

Temporal Chaos: Hybrid Media as Museum Display

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ABSTRACT: In this paper we will be looking at a currently developing installation for both a heritage museum and a gallery. This project is titled *Temporal Chaos*. We will look at how a work like this, initiated by outside artists, comes to different institutions, how the collaborative process works and what this means for the presentation of information that is relevant to the remit of the institutions in question.

1. INTRODUCTION

Temporal Chaos is a project that attempts to create a visualization of our living relationship with time. It intends to present such a relationship as it is experienced through current technology and also with an historical perspective. The project presents our contemporary experience of time-space as found through telepresence and gives it a physical dimension. This is done by the use of the shadow as the central metaphor to the project. The work presents two physical environments, one in London, the other in Singapore. These spaces are lit by video projectors, which represent sunlight. The shadows of the objects are created in this projection. The shadows are then replaced with streaming video from the other city, so that London will have streaming video from Singapore and Singapore video from London. Shadows are creations of the lack of light going past an object. The object blocking the light is experiencing light as an object of the present, while the shadow represents an area that is removed from the present as represented by light. As such the shadow is used in this work as a metaphor for past time, or memory. This will be further explained later in this paper.

2. THEORETICAL BACKGROUND

The issues depicted in this work are built around this central metaphor of the shadow. They include our relationship to time as it is presented to us by current media technology, the historical nature of globalisation and how this all unfolds in physical presence. The media landscape has seen entering a period of considerable flux, although in truth the technology of communications has not been as stable as might have been felt during the second half of the 20th Century. In *Audiovisions*, Siegfried Zielinski traces the historic relativity and finitude of cinema and television (Zielinski, 1999). He explains how similar concepts were developed in different parts of the world, with multiple possibilities vying for supremacy until one predominated, usually for indirectly connected socio-cultural reasons rather than obvious superiority. By showing how the audiovisual forms that we took for granted during much of the 20th Century only took shape by historical circumstance, and had many opportunities to develop differently, Zielinski presages the developments of the last few decades. Where TV, cinema, and radio had managed to become discrete media forms, all are now produced within the same digital realm.

As Lev Manovich has argued (Manovich, 2013), the digitisation of practically all media forms means they are now in a state of flux and cross-pollination. Although the tools to create content in the various genres (static graphics, photos, motion graphics, video, audio) began as discrete applications based on traditional production methods, they also share methods, like copy and paste. Increasingly, it has become possible to share data between heterogeneous applications, as well as to have media creation and output options from one available in another. For example, graphic design tools are available in video editing software, and photos can be stitched together into an animation within a photo editing application, then output as a video.

A brief survey of YouTube shows a plethora of audiovisual blends as digital production tools have filtered down to consumer end users. But the potential for the more professional content creator or artist is far greater, and perhaps even bewildering. This hybridisation does not result in a single genre of “multimedia” or “new media”, but a potentially permanent state of new forms emerging for specific situations, with only some finding long-term existence.

Contemporary media has changed our sense of experiencing and thus our understanding of the concepts of space and time. Beginning with Einstein’s Theories of Relativity, we have come to realize that time and space are intrinsically linked. Today we have two primary ways of experiencing time-space. The first is our relationship with sunlight. We have traditionally lived our lives coexisting with the Earth’s movement around the Sun. Day and night, the seasons, religious holidays, rituals, celebrations, all are extensions of this dependency. The second way of experiencing time-space is through telecommunication. Since the invention of the telegraph and the train, we have had to delineate time into physical regions. This was necessitated by our ability to communicate and travel great distances more easily. With global satellite and Internet capabilities our sense of time-space not only has compressed, it has also accelerated. Our relation with time and space is now realized as a form of global networked consciousness. Communication with friends, family and colleagues is so on-demand that we must be conscious of our time as well as their time. If I want to chat over the Internet with a friend in the United States or the United Kingdom, I need to be conscious of what time zone I am in, and the time zone of my friend. How are the times different, is it morning there? Is it night time there? How can these differences be understood in a realistic way? While these are very abstract questions, they serve as a construct of our reality. These are questions that many of us are asking ourselves on a daily basis.

