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Visual Narrative: A Theory and Model for Image-Driven Digital Historiography based on a Case Study of China's Boxer Uprising (c. 1900)

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Visual Narrative

A Theory and Model for Image-Driven Digital Historiography
based on a Case Study of China's Boxer Uprising (c. 1900)

Ellen Irene Sebring
August 2016

*Centre for Advanced Inquiry in Integrative Arts (CAiiA)
Planetary Collegium, Faculty of Arts, Plymouth University
Plymouth, Devon, United Kingdom 2013*

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Visual Narrative

A Theory and Model for Image-Driven Digital Historiography
based on a Case Study of China's Boxer Uprising (c. 1900)

by

ELLEN IRENE SEBRING

A thesis submitted to Plymouth University
in partial fulfilment for the degree of

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Planetary Collegium, Faculty of Arts, Plymouth University
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Author's Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Sub-Committee.

Work submitted for this research degree at the Plymouth University has not formed part of any other degree either at Plymouth University or at another establishment.

This research has been conducted under a formal agreement with Plymouth University, for which a joint award will be awarded.

A programme of advanced study was undertaken, which included intensive research sessions three times a year from 2009 through 2012, under the guidance of Professors Roy Ascott, Mike Phillips, and Jane Grant from Plymouth University. I presented my work, with intensive critiques by the professors and my fellow students for each of these nine sessions.

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“Atmosphere: Disorientation in Visual Narrative as a Time Traveler’s Tool,” MutaMorphosis Conference proceedings, Academy of Sciences, Prague (publication to come), 2012.

“World on the Head of a Pin: Visualizing Micro and Macro Points of View in China’s Boxer War of 1900,” *Transcultural Tendencies | Transmedial Transactions*, Ascott, Roy and Yuan, Xiaoying, editors, Volume 20 Numbers 2 & 3, Intellect, Ltd., Bristol, UK, 2012 (229-237).

“Around Me: Granularity through Triangulation and Similar Scenes,” *Technoetic Telos: Art, Myth and Media Part 2*, Volume 30, Number 3, Intellect, Ltd, Bristol, UK, 2012 (69-78).

“Acts of Authoring within a Visual Narrative Field,” *Consciousness Reframed 12: Presence in the Mindfield: Art, Identity and the Technology of Transformation*, Ascott, Roy and Girao, Luis Miguel, editors, Universidade de Aveiro, Portugal, 2011 (235-239).

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Abstract

Visual Narrative

A Theory and Model for Image-Driven Digital Historiography based on a Case Study of China's Boxer Uprising (c. 1900)

by

Ellen Irene Sebring

Digitization that has enabled instant access to vast numbers of archival, historical images, demands a new paradigm for the use of visual imagery in historical research. This thesis proposes a new form of historiography in the digital medium, an image-based narrative mode for authoring and reading history. I propose a digital model for conveying history through the visual record, as an alternative to the printed book. Unlike the quantitative “big data” approach to digital humanities, this research explores visibility itself. In a practice-led approach, the research addresses both aspects of historiography: (1) a method of historical representation; and (2) original historical work on a selected topic. The testbed for historiographic and narrative experiments which led to the model was my case study on the Boxer Uprising in China, c. 1900. While many written histories of the Boxer Uprising exist, I collected a large portion of its extensive visual record for the first time. Sources from around the world, in a variety of media, were assembled into a digital data set that reveals previously unexplored historical themes. A series of visual narratives built in the case study culminated in a proposed “Visual Narrative Field” model. In this model, meaning emerges in the patterns observed between images within a complex visual field. The model vertically integrates three narrative approaches in order to support alternating cognitive modes used to read texts and perceive images. Linear concentration is blended with the non-linear exploration of interactive forms. The model provides historians with a much-needed tool for authoring narrative through relationships between images in a scalable approach. Due to digitization, visual databases are easily assembled, and images are as easily reproduced as written text. The Visual Narrative Field model takes advantage of the characteristics of the newly-digitized visual record, providing a means of authoring visual narrative that can be comprehended without the use of extensive written text. The model thus creates an unprecedented image-based method for performing and presenting historical research.

