



## *Perceptions of Time:*

# Presenting the Abstract through Exhibition Space and Visitor Experience

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"Systemic reasoning is something we could not...possibly do without. But neither, if we are to remain sane, can we possibly do without direct perception, the more unsystematic the better, of the inner and outer worlds into which we have been born."

- Aldous Huxley, *The Doors of Perception*

"By object is meant some element in the complex whole that is defined in abstraction from the whole of which it is a distinction."

- John Dewey

"Suppose that time is not a quantity but a quality, like the luminescence of the night above trees just when a rising moon has touched the treeline. Time exists, but it cannot be measured."

- Alan Lightman, *Einstein's Dreams*

Cover page:  
"Your Strange Certainty Still Kept"  
installation art by Olafur Eliasson  
at P.S.1 Contemporary Art Center  
that uses continuously dripping  
water droplets and a strobe light  
to heighten our perception of the  
present.  
Source: MoMA

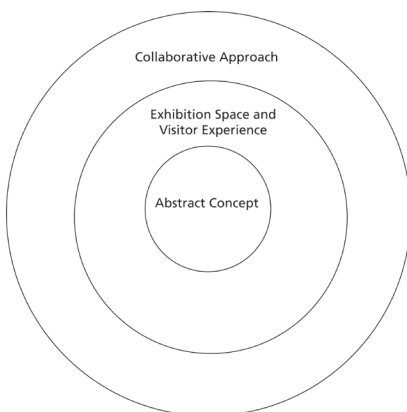
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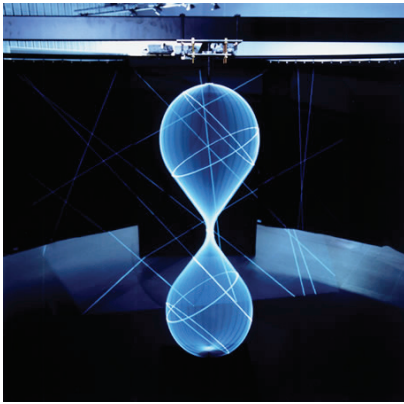
## Introduction of the Problem

For my Master of Fine Arts Graduate Thesis I propose to explore a method for how exhibition designers may present an abstract concept that does not lend itself to direct visualizations, concrete/tangible symbols or natural embodiments, i.e. time, identity, or reality. The purpose of presenting abstract concepts develops from understanding museums as places of meaning-making. They are spaces where people can go to develop deeper connections to content, objects and the resonance of objects. Stephen Greenblatt describes resonance as “the power of the displayed object to reach out of its formal boundaries to a larger world, to evoke in the viewer the complex and dynamic cultural forces from which it has emerged and for which it may be taken by a viewer to stand.” Abstract concepts emerge from the resonance of objects. As places of meaning-making, museums can be posited to present these abstract concepts in a unique and meaningful way. Unlike other methods of obtaining information such as the Internet or books, museum exhibitions can offer the space and the visitor’s experience in the space as a distinctive and memorable means of communication.



The method I propose will present an abstract concept so that the visitor may experience the concept in the exhibition space to develop a deeper, more meaningful understanding of the concept. The exhibition space will immerse the visitor in the concept to facilitate understanding beyond a cognitive level to understanding on an experiential level, one that offers visitors direct experiences with the abstract concept that can lead to a genuine understanding and affective resonance.

I am particularly interested in exploring abstract concepts that offer new ways of viewing and interpreting the world around us. For



"Heartbeat clock" in *Exploration of TIME* exhibition  
Source: Hong Kong Science Museum



Lelawi Theater, National Museum of the American Indian  
Source: avspl.com



Olafur Eliasson, "Mediated Motion" installation  
Source: ArtStor

this reason I have chosen "perceptions of time" as the catalyst for my thesis. I will research ways of presenting "perceptions of time" using exhibition space and visitor experience. Then I will create an exhibition with the intention of expanding the visitor's perception and understanding of time. Some areas of exploration may include biological aspects of the time, Einstein's Theory of Relativity, artists' interpretations of time and cultural differences in the perception/conception of time between Native American and Western culture.

In *Beyond Culture* Edward Hall stresses the importance of this last area of exploration. He writes "Time is so thoroughly woven into the fabric of existence that we are hardly aware of the degree to which it determines and co-ordinates everything we do, including the molding of relations with others in many subtle ways." He believes "the future depends on man's being able to transcend the limits of individual culture." I hope to explore a means to present another cultures' perceptions of time so that it may be experienced by visitors and understood on a deeper level.

## Nomenclature

**Abstract Concept:** A concept that does not lend itself direct visualizations, concrete/tangible symbols or natural embodiments. While certain aspects of a concept may lend themselves to tangible objects, my intention is to focus on the intangible aspects of a concept.

**Exhibition Space:** Space that becomes the presentation of the content/concepts and facilitates the visitor experience. The experience in some manner involves the entire exhibition space so that the visitor is immersed in the content/concepts. The focus of the design of the exhibition space is thus the visitor's experience and understanding of the abstract concept.



Interactive in *Identity* exhibition,  
Franklin Institute  
Source: Franklin Institute website

**Visitor Experience:** The visitor's experience facilitates a deeper understanding of the concept through experiential learning, or learning that engages the spatial and bodily kinesthetic intelligences. It is based on the Constructivist Learning Theory that promotes teaching through explorations that result in each learner's constructed conclusion or understanding of the concept.

### **Intended Result of the Problem**

My intention of presenting an abstract concept through exhibition space and visitor experience is to provide the visitor with a unique and meaningful experience within a museum. The museum can thus act as a place of profound meaning-making. The intention of this method is that the visitor develops a deeper understanding of the concept presented. This is not an understanding that will result in concrete information, but an understanding on an experiential level. As I am interested in exploring concepts that deal with ways of perceiving the world around us, the visitor may leave with a new way of seeing and interpreting the world around him or her. By offering a meaningful experience to the visitor a deeper connection can be made between an experience, a concept and a museum.