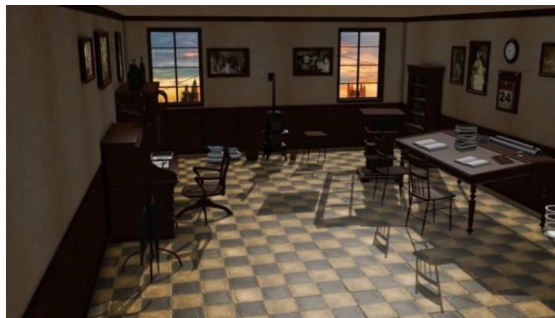


Figure 1: *Shadows provide one of our most primal indications of the passage of time, but also present this passage spatially*

In this work we are combining these forms of time-space into one compacted physical place. This work presents four different forms of time-space in one place. Through the use of projected lighting we will be able to replicate the equivalent of the sunlight in any given place on Earth. This will be communicated to the viewer through the shadows of the objects in the room. The time expressed through the shadows will be different than local time. This artificial time will be accelerated in the room so that a “day” can be depicted in a short period of time, such as a half hour to an hour. This means the equivalent of a day, sunrise to sunset, will occur in 30-60 minutes. At the same time the shape of the shadows themselves will be a live video stream of a different location from a different time zone. Conceptually this piece will place four forms of temporal experience into one space. There is the time of the viewer when s/he enters the room. In addition to this there is the time of the geographic location determined for the lighting. Thirdly there is the time of the video image, which would be streamed from a location in a time zone different from the display of the work. Finally, because the day-to-night time will be sped up, this will add the final temporal distortion to this work.

This project encompasses a second narrative element. The locations used for the installations have been chosen to tell the story of the colonial trade routes of the British Empire. If we use the rubber trade as an example of the process of colonial trade in the 19th and 20th centuries, it can be described as follows. The colonies (Singapore) produce raw materials (latex) to be shipped to the Britain for

manufacturing (tires, rubber-soled shoes) or trans-shipping to customers in the rest of the world. In this work the installations will be in Singapore and London, the lighting set ups and video stream for each installation will represent the other city. So that in Singapore the lighting and video stream will be of London and in London it will be the other way around. In this way the lighting and video of the installation represents the relationship of Britain over its empire, as well as how that empire allowed Britain to become a dominant economic and political power. By bringing in this historical narrative the project uses yet another form of time as history and memory, tying our understanding of time-space to the human experience. As a whole the work makes both physical and metaphorical how time-space plays out not only in our present lives, but also across history.

2.1 THE INSTALLATION

The project was originally conceived of after seeing a demonstration of the use of projectors as an artificial lighting source. The engineers involved in the project were interested in the idea of being able to mimic how sunlight fell on the Earth at any given latitude and longitude. Unfortunately, they were interested in this project as an idea and did not see its use as a metaphor. Interested in taking the prototype into a more metaphorical and meaningful area, Dr Feinstein became interested in how this displacement of light could be used to explore our relationship to time.

Modern technology since the invention of the first technical apparatus (the camera) has been based on a presentation of time. It has firstly delivered a past into a future. Photography, film and recording have allowed us to re-experience events that are past as if they were unfolding before us. Documentary film is a good example of this. Watching Frederick Wiseman's *Titicut Follies*, we are seeing events recorded in 1966. They unfold before us as if the events were happening now. The fact that many of the people in the film are no longer alive is not relevant to the experience we are having, which is a present time experience. More recent technology has allowed us to experience present time from remote locations in different timescapes. Watching the Olympics on television is experiencing an event experienced in the present even though it is occurring in a completely different timespace. The relationship between day and night becomes irrelevant. There is a sense of the now of the event being watched that supersedes traditional physical time as experienced through the movement of the sun. Similarly it is possible to talk to someone half a world away who is experiencing a different day. If it is daylight here then it is night time there, yet we are experiencing it with a sense of shared 'realtime.' Our sense of the present has become flexible. This is what the project is intended to present to the viewer. The question was how do we create a work that presents this seemingly normal experience and make the viewer understand the uncanny nature behind the use of technology.