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Chapter 1: Introduction

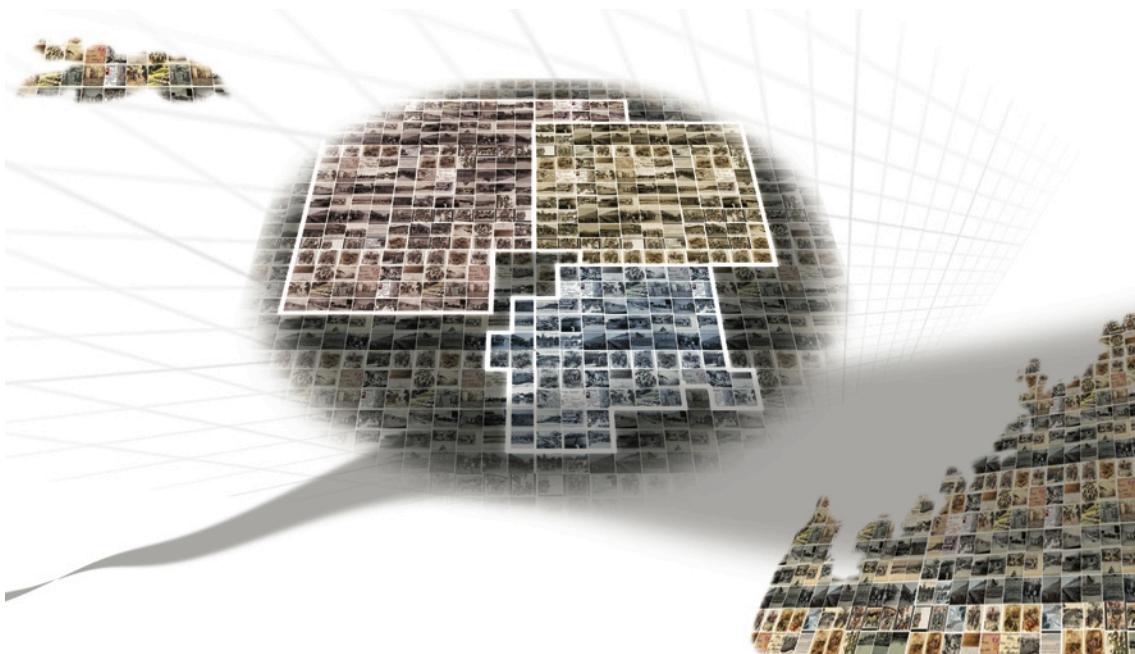
1.1 Research Overview

The Visual Record in a Digital Age

In recent years digitization has produced a vast, newly-accessible historical visual record. This research asks how the newly digitized visual record changes the practice of history, and examines the narrative potential and grammar of images in the digital medium. Can the visual remain visual in a narrative form without being dominated by or translated into text?

The hypothesis that digital images can become a new form of historical narrative is investigated through: (1) research into theories of narrative and history; (2) collaboration with scholars on image-driven scholarship in the Visualizing Cultures project at the Massachusetts Institute of Technology (MIT) from 2002-2015; and (3) experiments in a case study exploring the visual record of the Boxer Uprising in 1900.

Finally, based on this research, a digital historiographic model is proposed that supports authoring and reading with images.



*Figure 1. Envisioning a networked visual data field.
Rendering for the Visual Narrative Field model, Sebring, 2011.*

[sebring_vnf_islands]

Reason for Research Path

With the emergence c. 2006 of “digital humanities” as an academic field, traditional scholarship confronts the radical changes brought by computing. As a visual artist and designer working for a dozen years within the humanities and social sciences, I observed a vast distance between these disciplines, presenting difficulties for a fundamentally interdisciplinary field.

