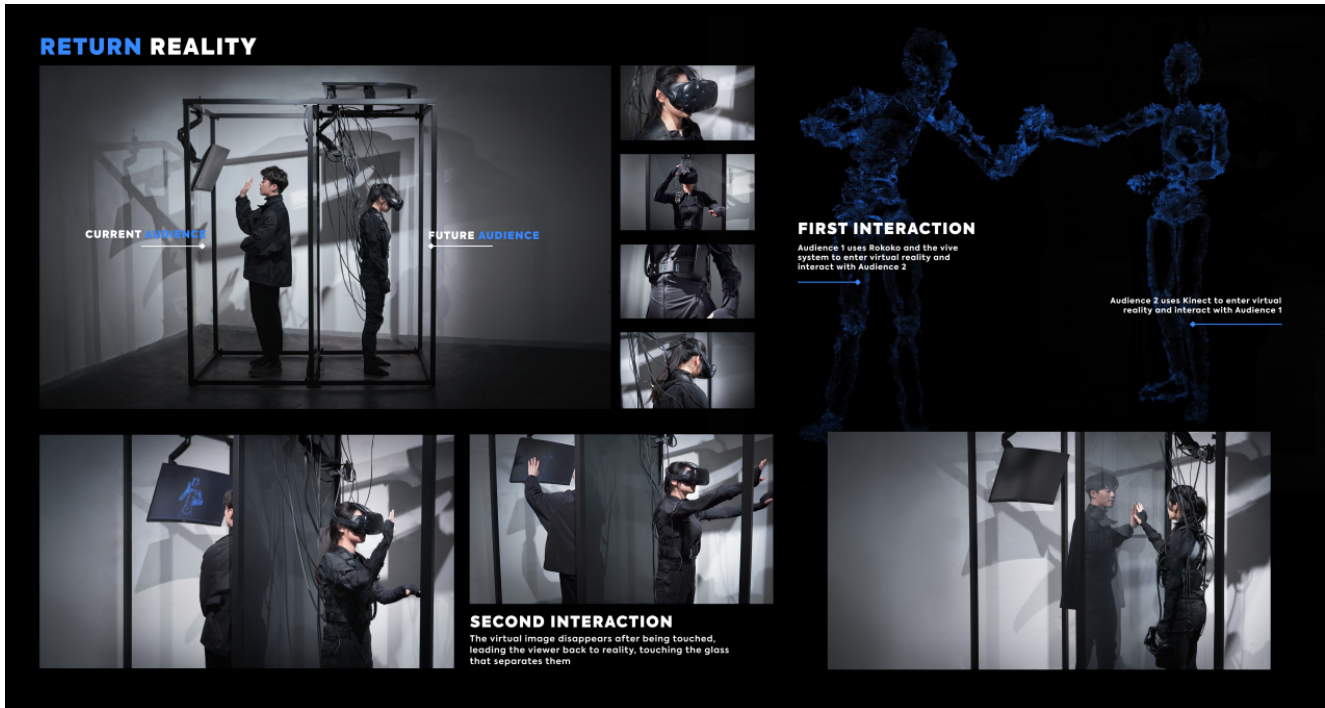
Figure 2. The design output of "return to reality"

The experience of the audience and installation benefits were evaluated after setting up a focus group. The majority of viewers said during the experience that they were able to experience the loneliness of interacting in the virtual world. This sense of loneliness stems from the blurring of the boundaries between the virtual world and the real world, which makes people feel a unique presence in the virtual space. This feeling even provokes a feeling of fear about the future worldview of the two spaces. However, it is this sense of loneliness and fear that makes people cherish real-life communication and discussion even more.

At the same time, the audience spoke highly of the installation experience of the virtual reality equipment. They all said that the installation process was simple and convenient, and the operation of the equipment was intuitive and easy to understand. This good installation experience laid a solid foundation for subsequent virtual reality interactions.

However, there is still room for improvement in virtual reality. Some viewers reported feeling inconvenienced while wearing Rokoko equipment. For example, the device may have restricted their freedom of movement and even caused discomfort in some cases. In addition, there are concerns about the privacy involved when replacing virtual reality equipment. How to ensure user privacy and data security while ensuring user experience is an important problem that virtual reality technology needs to solve.

On the other hand, due to the need for virtual reality technology to implant a new concept of a futuristic worldview, some viewers are unable to understand the exact meaning behind the device in a limited amount of time. This means that virtual reality devices need to pay more attention to the user's cognitive ability and acceptance when delivering information. To this end, the researchers suggest that more ancillary explanations and time should be added to future virtual reality designs to help users understand the worldview and the risks and development of loneliness.

All in all, it is a new attempt, exploring conceptually and reflecting on practice. At the theoretical level, discourse design is expected to find breakthroughs and new development directions after such experiments work. With the growth of social media, it is hoped that this interactive discourse experience will have a more

significant impact on society and solve the complex and unknown challenges of today's society.

Disclosure statement

The author declares no conflict of interest.

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