

# A Case Study of timeline investigation: the timeline in time

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**Abstract:** This research project seeks to develop an effective presentation format for a large body of images and information related to the history of digital image-making. At a first stage to give a broad picture of its evolving, I decided to design a timeline to demonstrate the voyage of digital image-making. A timeline that seeks to effectively explain its content requires being integrated and multifaceted in form. But lots of timelines are chronological, and encyclopedic. This design study investigates an advanced communication design strategy of a timeline, allowing the timeline manifest the historical development that took place. There is also a need to distinguish between the different areas in which digital imaging has inherited and been applied, such as art, design, medicine, science and technology, and mass culture. The design challenge is to find an appropriate conceptual structure to contain this complex array of material. This will be done principally in graphic form, through the design of a timeline.

Feeding into the object, first, is an associated investigation into the nature of time, adopt the understanding from philosophers and also challenge the conventional idea of designing a timeline. The second investigation is an extended qualitative analysis of the visual form, information architecture and navigation systems of existing timelines by web-based. This analysis investigates how they conventionally represent the concept of historical time and the relation between time and content. And the new possibilities from the contemporary media context were brought into the timeline design?

*Key words: the nature of time, timeline design, communication design*

## 1. Introduction

This design research project seeks to develop an effective presentation format for a large body of images and information related to the history of digital image-making. When people talk about events in history they have a desire to locate and scale the information. We build common measurements and descriptions to communicate our understanding and experience of time to others, and try to rationalize the empirical dimension of our knowledge. A timeline, that seeks to effectively explain its content needs to be integrated and multifaceted in form. Although a timeline approaches its subject chronologically, advanced communication design, possibly in a multimedia context, allows multiple streams of information to be visually juxtaposed, highlighting the diverse frames of reference in which historical developments took place. In the case of the history of digital image-making, it is my aim to relate individual images and key phases in its development to contemporaneous technological, cultural and

social events. As supplying an entirely observation of its evolving, I decided to design a timeline to demonstrate the voyage of digital image-making.

## **2. Method**

This research study investigates an advanced communication design strategy of a timeline, allowing a timeline to manifest the historical developments that took place. For the further development of an ideal timeline, investigating the current status of timelines leads to some questions: What is the nature of time? As an invisible form and concept, how could time be recognized? What is the concept executed in the timelines? How timeline designed in different contexts, how the new context shapes communication design? What kind information can the timeline deliver? These questions produced some suggestions for the creation of an efficient timeline for the development of digital image-making. There is also a need to distinguish between the different areas in which digital imaging has been applied, such as art, design, medicine, technology and science, and mass culture. The design challenge is to find an appropriate structure of timeline to contain this complex array of material as the vehicle of visual communication in art history. An historical review, and qualitative and comparative analysis research to expand the research into two branches: (1). An analysis of the nature of time, I looking back at the history of how scientists and philosophers recognize time asking what is the essentiality of time, which could strengthen the variety and maturity of timeline design? (2). Qualitative analysis research of existing timelines, information architecture and navigation systems of existing web-based timelines. This analysis investigates how they represent the concept of historical time and the relation between time and content.

### **2.1 The nature of time**

Investigate how the idea of time is understood in the work of philosophers and physicists. Their different understandings of the nature of time are tabulated in Figure 1. The ideas of philosophers and physicists on the nature of time are frequently contradictory. From surveying theoretical discussions of the nature of time, five different ways of understanding time emerge. Time is either understood through spatial metaphors, as operating in particular ways, as measurable, as having direction or as being something that is experienced by the human subject [1-5]. (1.) Spatial metaphor of time: Time is understood as motion through space. (2.) Action of time: Time is a continuous flux, a texture of structural relations, an order or sequence of events understood as occurring earlier or later. Motion exists merely as a relation between objects with regards to succession, and the sense of succession requires a relationship of motion between two events. (3.) Scale of time: Time is a sort of container of motion that exists only when a measure exists. A measure is a conscious, rational agent that is capable of imposing order on the fluidity of time. Time is the same everywhere for all things, and it can be infinitely divisible according to our epistemological needs. (4.) Direction of time: The elements of time are ordered with respect to before and after. Time is linear, a real line being used to represent all possible temporal relations between events. (5.) Experience of time: Time is the transcendental subject. It is the conscious ego, which is prior to all experience of temporal entities, and is identifiable with none. It apprehends images, representing a present mental state and the consciousness of past and future. To better understand time, people try to measure and record it, to describe the experience they have come through. However, the human experience of time only extends back to a measured sequence of years counted over several thousands. People especially recognize time as linear and directional, although this is not in the nature of time. People use regulation to measure time and control their experience of daily life and history by the measurements they have made, believing they then control time and the world.

Actually, what we have to deal with is not time but the conscious effect of the human mind. When we seek to measure time we seek to define our cognitive experience of it.