I am motivated to give voice to the visual. Academic discourse in the digital humanities remains dominated by scholars skilled in the written word. The knowledge conveyed through visual images and design appears to be oddly invisible outside of expected venues like museums. The use of visuals and design is perceived as a technical skill that serves content rather than expressing content itself. However, I propose that a historical record that originated as visual expression by people of the past, ought to keep its expressive integrity as it resurfaces in the digital medium today. The exploration of digital visual databases requires both intellectual and sensory attention to reveal their secrets.

Technologists in digital humanities labs tend to build applications envisioned by scholars to extend their research, projects often conceived without knowing the history of interactive design going back to the 1980s. Though both historical scholarship and design require training, skill, and talent, greater convergence can come by speaking up with both words and visuals. Visual perception bypasses language, and gets overlooked as intellectual argument. My work seeks to give visual expression equal footing with verbal expression.

Cathy N. Davidson, Director of the Futures Initiative at City University of New York, points out that dramatic change in technology both disrupts and reveals familiar patterns.

Because we’re in a transitional moment, in the midst of tremendous social and technological change, we’re experiencing the tension between the old and the new, a tension that exposes us to our own patterns of attention, patterns that are usually hidden behind closed eyelids.¹

In order for the digital humanities to be revolutionary, visual artists and technologists need to enter into intellectual discourse along with scholars. Scholars who learn more about visual thinking, and artists who learn more about scholarly thinking can better use new technology to break new ground. This research argues, in text and visual examples, that the digital medium facilitates discourse through non-verbal, visual expression.

¹ Cathy N. Davidson, *Now You See It: How Technology and Brain Science Will Transform Schools and Business for the 21st Century*, (New York, London: Penguin Publishing Group, 2011), 281.

Visual Narrative

The rise of massive visual databases challenges the limits of traditional textual narratives that generally use visual images only as illustrations. In a closed system like linear textual narrative, the author decides the flow of information. However, closed systems risk becoming orphaned by being cut off from the constant flow of information in the digital domain. Open-ended interactive systems like visual databases, easily expand to incorporate the flow of new information. These systems need each other: a database without explanation remains enigmatic, even meaningless to viewers; and a text disconnected from digital networks can quickly become obsolete. The two systems—closed linear narrative, and open informational database—can succeed in the digital realm in a symbiotic relationship. The challenge for digital designs is to integrate these two contrasting narrative forms.

We can use the digital medium to keep the visual visual even as we continue to rely on the text-based formats of the print book era. Digital technology that reproduces images as easily as text makes it possible for the first time to “write” with images in narrative sequences, and distribute them as authored objects.

The visual environment precedes language, which is a human creation. Visual perception must be classified as a type of thinking in order to author with images. To effectively support visual narrative, a digital model must accommodate the shift in cognitive modes between looking and reading, and the structural differences between text-based and image-based navigation. Books usually unfold as mediated linear narratives. Images are perceived all at once and understood through the iterative observation of details, comparisons, connections and, if present, captions.

This research focuses specifically on images from the historical record to explore visual narrative as a digitally-based historiographic form. As an expression of the past, history itself is necessarily poly-linear, combining chronology and chaos. By putting a slice “under the microscope” through virtual visualizations, our understanding of the past can expand to include the knowledge of the senses.

Return of the Visual Record

The digital medium has fundamentally shifted the accessibility of the historical visual record within the massive shift in communication taking place at the turn of the 20th century. Archives, long the historian's domain, become open public sources when digitized. Colligating visual primary sources in a single medium enables us to digitally unify multiple genres—drawings, illustrated newspapers, postcards, photographs, stereographs, and more—to expose new patterns and textures that evoke the “atmosphere” of a previously unseen past. Visual images have shaken off the dust of the archives and can be seen in unprecedented numbers, configurations, and detail on our computer screens. As digital media make visual artifacts accessible, new forms of historical memory are emerging.

Traditional history lies in the domain of the written word and research based on textual documents sources. One reason for this, as historian Peter C. Perdue noted, “I can quote text in text. They are the same medium. But quoting a picture within a text is more difficult.” This narrative art is nevertheless only one way of representing the past, for the past exists beyond the limited ways we access it. Long a subtext to historical research and publishing, images add color to lectures, textbooks, and historical books. With digitization, however, images can appear with enhanced, larger-than-life quality in unlimited numbers.