The Blur Building a work by the design studio Diller + Scofidio, a multidisciplinary studio that fuses architecture, visual and performing arts.  
Source: *Where Space Meets Art/Where Art Meets Space*

I believe a method of collaboration between fields has great potential for presenting an abstract concept with exhibition space and visitor experience. Integration with the space and expansion from traditional practices are central goals of the project. These goals would be best addressed from a variety of positions that are all related to museum work. In *The Wisdom of Crowds* James Surowiecki supports the collaborative approach of diverse groups for problem solving. He writes, "Diversity and independence are important because the best collective decisions are the product of disagreement and contest, not consensus or compromise." For my





*Take Your Time* exhibition at SFMOMA  
by Olafur Eliasson



*Time* exhibition at the Museum of  
Science and Industry  
Source: MSI



*Our Peoples* exhibition at the National  
Museum of the American Indian  
Source: newsdesk.si.edu

thesis I will involve a diverse group of people from different fields related to museums. The group may include museum exhibition designers, architects, installation artists, curators, scientists, cultural representatives, and philosophers. I will act as the point of contact through interviews and thesis committee reviews.

Furthering the collaborative approach, I also intend to explore the interconnectivity of abstract concepts between different types of museums. Concepts such as “identity,” “time,” “dreams” or “spirituality” can and have been interpreted by several different types of museums: art, science, natural history, cultural etc. Likewise, the abstract concept I have chosen, “perceptions of time,” is a concept that can be addressed by a variety of museums and has implications for many different subjects. For this reason, I hope to apply the collaborative methodology and involve professionals from different types of museums in my research for various methods of presentation. Specifically, I am interested in understanding how science museums, art museums and a cultural institution, the National Museum of the American Indian, has approached or would approach altering our normalized perception of time through exhibition space and visitor experience. Through the interconnectivity of abstract concepts I hope to explore a means to bring in audiences that might typically frequent one type of museum, but may now be drawn for the first time to another type of museum.

## Research Question/Hypothesis

I have organized my problem into two questions that I will address:

- How can exhibition designers present an abstract concept in a space so that museum visitors may experience the concept to develop a deeper, more meaningful understanding of it?

- How can varied perceptions of time be presented in an exhibition space in a way that visitors may experientially understand them?



*Massive Change* exhibition by Bruce Mau on climate change, design and personal choices  
Source: Bruce Mau Design

## Goals of Thesis

I hope to accomplish a variety of goals in my thesis work relating to abstract concepts, exhibition space, visitor experience, and collaboration as a methodology.

I will work to understand the challenges of displaying abstract concepts that may not lend themselves to direct visualizations, concrete/tangible symbols or natural embodiments. I hope to understand the problems exhibition designers face in presenting the intangible and communicating abstract ideas effectively. From this I hope to understand what criteria a new method of presentation would need to incorporate.

I will work to understand the interconnectivity of abstract concepts between different types of museums. For example, I am planning to look at “perceptions of time” from the perspectives of science museums, art museums and a cultural museum, specifically the National Museum of the American Indian. I hope to understand how an exhibition can explore “perceptions of time” in a way that could be applied to all of these institutions and could bring in new and diverse audiences.

I will work to further understand how to design a space to facilitate experiential learning for the visitor. I have researched how immersive spaces prompt experiential learning in museums using environmental psychology studies. I have also looked at installation art that immerses the viewer within the work. Expanding on this research, I hope to understand how to facilitate experiential learning so that the visitor understands the concept on a deeper level.



I will explore how to create an exhibition in which the visitor's experience is the central goal. I will draw from installation art practices that immerse the visitor in the work of art. However, for this project I am interested in immersing the visitor in the given concept, in this case in "perceptions of time." Thus the goal of the exhibition moves away from an expression of the installation artist towards the visitor's experience and understanding of the concept.

Tying these ideas together, I hope to further research and explore how professionals in fields relating to museums have utilized exhibition space and visitor experience in their work. I will work to understand what these professionals have used in the past, what they believe has worked or not worked and to understand how their work can be expanded upon.

The final goal is to apply a collaborative methodology to the project. I will work to receive input from a variety of fields related to museums. These may be people from museum backgrounds or inter-disciplinary design firm backgrounds.

### **Limitations of the Study**

There are certain limitations of my study. I do not intend to find one perfect model for an exhibition of an abstract concept through exhibition space and visitor experience nor one model for a collaborative methodology. I understand each case and each museum is different. Instead, I hope to offer one well tested and researched model that I hope can be applied to many different situations and museums.

I also understand that the interaction of space and experience is in itself abstract and each person will understand and use it slightly

differently. Likewise, each visitor's experience within a space will be different. However, I hope to offer as clear an idea of the interaction of space and experience as possible. I hope to then present a variety of interpretations from professionals to explain its expansive possibilities.

"Perceptions of Time" is also a topic that can be understood very broadly. Science museums, art museums and cultural museums will all approach it very differently. It is not my intention to create an exhibition with content that comprehensively covers "perceptions of time" from all three perspectives. Instead I hope to understand each type of museum's approach in exhibition design to presenting "perceptions of time" and apply what is appropriate to my thesis paper and project.



Visitor-centric design at the Franklin  
*Identity* exhibition  
Source: Franklin Institute website

### **Impact Statement**

This project will primarily impact the museum exhibition design field and museum visitors. Recently, many museum professionals have come to view museums as places of meaning-making; places where objects and the resonance of objects are given meaning for the visitors. Abstract concepts are often wrapped up in this resonance. Museums may thus have key abstract concepts that they wish to interpret for their visitors that do not lend themselves to direct visualizations, concrete/tangible symbols or natural embodiments. Perhaps these concepts have intangible qualities that are difficult to present. As places of meaning-making, museums may have a desire to provide a deeper meaning and understanding of the abstract concept. The concept may be of a nature that the only way for visitors to understand it on a deeper level is to experience it in some manner. This project will give institutions new ways of presenting abstract concepts in a complex and rich way that can

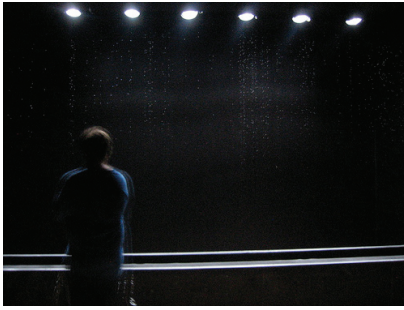


Interactives in *Identity* exhibition,  
Franklin Institute  
Source: Franklin Institute website

further develop the visitor's understanding of the concept and create meaningful experiences for the visitors.