Along with this feeling of 'the miraculous in the commonplace' it became important to explore how this experience of a past as the present could make an understanding of history more vital. Vilém Flusser wrote about how the historical was tied up in the idea of the linear text. History as such is linear and so the presentation of the past in a nonlinear form is posthistorical. As we live in an age of technical images (photographs, video, social media, etc) we live in a posthistorical world (Flusser, 2011). If we are to present the concepts of how this technology presents the world of the past into the present then it only made sense to present it in an appropriate manner, in a posthistorical form. In a posthistorical form information is presented through the use of a combination of text and technical images. This type of presentation is one not bound to a linear form as found in a written text. Instead, through the use of images, sound and movement, it is a multi-sensory approach to presenting information. This immersive experience is one where our relationship to data becomes closer to how we experience daily life and as such can have a powerful effect on us. Bringing data to the viewer through multiple senses engages her/him to compile the data in her/his mind into a form that allows for them to create useful information. The idea of creating a multisensory environment in order to immerse an audience goes back from present installation art to the Dioramas of Daguerre and Bouton and finally to Athanasius Kircher and Christian Huygens' use of magic lanterns in the 17th century (Zielinski, 2006). Much of the 18th and 19th century work, such as panoramas and dioramas, depicted extreme landscapes, historical events or religious scenes. These works were meant to inform by making the viewer feel as if they were actually at the place depicted. In the diorama the effects are created by the use of active lighting as well as the life-size images. It is this idea that we have taken

from these prior forms. As the work is addressing historical issues it is also meant to make allusions to the tradition of panoramas and dioramas, especially as they are seen in historical and natural history museums.



Figure 1: Video projected into the “shadows” provides a vestige of activity from another place and time zone

The metaphor for the project was the shadow. It was used to represent a trace left behind after light has entered a space. It is the place where light has not penetrated and as such it makes the existence of light as a presence noticeable. As we know, because light moves at a constant rate we can speak of the distances that light travels in relation to time. Also the photographic image, be it digital or analog, still or moving, is formed by the relationship between varying amounts of light and darkness being recorded. So how we experience the world remotely is through a series of variations between light and shadow. Therefore we used the shadow as a metaphor to represent time. Shadows are a normal part of our daily lives. We see them everyday and our shadows are created whenever light is present. So all of us have a personal relationship to what shadows are and what we expect to see when we look at a shadow.

From this basic premise we needed to find a form of design that would be engaging to an audience. If the project were seen as either too static or too distant from the viewer then its level of immersion would be lost. While in consultation with one of our potential partners this issue was raised. Our solution was to include within the shadow videos the movements of non-existent actors. There would be shadows of people moving through the space that the audience would never see.

A further development was the inclusion of sound elements into the project. We always knew that sound would be an important element in the final installation, but had never come to a design solution for it. While consulting with the National Maritime Museum (NMM), Greenwich, they presented us with their exhibition themes for the next few years and asked us how we felt that *Temporal Chaos* could fit into these themes. We felt that a general soundscape would have a very limited effect on the audience. It would help make the project appear to be more immersive without actually engaging the audience. The idea of using highly directional sound was one that we wanted to include in the design previously, but we were unsure of the appropriate content. As the curators at the NMM explained their exhibition theme, *Sex and the Sea*, the concept of the soundscape took shape. We would call upon archival writings of colonialists living in Singapore and Singaporeans living in the UK. We would have actors read sections from these texts. Along with this we would conduct interviews with contemporary Britons and Singaporeans living in each other's countries. These recordings would be hidden within the exhibition space. Because the speakers playing the sound would be ultra directional, the audience would only encounter the sounds by being in front of the speakers, as they move around the installation. The ambient spillage of these sounds would be at a minimum. This makes the encounter with the audio seemingly random and more uncanny.

By placing video streams into shadows and incorporating highly directional sound we are creating an object that is at once very familiar and uncanny at the same time. This sense of the uncanny is central to the project. The installation is made to present time in a form that presents an unusual presence of time into an environment that appears at first to be normal. It is through this juxtaposition of the familiar and the unfamiliar that the work communicates its meaning. This is accomplished visually

through the use of video streaming in the place of the shadows and the sense of the shadows moving at an accelerated speed. Alongside this, there is the unexpected use of a sound track that has an intimate presence through the recording of a single voice which is projected at the viewer in such a way as to feel as if the voices are speaking directly to the listener. These displacements of the expected present the viewer with a feeling of being taken off balance and confronted with a presence that needs to be understood as the physical presence of an otherness as opposed to a work made up of easily read signifiers. What the viewer is confronted with is the feeling of being in the presence of something that is an absence, a trace of what was.