The meeting of image and text in the digital medium reveals a perceptual clash that challenges the way we think in response to each. The same information in written text is perceived in visual images with a different vocabulary that reveals cognitive shifts in how we perceive and process information. In order to be effective, a new model for researching and publishing history that puts the visual image in a primary narrative role, must recognize a perceptual shift—from word to image—in its design.

This research addresses the potential to see the past through the largely un-mined visual record left behind. Written forms based in the print medium introduce an unnecessary barrier, putting text between readers and images that is no longer needed in the digital medium.

For the first time, readers can look—for as long and as probingly as they like—at visual primary sources. How do the techniques of history need to change to include the visual memory? What narrative forms can communicate in the language of visual images? How can historians bring their analytic and narrative expertise to help make sense of visual databases?

Transformative Effects of the Digital I: Multi-media

The transformative aspects of the digital are considered in the model proposed here: changes in scale—in the number of images and their accessibility; increasing presence and entree to the visual sensorial—the emergence of immersive experience economies; and navigation—the interactive, hypertextual, connective linking nature of the platform.

The mass digitization of historical primary sources colligates diverse media into a single medium. This holds true, of course, for both visual and textual documents sources. History is being influenced by the medium that is increasingly being used for research. The digital emphasizes the quantitative, comparative, and hypertextual aspects of historical research. In the case of visual histories, unifying various types of media in a single platform presents a new view of the past. At the same time, prior to the digital medium image sets have been used comparatively to convey intellectual argument. Theorists like art historian Aby Warburg, who developed a series of photographic posters in the 1920s that are still widely influential today, and others, will be covered in the section on “Precedents.” But, the scale of penetration by images through digital capture, remixing and sharing permeates contemporary global communication, and radically suffuses the daily syntax that defines personal and cultural identity.

My research focuses primarily on output and publishing models. Despite digital research methodologies and sources, written histories published in printed books continue to look largely the same, the basic form remaining stable in the digital age. However, publishing histories in visual form is theoretically and practically made possible by a broadly pervasive digital medium. The cost of image reproduction in the digital medium is insignificant compared to print. Digital images can be scaled: maneuvered, zoomed, and compared in ways that support sustained study, not just by experts and authors, but also by readers. Readers can also peruse digital archives, but, as we will learn, have little success without the guidance of historians in understanding what they are looking at. A shift in the hierarchy of access and the plentitude of accessible materials asks for new forms to fulfill the potential opened up by the technology.

This thesis compares the qualities of images and text in order to postulate the grammar of an image-based narrative form. Of course, cognition is not neatly split between the perception of images and text, or broken in the sensory/perceptual (visual) or the rational/

intellectual (text), but mixes and iterates between these modalities. Just as “nonlinear” visual images appeal to the sensorial while giving factual information, “linear” texts can evoke sensory states that are poetic, experiential, and atmospheric. Historical writing aims to both explain and evoke an experience of the past. Yet for the purposes of this research, finding the differences between text and image helps flush out distinctions needed to formulate image-based narrative.

Navigation in digital media has, from the beginning, assigned readers an exploratory and self-directed role in negotiating the interface. Unlike the book interface, the structure of interactive designs must be invented by designers. In the early days, no standards existed for how story and/or the progression through content in the digital medium should be approached. The “human interface” with the computer might draw on the metaphor of a tennis game as in Atari’s groundbreaking 1972 video game *Pong* or an information hierarchy, as in the *Encyclopedia Britannica*, produced since 1768 (both examples will be discussed in Chapter 4). Interactive media artists create nonlinear narrative architectures that are conveyed virtually through visual metaphors described by “look and feel.” The blockbuster video game, *Myst*, was among the first to blur the lines between gameplay and storytelling with an immersive aesthetic environment that shrouded the users in mystery.”²



Figure 2. Screenshot from video game, Myst.
by Robyn and Rand Miller, Cyan, Inc., published by Brøderbund, 1993.
[myst-5]

² *Myst*, video game designed by Robyn and Rand Miller, developed by Cyan, Inc., published by Brøderbund, released on Macintosh OS, September 24, 1993.