Museums are also feeling a strong push to be more engaging and relevant to visitors' lives and to apply more visitor-centric models. Books such as Kathleen McLean's *Planning for People in Museums* and blogs such as Nina Simon's *Museum 2.0* frequently champion a design approach that puts the visitor as the focus. Museums continue to develop sustainable methodologies that apply a visitor-centric model to programming and exhibition, a method that can change and adapt as visitors change and evolve. Today's visitors often desire a more direct relationship with subject matter and grow bored with didactic information that is presented one-dimensionally. People today also have a world of information available on the computers, TVs and/or on their smartphones. With many people on a tighter budget today, visitors might be asking themselves why they should go to a specific institution and pay a price to gain information readily available at their fingertips.

When museums present themselves as highly engaging institutions that directly affect the visitor and offer them a truly meaningful experience within a space, museums make a case for themselves and draw in questioning visitors looking for more than information. The method I propose for my thesis project will engage the visitors and make the subject relevant to their lives by appealing directly to their experiences. It will present the subject in a way that transforms the visitor's relationship to the subject and perhaps transforms the way they view the world. It will utilize a constructivist approach, allowing the visitor to create his or her own solution and meaning, an approach that is important to today's visitors.



"Your Strange Certainty Still Kept"  
installation art by Olafur Eliasson at P.S. 1  
Contemporary Art Center  
Source: Peter Samis on Flickr

My project will also use the space and the visitor's presence in the space as the means of communication. It will provide museums with a case for how they can offer more than what the Internet can provide. After the exhibition experience the visitor may recall and reflect on their visit in the future. An established connection between a concept, an experience, and a museum will potentially increase repeat visitation and make the museum a more permanent choice in the visitor's free time. In this way the method I propose for my thesis will offer a visitor-centric model for museum exhibition design. The main goal of the exhibition is the visitor's experience and experiential learning.

Lastly, museums are often looking for a means to expand their visitor-base. This project will help to expand their visitor-base by presenting the interconnectivity between different types of museums through shared abstract concepts. I will be exploring "perceptions of time" from the viewpoint of institutions that otherwise might not have much cross-over in their visitor base. Exploring connections is important today as the divisions between disciplines are becoming smaller and smaller. The older constructs that divided museums by subjects and fields are not as viable today with the interconnectivity of the Internet, liberal arts schools, and post-disciplinary approaches. Museums can use the shared interest of one concept among the public to attract new and diverse audiences.

### **Research/Scholarship**

The research that has been done to date on the presentation of abstract concepts through exhibition space and visitor experience comes from a variety of sources. While the sources I have found provide a wealth of background information, no source touched directly on my thesis problem. The problem is instead approached

from different angles for different purposes. Key concepts I have explored are the presentation of abstract concepts in space, examples of visitor immersion that led to a deeper experience, defining a visitor's meaningful experience, the environmental psychology approach to experiential learning, creating meaningful experiences with design, expanding perceptions of time and exhibitions of "time."



Interactives in *Identity* exhibition,  
Franklin Institute  
Source: Franklin Institute website

I have found a couple key examples of recent exhibitions that have presented abstract concepts in an exhibition space. These examples vary in their use of the space; some design the space to reflect the abstract concept, while others segment the space into distinct exhibits. These examples also vary in their level of designing for a visitor experience that will facilitate a deeper understanding. The *Identity* exhibition at the Franklin Institute presented the concept of an identity through a series of hands-on, interactive and situational experiences. The goal was to bring insight into the way visitors think about their personal identities. The elements of the exhibition that most directly related to my thesis problem were the large interactive exhibits that visitors could enter into in order to gain a deeper understanding of the concept of identity. As an introductory interactive, visitors walked in front of a large screen that projected three silhouettes of the visitors, illustrating each visitor's physical, psychological and social identity. Further along, visitors stood underneath large immersive cones that emitted a colored light. Each cone symbolized a character trait and within the cone the visitor could hear the voice of a person describing what it is to have a particular personality trait. The *Identity* exhibition is a good example of the use of immersive installations that visitors can interact with in order to experience a concept. However, I am interested in extending beyond this case to a situation in which the entire space of an exhibition is used in an immersive and experiential way.



*Massive Change* exhibition by Bruce Mau  
Source: Bruce Mau Designs

An exhibition that aligns well with the goals of my thesis was the *Massive Change* exhibition designed by Bruce Mau. The exhibition invited viewers to consider the future of design culture and crucial real-life choices. Mau and the Institute without Boundaries utilized the entire space through design to bring the message across to visitors. The immersive installation left the visitors with a powerful experience and message. I hope to use this kind of method to present a more abstract and intangible concept to visitors.



The *MEGartSTORE* at Hong Kong Heritage Center. An exhibition on materialism that incorporate exhibition design and installation artists.  
Source: *Where Space Meets Art/Where Art Meets Space*

Examples of the presentation of abstract concepts in spaces other than museum exhibitions are available in *Where Space Meets Art/Where Art Meets Space: Spatial, Structural and Graphic Design for Event and Exhibition*. This work looks at spatial design to discuss how structure and graphics are used within space to create a cohesive look and reflect a concept throughout an entire event. The book studies spatial design in museum exhibitions, public buildings, projections, exterior installations, tradeshow, design events, national parks and more. This book offers a broad approach that extends beyond museum exhibition design when considering how to present a look and concept for an entire space.

Sources on installation art provide another approach to the presentation of an abstract concept in a space. Installation artists often aim to create a particular experience for the viewer when encountering the work. Some resources include *Installation Art* by Claire Bishop and *Installation Art in the New Millennium: the Empire of the Senses* by De Oliveira, Oxley and Petry. These works discuss installation art as a method of art that considers the embodied viewer by addressing his or her sense of touch, smell, and sound as well as sight. The spectator is thus in some way integral to the completion of the work. I did not find many examples in these



sources of installation art whose aim was to facilitate the visitor to experience a particular abstract concept. While many of the art works involved various concepts, few of the artists selected one abstract concept to present to the viewer. The central goal of most of the installation art presented was the artist's expression instead of a visitor's meaningful experience. This is where my intended project differs from installation art.



"Winterreise" by Kazuo Katase  
Source: *Installation Art*

One example that stood out was a work by Kazuo Katase entitled "Winterreise." This work is built around the Zen concept of *chaos-satori*, a term loosely meaning "the way" that is associated with Japanese sites and ritual. Katase's work points out that the meaning of being cannot be grasped rationally, only experienced. It is perhaps for this reason Katase chose to create an installation art piece that can be experienced spatially by visitors. My research will expand on this idea to offer a deeper understanding of a concept to visitors.