These shadows engage the audience while emphasizing the idea of the trace. The trace is a presentation of otherness. Otherness is a relationship, which goes beyond Being as defined by self. The presence of the other defines our living in the world. The other is prior to us and makes up the world that we live in. It is through our encounter with the other that we understand the world as real as opposed to a creation of our mind. This otherness is beyond our understanding and yet we try to make sense of it. We submit it to the order of signification. In his essay, *The Trace of the Other*, Emmanuel Lévinas writes, "In the presence of the other do we not respond to an "order" in which signifyingness remains an irremissible disturbance, an utterly bygone past? Such is the signifyingness of a trace." (Lévinas in Taylor 1986) To present a trace is to present us with an absence of someone who was there. "In addition to what the sign signifies, it is the past of him who delivered the sign." (Lévinas in Taylor, 1986) Our struggle to understand the world around us is one where we try to incorporate our experiences through the process of creating meaning by way of signification, reducing the world to a series of signs. But when these signs are a trace they give us something more than just a sign: they give us a presence. The trace gives us the absence of one who was present and a memory of an event past. Memory is more than personal recollection, but is part of a past that is historical and cultural and thus subject to signification. "Memory brings back the past itself and puts it into this future in which research and historical interpretation wander." (Lévinas in Taylor, 1986) This tension between object as sign and object as trace is at the heart of the *Temporal Chaos*. It is this tension between memory and trace that creates the sense of the uncanny. It places the viewer in a situation where they are given memory as the historical in the form of the audio texts and the furniture; and a trace through the shadows and the voices of the audio tract.

The tension between the trace and signification is where we expect to place the audience. This gives them an active role in the work. Often traditional science centres and heritage museum exhibitions are based on historical text and artefacts are used as illustration. This approach comes from the tradition of linear written scholarship. It is an extension of the textbook. Wall texts are long and objects are placed behind barriers or inside vitrines. Dramatic lighting is used to help organize the movement of the public. The experience is designed so that we read the text first, which explains the context and then introduces the object in view. Valuable knowledge is presented to the public in a fashion that it is hoped will be more acceptable because it is in a three-dimensional and dramatic format. This is what we have called the display as opposed to an installation. Presenting a work such as *Temporal Chaos*, which is based on an experiential relationship between the viewer and the work, poses different challenges to the artist, museum and audience. For the artist there are the concerns of creating a work that conforms to the language of installation art and the ideas of user experience found in that tradition. The museum's major concern is understanding: what the audience is able to get from the work and how will it be communicated. The solutions to the museum's concern are also grounded in user experience. The tradition of what a museum user experience is may be different from the arts tradition, but because we had this common idea of what was important to the design of the work it gave us room to find a common ground. This allowed for the discussions that we had with our installation partners.

2.2 WORKING WITH MUSEUMS

We have argued that a traditional museum display takes the form of a textbook, with the written word and diagrams providing the interpretive background for the primary narrative of the objects. This relationship was particularly foregrounded by Neil MacGregor's 2010 book *A History of the World in*

100 Objects, which traced the narrative of human development via a selection of key objects from the British Museum, returning the curated exhibition back to its origins, so that its literary linearity became actual literature (MacGregor, 2010). As such, the museum display is a form of media that has previously taken its lead from the written word, as have so many forms of media. The narrative may be dramatised by the particular arrangement of text, objects, diagrams, and images, or even by the introduction of costumed actors. The audience is also free to engage with the museum display in a non-linear fashion. But the intended mode of presentation has been generally linear and historical, despite opportunities for the visitors to ignore this and browse in their own way.

More recently, however, the modern museum is increasingly finding itself home to forms of display that mirror developments in other, more commercial and technological areas of human communication. There has been the introduction of audio and video presentations, both for shared gallery or cinema experiences and individual consumption via personal screens and headphones. In the 1990s, the first forays in this direction resulted in CD-ROM multimedia, which did find its way into museums as informational kiosks. Audio guides have been around for decades and have not progressed beyond being a gallery talk delivered through a headset. Video kiosks tended to be text-heavy displays where the user interaction was limited to choosing which text to read. But this was merely the juxtaposition of media types, rather than a much more fundamental low-level integration and borrowing between genres.