**Fig.1 Different ideas of time as presented in the work of individual philosophers**

## 2.2 Qualitative analysis research

Existing web-based timelines were inspected in regard to focusing to their information architecture and navigation systems. This analysis investigates how they represent the concept of historical time and the relation between time and content. The sample timelines (see Appendix A) represent the general range of approaches found after browsing hundreds of web sites, which were selected manually by their graphic impression and eliminated by their similarity, they were accessed before November 2002. The greatest concentration of timelines today exists on the Internet. An investigation of web-based timelines suggests a diversity of visual and conceptual formats for the representation of time and historical events, also it brings the observation of whether the hypertext context extends the narrative capability into the timeline structure and what they represented in terms of their construction of history. Seven timelines located on web sites were selected and analyzed. Each timeline has been

analyzed according to: information structure, the relation between time sequence and information content, navigation systems and information hierarchies, and the interrelationships between different information links [6-8] (Appendix A). Summarize the observations of analysis: (1.) Information structure: Many timelines carry huge amounts of text-based information. They use to have predetermined pathways through the information and the information content is organized according to fixed relationships. They consider the depth of content more closely than the diverse relationships between events, and rarely consider employing visual strategies to negotiate the information. (2.) Navigation system and information hierarchies: As most sites see time as a line, their information hierarchies and global and local navigation systems tend to organize content, whether simple or complex, in a linear sequence. The micro view of the single time period or event tends to predominate over the macro view of broader historical forces and contexts. The sites deny the capacity of multimedia to provide multiple views of material. In the quest to provide depth of information, these sites have lost sight of the role a timeline in showing the relationship between events and historical dynamics, not just informing the viewer about fragments of history. (3.) The lack of scrupulousness in multimedia: The interactive aspects of the web sites, in combination with the sheer amount of information provided, confuse or alienate the inexperienced user. Many sites demanded too much time to learn their site structure and operation method, interfering with access to information. Without the clear understanding of what's the role and function of timeline, the overdriving of media lost the communication in timeline.

### **3. Results and Discussions**

Generally, those timelines exist on web-site; they present research information of broad or specific interest. Many are also ancillary pages to the content of larger sites, and are accordingly treated very simply in graphic terms, reflecting simple ideas of historical time and events.

This two different analysis freshen up the conventional role of timeline. Firstly, the historical review brings an understanding that time is regarded as an abstract structure of human knowledge and memory. Because of the dominance of epistemology, time is shaped as a measurable linearity, and it is inherited and revised from generation to generation. But when time is taken apart from the dominant metaphor of epistemology, it is a sort of personal experience and consciousness. It is fluxional, visual and interlaced with pieces of memory. The advance timeline design should give flexible understanding of the interrelated and complex character of historical events. Explore complex relationships between content, structure and the nature of time. To understand the nature of historical events, designer needs to build the clues for users, let users move between bodies of information in diverse ways, searching for their own meanings rather than squeeze all the information into a restricted viewpoint. Secondly, the qualitative analysis of Internet timelines has suggested numbers web based timelines designs are restrained by the unified measurement in a linear direction. The scanty understanding of the possibilities in time is difficult to achieve the effective information architecture for a timeline. Timeline is not just a visual measurement; it is a vehicle of information, a methodology of presenting how and what to look and to think. Obviously the role of hyperlinks in multimedia allows the incorporation of layers of additional information without overwhelming the representation of individual historical events and broad historical developments. It should bring much flexibility of contextualize information in to the visual timeline, in terms of taking the new technology only for amassing huge text into the hyperlinks in a timeline. A more sophisticated and complex presentation of information could be achieved if the information is initially identified by images with hyperlinks offering access

to further information. It is the role of the designer to find an effective representation of these aspects of the site to facilitate comprehension.

#### **4. Conclusions and future study**

This case study represents the process of gathering and analyzing a range of material related to the conceptual structure and communication design of timelines. To challenge the limitation of timeline design, would bring the much abundant visual language into conventional linear timeline design, moreover it augments the viewpoint of historical narration. These analyses detect how scanty the spirit of communication design turns into the timeline design. They represent the concept of historical time and the relationship between time and content. Technological developments are dynamic and overlap with complex social, political and economic forces. Designing a timeline with multiple dimensions for practical comprehension of the development of digital image-making needs an appropriate new format in the new media era. Moreover, the analysis data and the statistics are not refinedly explicit. This purpose of the research doesn't aim to announce the rules of designing, but exploring different access to design an ideal timeline for demonstrating the development of digital image-making.

The ideal timeline format offers an established solution to representing historical developments both chronologically and in the context of other historical events. Set the timeline as knowledge net, which with the horizontal dimension to express the main content (digital image-making developing) of the longitude, the vertical dimension to represent the possibility of exploring further information such as social, political and economic forces in latitude. For more effective reciprocal referencing, timelines should support more cross-linked contextual exploration rather than insisting users accept a predetermined, and almost exclusively linear, path through the information. Furthermore, design a practice timeline is my continuing work, which is coming with more investigation between the content and form, in contemporary contextualize communication.

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## Appendix A

Qualitative analysis research sample timeline list:



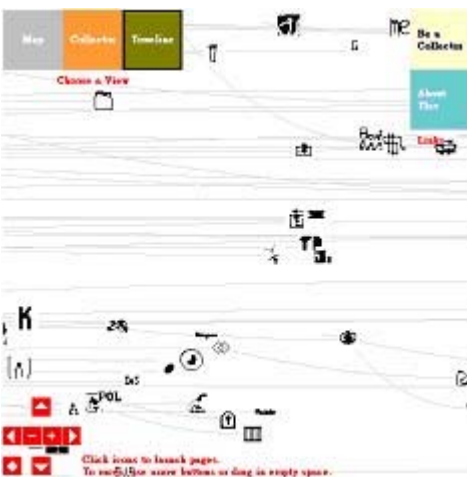
[www.metmuseum.org/toah/splash.htm](http://www.metmuseum.org/toah/splash.htm)



[history.acusd.edu/gen/WW2Timeline](http://history.acusd.edu/gen/WW2Timeline)



[www.chaos1.hypermart.net](http://www.chaos1.hypermart.net)



[wonderwalker.walkerart.org](http://wonderwalker.walkerart.org)



[www.bbc.co.uk/history/state/monarchs\\_leaders/through\\_time/index.shtml](http://www.bbc.co.uk/history/state/monarchs_leaders/through_time/index.shtml)



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