*The Psychedelic Experience* at the Denver Art Museum  
Source: [http://www.exhibitfiles.org/the\\_psychedelic\\_experience](http://www.exhibitfiles.org/the_psychedelic_experience)

I also looked at examples of visitor immersion that led to a deeper experience for the visitor. The best sources for these were ExhibitFiles cases and my own empirical research. Many case studies and exhibit reviews on ExhibitFiles discussed the immersion of visitors in hyper-real atmospheres or reconstructions of a particular culture. This immersion led the visitor to develop a deeper understanding of the place or topic. Nina Simon reviewed *The Psychedelic Experience* exhibition at the Denver Art Museum. The exhibition included a room that provided an immersive environment of interactive experiences that let visitors share their own stories, participate in art projects, and explore the music of the time. This environment worked in tandem with the interactives to create an experience that was "comfortable, diverse, authentic, content-oriented and deep."



California Academy of Sciences  
rainforest  
Source: Author



Second Bank of the United States  
Source: Ming Shao

My own experience at the California Academy of Sciences also offered an example of an immersive environment that provided me with a deeper experience. The two-storey tall indoor rainforest and beautifully designed aquarium set me in an immersive atmosphere. This atmosphere facilitated my engagement with the content and left me with a meaningful experience. On a much smaller scale, the Second Bank of the United States creates an atmosphere of a 18th century street with simple design techniques that helped me as the visitor give context to the information presented. These examples from ExhibitFiles and my empirical research offer good case studies for immersive environments that provided a deeper experience for the visitor. However I would like to push the idea of exhibition space and visitor experiences to the interpretation of an abstract concept.

Another area of prior research that relates to my thesis topic is defining a visitor's meaningful experience. One approach is to view this from an educational standpoint. Howard Gardener developed a theory of seven intelligences. The intelligences that I am particularly looking to activate in my exhibition would be the spatial and bodily-kinesthetic. His theory helps support my emphasis on learning that extends to an experiential level of understanding and reaches beyond a cognitive understanding. Another source for educational theory is Jean Piaget's Constructivist approach to learning. Constructivism argues that humans generate knowledge and learning from their experiences. John Dewey expanded on this theory to look at how visitors can create meaning through discovery and experiential learning in museums. I hope to use and elaborate on these learning theories to explain how experiential learning can occur in an exhibition on an abstract concept.

Another source for information on meaningful experience was Mihalyi Csikszentmihalyi. He developed the concept of psychological



Immersion to create visitor flow at the California Academy of Sciences aquarium  
Source: Author

“flow” which is often characterized by focused attention and a distorted sense of time in which awareness of the self is temporarily lost. With psychological flow the goal is the experience or behavior itself rather than a future reward or advantage. What interested me in his work was how a museum might be able to facilitate a visitor to feel a sense of flow; to get lost in the moment and forget the outside world and thus to have a truly meaningful experience in a museum.

Csikszentmihalyi begins to address this question in a study entitled *The Art of Seeing: An Interpretation of the Aesthetic Encounter*. Csikszentmihalyi was commissioned by the Getty Center for Education in the Arts to connect the “flow experience” and the “aesthetic experience.” The aesthetic experience is here described as a state of mind when appreciating art characterized by a “loss of ego,” “loss of self consciousness” or even “a transcendent experience [that] takes you out of the realm of everyday life.” From the results Csikszentmihalyi was able to deduce four guidelines for museums to facilitate an aesthetic experience: the museum should communicate to the viewers that viewing art is its own reward; the viewer must feel that there are no right or wrong responses to the objects displayed; the museum should provide a diversity of tools that highlight the perceptual, emotional, cognitive, and the communicative content of the works; and the optimal installation of art objects would help to induce the flow experience by promoting concentration and avoiding distractions. However, Csikszentmihalyi determined that ultimately the aesthetic experience really depends on the viewer and the challenges that the work presents.

Studies in the journal *Environment and Behavior* take an environmental psychology approach to understanding immersion



Denver Museum of Natural History  
dioramas  
Source: Flickr

and visitor experiential learning. This information provides another facet to understanding a visitor's meaningful experience. "The role of simulated immersion in exhibition" by Stephen Bitgood in 1990 theorizes that the role of simulated immersion in exhibition leads to a greater potential for learning and pleasure. He defined simulated immersion as "the degree to which an exhibit effectively involves, absorbs, engrosses, or creates for visitors the experience of a particular time and place." In his study he identifies four factors that produce an immersion experience: the use of physical space, environmental feedback, multisensory stimulation, and object realism. Bitgood finds that immersion offers a learning method that is more experience driven than information driven. It thus allows the visitor to gain declarative knowledge, procedural knowledge, spatial knowledge and affective knowledge on a subject.

In 1998 a study led by Mark L. Harvey entitled "The influence of museum exhibit design on immersion and psychological flow" furthers Bitgood's ideas and relates them to Csikszentmihalyi's concept of "flow." Harvey considers immersing techniques as a means to promote a flow experience. These techniques can pull the visitor's attention toward the museum-created environment and away from internal thoughts and feelings. Harvey expands on Bitgood's ideas and identifies potentially immersive design features: exhibits that produce environmental feedback, multisensory stimulation, role-playing prompts that produce mental imagery, and lighting that helps to set the atmosphere of the exhibit. By applying these features to a renovated display of dioramas, Harvey proved their immersive qualities. He also determined that flow and immersion do correlate. The study classifies several unique design features that facilitate the visitor to feel immersed or in a state of flow, each with varying degrees of effectiveness. These studies

help to provide the environmental psychology perspective on how space can facilitate experiential learning and create meaningful experiences. I will work to expand on these studies to the presentation of an abstract concept and the utilization of the entire space, as opposed to the renovation of one specific exhibit element.

From the museum field there are other sources on creating meaningful experience for visitors with design. Stephen Greenblatt's "Resonance and Wonder" is a key resource. Here Greenblatt argues that every piece in a museum has a "resonance" meaning the importance of the object to the larger world or culture, and a "wonder" meaning the power of the object to stop the viewer in his or her tracks. In my thesis work I am looking to create an affective resonance for the visitor with an abstract concept. This resonance with the abstract concept may in turn transform how the visitor views the world.

James E. Traue in "Seducing the Eye: Contemporary Exhibition Design" also stresses the importance of resonance in museum exhibition design. In this article Traue looks at how to use exhibition design to create meaningful exhibitions with certain visual principles and story-telling methods. Traue notes the difficulty in exhibition design is often how to create the sense of resonance. One method for creating resonance is to construct a rhythmical pattern of relationships early on in the exhibition experience so that the viewer expects to find a pattern and then feels satisfied at understanding the pattern by the end. He notes this is really the technique of any good storyteller: using partial concealment, hinting at surprises to come, using suspense and mystery. He believes exhibition designers can use these storytelling techniques to move people through spaces.