Most significantly, starting in the 60s, interaction starts seeping into the museum hall of science centres and children's museums, for example the Exploratorium and the Children's Museum in Boston and London Science Museum's Launchpad. The end result of this is that although the traditional formats still persist, they are also being combined into many new forms. Museums are subject to the same competitive pressures for audience attention as other forms of media, and must constantly find new ways of attracting and engaging visitors in the subject areas they cover and their collections. So whilst the museum is its own cultural form, it is also part of the evolving media landscape.

Museums feel under pressure to incorporate these technologies into their design mission while at the same time mistrusting their ability present the information to the level of "accuracy" that a visualization can give. What is created for these displays are what Flusser calls a technical images. Images which incorporate the tradition of visual art with the conceptual nature of the text. Yet he warns us that as a new and distinct form technical images communicate in a different way that traditional images and texts. As a result they are seen as distortions of the text as opposed to new conceptual frameworks for the ideas (Flusser, 2000). This is where the tension between the museum historian or scientist and the artist or designer lies.

As the technical image has developed into new forms and delivery systems, museums and science centres have to come to terms with how information is understood and presented. Transposing previous forms into new delivery systems as is does not work. *Temporal Chaos* sits firmly within this emerging trend, through which the project provides a meta narrative on our hyper-mediated sense of time. As a presentation of historical physical objects, the installation fits the context of a traditional museum display. The use of video projection and directional audio bring more recent museum display techniques into play. However, neither are used in the discrete forms that they would be in multimedia. Instead, they are blended into the physical installation space in a much more integrated way. The video in particular breaks the traditional rectangular frame boundary and instead sits within a frame provided by the shadows that would be cast by the shapes of the objects used within the installation, were they bathed in sunlight, as well as the shape-traces of absent humans. The fact that these video-filled "shadows" are being created by a games engine, using 3D objects that have been derived from the real installation objects, exemplifies the hybrid use of media. So whilst the shadow forms come from the gaming genre, the video is streamed from another location, having been collected by outdoor surveillance cameras. The digital realm has allowed video intended for security system usage to be repurposed, and inserted into a game engine, which is then project-mapped into a physical space to match objects.

3. CONCLUSION

The Temporal Chaos project is both posthistorical museum display and hybrid media artefact. It is an interactive installation, which visitors can explore, and will contain snippets of historical information regarding, for example, the rubber trade in the 19th Century. So there is a level of linear textual narrative available, which could even be described as educational. However, this is layered within deconstructed mediation such that the format of the presentation itself also provides further meaningful levels that comment upon the development of international trade from physical to digital communications. Then there is the commentary on what this shift has done to our sense of time, imploding it so the natural lightflow of night and day no longer signal the temporal rhythm, which now like so many things revolves around an individual's personal preferences and where their network of friends reside around the world.

Clearly, not all museum displays could take such a radical approach without leaving the visitor too much to understand. The *Temporal Chaos* project works because it sits within museum and art installation traditions, alongside more conventional displays, providing a variation on both themes. It contains traces of object-based museum display and “multimedia” presentation, but digital media hybridisation has allowed these to become part of a new media form that represents the current situation and its relation to history by its form as well as its content. In his highly influential paper, *The Question Concerning Technology*, Martin Heidegger argued that modern technology Enframes human existence (Heidegger, 1977), and places mankind in a different relationship to truth than before, such that we have become functions of our own technological creations (which he calls Standing Reserve). As a work that spans the eras of this development, *Temporal Chaos* reveals how our changing relationship to time-space also signals a fundamental shift in our relationship to truth. But as an art installation, *Temporal Chaos* is an example of Heidegger's poesis, with a more fundamental relationship to truth than through the Enframing of science and technology. So it can provide a form of information that is relevant to the host museum's remit, but also a commentary on how that information and remit sit within a wider dialog about human communication, existence, and our relationship to truth.

4. ACKNOWLEDGMENT

The authors would like to thank the following collaborators, Nanyang Technological University for the initial funding, and Ravensbourne for infrastructure and financial support. The Now Gallery for being an exhibition partner, Harold Thwaites and Andrea Nanetti for technical and conceptual feedback.

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