"Anechoic Space" interactive in *Exploration of TIME* that lets the visitor experience how time is perceived in the absence of everyday cues.  
Source: Hong Kong Science Museum

I have also researched the abstract concept that will act as a catalyst for my thesis, perceptions of time. A starting point was to understand how we traditionally perceive time. In *The Labyrinth of Time: the Universe* Michael Lockwood discusses our perception of time as "passing" and discusses the now-relative series of time (today, tomorrow, two days ago) and the clock series of time (4:19 EST). He explains how it is arbitrary which series we see as moving and which as stationary. I have also explored the Einstein's Theory of Relativity and how it can change our perception of time. With this theory we no longer see time as an absolute quantity, but something that depends on the timekeeper's point of view. *Einstein's Dreams* by Alan Lightman is a fiction novel that expands on this by exploring different conceptual frameworks to view time. He manages to creatively expand on our perception of time with such dreams as a world in which time is a quality instead of a quantity and a world where time slows down the faster one moves.

For alternate perceptions of time in science, art and anthropology I looked towards a variety of sources including David Bohm, Benjamin Whorf and even Aldous Huxley's *The Doors of Perception*. Perhaps beyond the reaches of this project, Bohm's theory of the "implicate order" implies that our experiences of three-dimensional space and time is a derivative, temporary projection similar to a hologram. From an anthropological standpoint, Benjamin Whorf studied the Hopi Indians and addresses their concept of time in "An American Indian Model of the Universe." Unlike our common perception of time, Hopi Indians do not view time as a smooth flowing continuum in which everything proceeds at an equal rate. I am interested in considering this perception of time by the incorporation of the National Museum of the American Indian that similarly does not address time as a timeline continuum.





Olafur Eliasson's *Take Your Time*  
exhibition at SFMOMA  
Source: ExhibitFiles

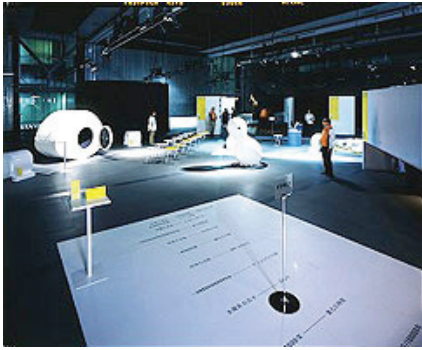
I also looked at different ways artist have considered our perceptions of time. In *Art, Time and Technology* author Charlie Gere looks at the role of art in the era of real-time technology and how some artists have responded to this instantaneous version of time. Of particular interest are installation artists such as Olafur Eliasson whose work addresses time in large-scale installations involving entire galleries. His *Take Your Time* exhibition organized by the San Francisco Museum of Modern Art is designed to heighten one's experience of the everyday with multisensory experiences. His piece "Your Strange Certainty Still Kept" uses continuously dripping water droplets and a strobe light to heighten our perception of the present.



"Reflectory" exhibit in *Playing with Time* gave visitors a chance to reflect on time with high-speed and time-lapse photography.  
Source: Science Museum of Minnesota

Many museum exhibitions have addressed the concept of "time." In 2002 The Science Museum of Minnesota created *Playing with Time* and the Museum of Science and Industry put on *Time* to highlight their collection of timepieces. Einstein's Theory of Relativity was presented in The American Museum of Natural History's exhibition on the famous scientist also in 2002. While these exhibitions inform my thesis research, I would like to address how to present time from a more abstract perspective by focusing on our perceptions of time. I would also like to focus the design on more experiential learning than cognitive learning.

One exhibition that aligns very well with the goals of my thesis is *Exploration of TIME* organized by Miraikan, the National Museum of Emerging Science and Innovation in Tokyo in 2005. This exhibition uses interactive exhibits to present various concepts of time from diverse perspectives. Exhibits allow visitors to see changes in the universe over time, understand Einstein's Theory of Relativity and recognize time in life cycles and biological clocks. Created by a



*Exploration of TIME* exhibition created by Miraikan and toured around Asia and South America  
Source: Miraikan

team of scientists, artists, philosophers and musicians, interactives include a heartbeat clock that visualizes the rhythm of visitors' hearts and an anechoic space interactive where visitors experience how time is perceived in the absence of everyday cues. I will certainly draw on this exhibition for inspiration. My thesis will differ from this exhibition due to the nature of collaboration and different personalities than those involved in the Miraikan project. In particular I hope to involve the perspective of the National Museum of the American Indian for a unique perception of time.

While all of these sources approach my thesis topic from various angles, none directly questions how to present an abstract concept in an exhibition space so that the visitor may experience the concept and gain a deeper understanding of the concept. My thesis topic is one that touches on several different fields and sources. I will use these various approaches to inform my research. In the end I hope to create a synthesis of these different ideas in order to approach my thesis problem directly.

## **Methodology and Approach**

The methodology and approach I will take to my thesis is two-fold. I will first develop a synthesis of my research and interviews on presentations of abstract concepts, exhibition space and visitor experience in the form of a written report. Then I will develop a project in which I will enact my findings in order to develop and design an exhibition of perceptions of time.

For both phases of the thesis I will use a methodology of collaboration between people in different positions related to museums. I believe that this model of collaboration has great potential for the presentation of an abstract concept through



"The Blur Building" a work by the design studio Diller + Scofidio, a multidisciplinary studio that fuses architecture, visual and performing arts  
Source: *Where Art Meets Space/Where Space Meets Art*

exhibition space and visitor experience. I plan to use museum exhibition designers, architects, installation artists, curators, scientists and philosophers for my approach to the presentation of "perceptions of time." However, this selection is subject to change depending who is needed to round out the approach to the concept. In this methodology I will act as the point of contact between collaborators by means of interviews and thesis committee reviews. I will work to have a variety of positions involved in my process for both the thesis report and thesis project.

I have chosen the museum exhibition designers as the voice of the museum, voice of the process and voice of design. They can provide a context for the exhibition and offer their knowledge in interpreting and educating the public through exhibitions. Architects will be involved to provide an understanding of the space in the exhibition. The project requires a person with an in depth knowledge of the limits and expanses of a space. I have included installation artists for their ability to view an entire space as a work of art. They have the power to portray abstract concepts through space without the didactic and interpretation typical of museums. Curators, scientists and philosophers have the expertise in the content of abstract concepts. In the case of my thesis, they have expertise in understanding perceptions of time from different perspectives.

I am proposing a new model of collaboration between these roles. It is a model that is different from curating an exhibition of tangible objects, different from curating an installation art piece and different from commissioning an art piece. I hope to involve all fields at the ground level so that they may work together with the same understanding and goals for the project. Ultimately the goal of all of their work is to offer a deeper, more meaningful experience for the visitor.

These roles may come from a variety of sources including museums, inter-disciplinary design studios, architecture or design firms, or the University of the Arts. Currently I am looking at exhibition designers, architects, installation artists, scientists and philosophers that have already approached “time” as a subject of art or exhibition and have considered some of the challenges and opportunities that this concept provides. I hope to get a variety of voices from different types of institutions to give depth to my approach.

I will begin by exploring approaches to previous exhibitions of abstract concepts. I will interview exhibition designers and curators to create case studies of their approaches. I will collect information from museum exhibition designers from different types of museums and design firms first with a front-end survey and later with a more a detailed interview for a select group. I will try to choose museums and firms that have had a significant impact on the museum field and often try to expand beyond traditional display techniques. In this section I hope to understand the challenges of interpreting abstract concepts for different types of museums.

Next I will explore approaches to “time” in museum exhibitions. Here I will interview exhibition designers, curators, scientists and philosophers. I will look at previous museum exhibitions on “time.” I will research how these professionals have gone about this topic and how they might adjust it if considering it within the framework of exhibition space and visitor experience. I will also work to gain a better understanding of different perceptions of time. From here I will brainstorm possible approaches to the presentation of these different perceptions of time. I plan to collect this information through research and interviews.

Next I will further research the visitor experience in museums and experiential learning. I have begun to explore the psychology of a visitor's meaningful experience in museums and how design factors affect environmental psychology. I will further this research by considering experiential learning and how it has been defined by educational scholars. Then I will consider how a museum may attempt to produce experiential learning in the presentation of an abstract concept. My front-end evaluation will poll exhibition designers for applications of experiential learning in exhibitions, either on abstract concepts or on more concrete concepts. From here I will collect information through interviews and case studies with exhibition designers, installation artists and architects. The case studies will question if the interviewees have ever attempted or succeeded in applying experiential learning to a presentation of an abstract concept, and if so what do they have feel has worked and what has not worked.

In the last section of my thesis report I will address the integration of exhibition space and visitor experience. I will incorporate information from museum exhibition designers, curators, installation artists and architects. I will research approaches that used an entire space for the exhibition to create an overall experience for the visitor. I will research how these professionals have gone about this approach or how they might if given the opportunity. I will also research what professionals considered successful approaches to the integration of exhibition space and visitor experience. I will then consider how these practices may be expanded upon and used to present "perceptions of time." I will collect this information through research, case studies and interviews. I hope to get a diverse and thorough understanding of exhibition space and visitor experience from all the fields involved.

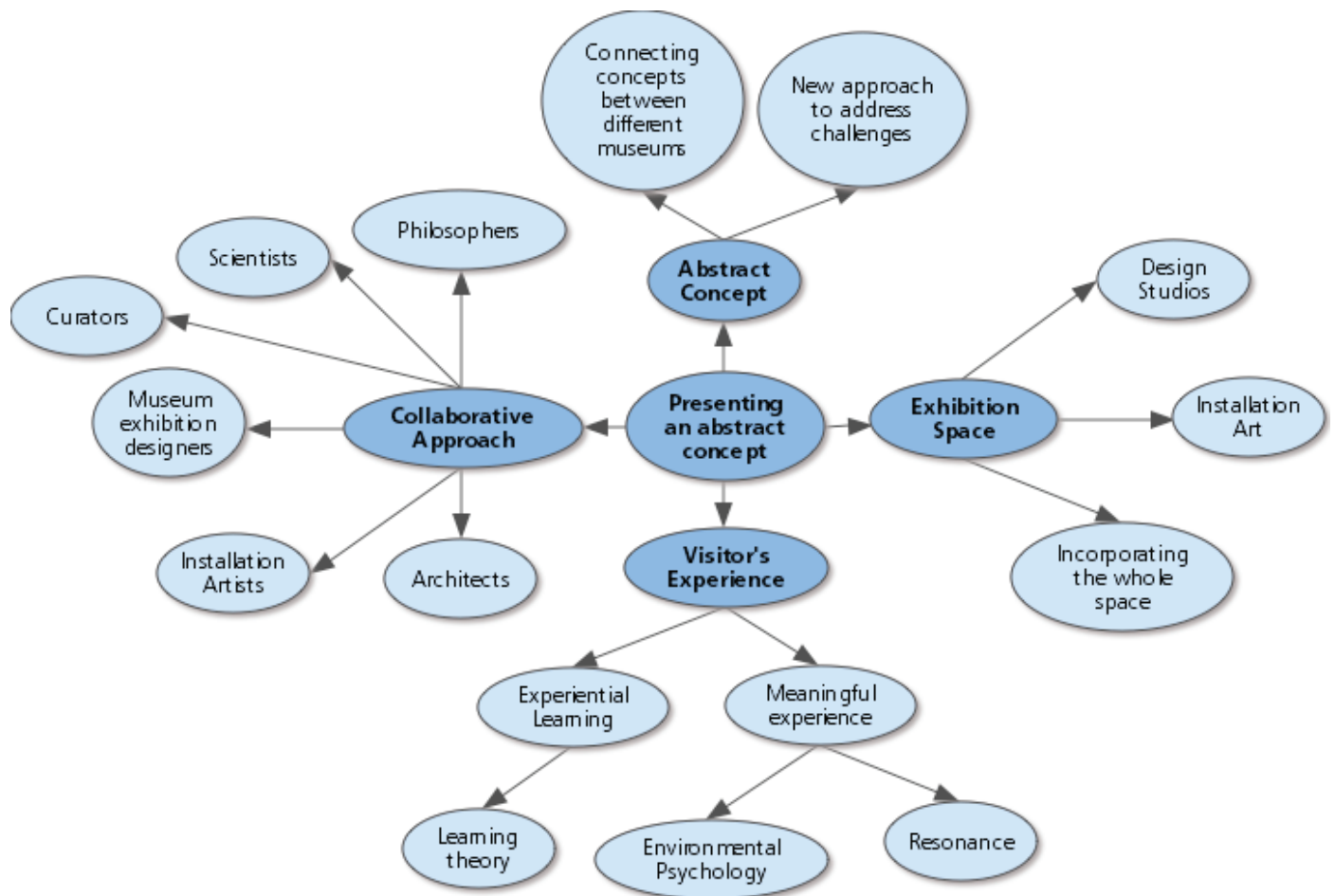
### **Expected Findings and Preliminary Framework for the Solution**

There are certain expected findings that I hope to accomplish through my study. I hope to find some of the challenges in displaying abstract concepts at different types of museums. I hope to find how a museum may facilitate experiential learning. Finally, I hope to find an application of exhibition space and visitor experience in interpreting an abstract concept. Throughout my research I also hope to explore a method of collaboration between fields relating to museums.

The solution for my thesis will come in the form of my thesis project. The project will reflect my findings on exhibitions on abstract concepts, exhibition space and visitor experience. These findings will then be applied to create an exhibition on “perceptions of time.” I will use my findings and interviews with professionals in the different roles to better understand how a collaborative methodology would work for this method of exhibition design. I have not yet determined how exactly I will use the collaborative model to create my thesis project. I am not certain if I will continue to act as the point of contact between different collaborators similar to the thesis report or if the collaborators will have a more direct role. I hope to eventually create an exhibition using exhibition space and visitor experiences that actualizes “perceptions of time” into an exhibition that can be applicable to different types of museums.



## Mind Map



## **S.W.O.T. Analysis**

### **Strengths**

- The project is working to discover an innovative approach to presenting abstract concepts to visitors. Any type of museum may adapt the project as truly any museum has abstract concepts that they feel are important for their visitors to understand.
- This project may be of particular interest to non-collecting museums and museums without large collections of objects.
- The project could have an interest from NAME as a new technique in exhibition design.
- With the inclusion of art installation in the collaborative process the museum is proving the importance and role of artists to visitors in interpreting a concept for them and facilitating deeper understanding. NEA could have an interest as a new use of installation art, one that more directly connects with visitors
- The project will help the museum to be more visitor-centric, by focusing on the nature and depth of the visitors' experience. With a deeper experience visitors could be more likely to be a frequent visitor and could boost admission and membership

### **Weaknesses**

- It is difficult to create a project that is both specific but can also apply to other museums and help to inform the field.
- The integration of exhibition space and visitor experience can mean a lot of different things to different people; it is difficult to define. I want to keep it open but still an understandable idea.
- Introducing a collaborative approach is difficult with the politics of artist and museum. There are issues with voice and the artist wanting to create their own art separate from the museum's desires.

### **Opportunities**

- This project will offer a new method of museum exhibition design to the field.
- It will bring the work of an installation artist or a design team to the forefront, making their work potentially more accessible to the visitor.
- The project will find a means of exhibition for an institution without a significant collection.
- I will create an exhibition about the "perceptions of time" that will hopefully expand people's

views and transform the way they view the world. This will hopefully in turn express to the visitors the importance of art to expand our perceptions of the world around us.

## **Threats**

- I'm risking offending the installation artists by separating the artist and the concept being presented. Installation artists typically do not want interpretation and exhibition design to interfere with their work. I am trying to nullify this threat by involving every member at the ground level of project and making it a collaborative process.
- I realize there are many factors involved in my thesis project. I don't want to spend too much time trying to define all the terms and factors and miss the opportunity to get to the thesis question.
- I don't want to spend too much time on trying to create something in which every visitor will leave with a meaningful experience. This is too variable an outcome. Instead I will try to create something so that at least most visitors have an experience to a varying degree and can construct their own meaning from it.

## **Front-End Evaluation**

The audience for my front-end evaluation will be museum exhibition designers. The evaluation will ask if they have ever created an exhibition on an abstract or intangible concept that did not lend itself to direct visualizations, concrete/tangible symbols or natural embodiments. Perhaps the entire exhibition was devoted to the abstract concept or more likely perhaps there were abstract or intangible elements incorporated into an exhibition. If so, what was the subject or what were the more abstract elements? I will ask what challenges the exhibition designers faced when working to create the abstract elements of the exhibition. To the best of their knowledge, how did the visitors respond to the abstract concepts? I will ask what a designer should consider if approaching an abstract concept in a museum setting. Lastly I will ask the exhibition designers if they considered using experiential learning for either the exhibition on the abstract concept or for other exhibitions. I will define experiential learning and ask what form it took in their exhibition.

## **Idea Trap**

Initially "space and experience" were expressed as "transformative design." Transformative Design was defined as when the design of the space joins the exhibition content to further the visitor's

immersion into the content, implying both a transformation of the space and a transformation of the visitor's experience. I felt that this term added too much of a variable to my thesis. It created too many varying connections and associations. I was afraid that defining and clarifying this term would take over too much of my time in the thesis research. I was also afraid that by placing the focus on the visitor's transformation would be too heavy a task and would vary too much from person to person. Instead I want to put the focus on the visitor's experience and understanding of the concept. This can be interpreted in a broader way to include any constructivist response to a situation. Therefore I altered "transformative design" to what I believe I was really getting at: space and experience.

Performance art is another art form that relates to this thesis topic. It also engages with exhibition space and the visitor's experience. Unfortunately I found the addition of the art form would make the research too broad for this project and therefore decided only to consider installation art in this instance.

## Selected Bibliography

### Resources Addressed in Literature Review:

American Museum of Natural History. *Climate Change: the Threat to Life and a New Energy Future*. Nov. 2009. Web. Aug. 2009.

<<http://www.amnh.org/exhibitions/climatechange/?section=introduction>>

Bishop, Claire. *Installation Art: a Critical History*. New York: 2005.

Bitgood, Stephen. "The Role of Simulated Immersion in Exhibition." Jacksonville, AL: 1990.

Csikszentmihalyi, Mihalyi. *The Art of Seeing: An Interpretation of the Aesthetic Encounter*. Mailbu, California: 1990.

Csikszentmihalyi, Mihalyi. *Flow: The Psychology of Optimal Experience*. New York: 1990.

De Oliveira, Nicolas. *Installation Art in the New Millennium: the Empire of the Senses*. London: 2003.

Franklin Institute. *Identity: an Exhibition about You*. Nov. 2009. Web.

< <http://www2.fi.edu/exhibitservices/identity.php>>

Greenblatt, Stephen. "Resonance and Wonder," in *Exhibiting Cultures: The Poetics and Politics of Museum Display*. Ed. Karp, Ivan and Lavine, Steven D. Washington: 1991.

Griffiths, Roy. "Bioquest Woods." Case Study, exhibition at Museum of Life and Science. *ExhibitFiles.org*. 5 Sept. 2008. Web. 11 Aug. 2009.

Hall, Edward. *Beyond Culture*. New York: 1981.

Harvey, Mark L., et al. "The Influence of Museum Exhibit Design on Immersion and Psychological Flow." *Environment and Behavior* 30.5 (1998): 601-627.

Hein, George E. and Mary Alexander. *Museums: Places of Learning*. Washington: American Association of Museums Education Committee, 1998.

Hong Kong Science Museum. *An Exploration of TIME*. Dec. 2009. Web. Feb. 2009.

< <http://hk.science.museum/spexh/eeot/index.html>>

Lightman, Alan. *Einstein's Dreams*. New York: 1993.

Lockwood, Michael. *The Labyrinth of Time: Introducing the Universe*. New York: 2005.

Mau, Bruce and the Institute without Boundaries. *Massive Change: the Exhibition*. Nov. 2009. Web. 2007. < <http://www.massivechange.com/exhibition>>

Mau, Bruce and the Institute without Boundaries. *Massive Change: the Exhibition*. Nov. 2009. Web. 2007. < <http://www.massivechange.com/exhibition>>

- Museum of Science and Industry. *Time*. Dec. 2009. Web. 2002.  
<[http://www.msichicago.org/scrapbook/scrapbook\\_exhibits/time/index.html](http://www.msichicago.org/scrapbook/scrapbook_exhibits/time/index.html)>
- National Museum of American History. *On Time: How American Has Learned to Live by the Clock*. Dec. 2009. Web. 1999 < <http://americanhistory.si.edu/ontime/>>
- Pyne, Lola. "Discovering Rastafari!" Rev. exhibition at Smithsonian National Museum of Natural History. *ExhibitFiles.org*. 21 Jan. 2009. Web. 11 Aug. 2009.
- Redmond-Jones, Beth. "Dazzling + Dangerous." Rev. exhibition at Aquarium of the Pacific. *ExhibitFiles.org*. 12 April, 2007. Web. 11 Aug. 2009.
- Simon, Nina. "The Psychedelic Experience." Rev. of exhibition at Denver Art Museum. *ExhibitFiles.org*. 13 April 2009. Web. 11 Aug. 2009.
- Surowiecki, James. *The Wisdom of Crowds: Why the Many Are Smarter than the Few and How Collective Wisdom Shapes Business, Economies, Societies, and Nations*. New York: 2004.
- Thogersen, Erik. "Mind." Case study of exhibition at Exploratorium. *ExhibitFiles.org*. 24 Sept. 2008. Web. 11 Aug. 2009.
- Traue, James E. "Seducing the Eye: Contemporary Exhibition Design in France and Italy." *Design Issues* 16.2 (2000): 62-74.
- White, Judith. "California Academy of Sciences." Rev. *ExhibitFiles.org*. 21 Jan. 2009. Web. 11 Aug. 2009.
- Whorf, Benjamin Lee. "An American Indian Model of the Universe." *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf*. Ed. John B. Carroll. Cambridge: 1956.
- Victionary. *When Space Meets Art/When Art Meets Space: Spatial, Structural, and Graphic Design for Event and Exhibition*. Hong Kong: 2007.

## Further Resources

- Bernstein, Rachel. "Deborah Aschheim and Lisa Mezzacappa: Earworms." Rev. exhibition at Pasadena Museum of California Art. *ExhibitFiles.org*. 30 Dec. 2008. Web. 11 Aug. 2009.
- Bitgood, Stephen. "Designing Effective Exhibits: Criteria for Success, Exhibit Design Approaches, and Research Strategies." *Visitor Behavior* 9.4 (1994): 4-10.
- Dernie, David. *Exhibition Design*. New York: 2006.
- fratha. "De-Re-/con-Struct(ur)ed\_lang(u)age." Case study, TAGallery. *ExhibitFiles.org*. 22 May 2007. Web. 11 Aug. 2009.
- Johnston, Robert J. "Exogenous Factors and Visitor Behavior: A Regression Analysis of Exhibit Viewing Time." *Environment and Behavior* 30.3 (1998): 322-347.



Lorenc, Jan; Skolnick, Lee; Berger, Craig. *What is Exhibition Design?* United Kingdom: 2007.

Orselli, Paul. "The Animated Artwork of Laura Vaccaro Seeger." Case study of exhibition at Nassau County Museum of Art. *ExhibitFiles.org*. 20 Nov. 2008. Web. 11 Aug. 2009.

Pollock, Wendy. "Looking at The Light." Case study of exhibition at Exploratorium. *ExhibitFiles.org*. 09 May 2007. Web. 11 Aug. 2009.

Pollock, Wendy. "Sun Painting." Rev. of exhibition at Exploratorium. *ExhibitFiles.org*. 06 Nov. 2007. Web. 11 Aug. 2009.

Tuchman, Phyllis. "Seeing Noguchi Anew." *Art in America* 91.12 (2003): 94-95.

White, Judith. "The Discovery Room." Case study of exhibition at Museum of Natural History. *ExhibitFiles.org*. 16 Aug. 2007. Web. 11 Aug. 2009.

Thesis Schedule

Time	Sept and Oct.	Oct. 27	Nov. 25	Dec.	January	February	March	April	May
Phase One: Proposal Development	Group and Individual Meetings	Establish basis of thesis proposal	Finalized Proposal due	Review of proposals	Committee formally asked Jan. 20				
	Research and Conceptual Development			Further Research and Development	Schematic Design	Thesis Development			
Phase Two: Thesis Report					Send out Front End Evaluation	February 5th First Submittal to Committee, Committee returns submittal Feb. 12th	Set Defence		
					Begin Interviews with Thesis Advisors	Finish all interviews and complete report	Begin Thesis Project	Thesis Design/Document	
							March 5th Second Submittal to Committee with completed report and initial plan for exhibition, Committee returns submittal March 12th	Thesis Project Schematic Design	
Phase Three: Thesis Project							Spring Break	April 16th Final submittal to committee with Schematic Design of Thesis Project, Committee returns April 23rd	
								Final Corrections	
								Thesis Defence, TBD based on scheduling with Committee members	Revisions and Final Sign-Off
									Graduation May 20th