In most interactive designs, navigation and the narrative arc were enmeshed, plotted in flow charts and menus that set the stage for the user experience. Today, User Experience (UX) designers are sought after professionals in an arena where innovation and standardization present a difficult balance as technologies evolve. My own experience goes back to videodisc, CD-ROM, and early web designs at MIT and Botticelli Interactive, Inc. in the 1980s and 1990s. I produced and wrote an interactive documentary, “Star Festival: A Return to Japan,” for MIT (published 1998) that taught the language and culture of Japan using a questing metaphor. With the lead character voiced by Japanese-American actor, George Takei, the CD-ROM framed a non-fiction documentary within a fictional narrative shell. “Star Festival,” which became the first interactive educational curriculum adopted systemwide by the Boston Public Schools, threw users into the middle of a story. They were forced to rely on their observational skills to reconstruct the chain of events. A damaged “PDA” or personal digital assistant—with functionality similar to Apple’s iPad released a more than decade later in 2010—held video, voice memos, photographs, objects, 3D models, a Siri-like AI, and a diary and “field notes” written by a vanished professor who was based on the life of MIT Professor Shigeru Miyagawa.



Figure 3. “Star Festival: A Return to Japan,” Site 10 - Fisherman and Woman Interactive documentary based on experiences of MIT Professor Shigeru Miyagawa, featuring George Takei, produced and written by Ellen Sebring, creative direction and filming by Michael Roper, graphic design by David Gómez-Rosado. CD-ROM, MIT, published 1998.

[sf10]

Among other projects, I wrote and produced an interactive television prototype (“CamKidz,” Botticelli Interactive, 2001) that enhanced creativity in children by posing web-based shared problem-solving that combined each user’s local, physical and virtual landscapes.

I mention these projects to contrast the game-like, user-driven approach of typical interactive media with the academic model of history, in which a single researcher usually shapes the narrative. It is not a question of either/or, but how to combine these divergent models in the digital. Today, the digital environment has more than fulfilled its early promise. In the past, discussions centered on bandwidth and the rate at which fast connections would become the norm. In 2016, digital access was legally declared a public utility in the U.S., comparable to electricity and water. Much of the experimental thinking in interactive media has proved solid, albeit bifurcated into genre such as games, search, entertainment, and a multitude of mobile apps.

The question remains whether digital narratives enter the academic mainstream as scalable, intellectually viable forms of history. The model proposed here is inclusive, embracing images and texts in a symbiotic relationship balanced between the sensory and reasoning cognitive poles within a single application. The model takes cues from precedents in image-driven scholarship created by theorists and artists skilled with both text and images, and brings the thinking of museums—institutions that specialize in presenting the visual—into a digital format.

Transformative Effects of the Digital II: Transnationalism

The kaleidoscopic view often presented by a collection of visual sources supports a trend in history towards transnationalism. At the “Visualizing Asia: Images | History | Digital” Conference at Yale University in 2015, China scholar Peter Perdue discussed transnationalism as a byproduct of visual history. Using the Boxer Uprising visual record as an example, he demonstrated how the image set touched on history across multiple borders and view points on the same incident. As primary source materials, images carry their own local signature and cultural imprint both in genre and skew. Perdue discusses his three-volume study using transnational and interdisciplinary approaches, *Asia Inside Out: Changing Times* (Harvard University Press, 2015), edited in collaboration with anthropologist Helen Tsu, and historian

Eric Tagliacozzo. In an online publication, he describes the difficulties of crossing disciplines and borders.

My discipline, history, finds itself today in a puzzling quandary. Everyone knows that we live in a globalized world, but the history profession stands out among academic disciplines for defining its topics of research and “slots” for new positions almost exclusively according to national boundaries. Historians still need, however, research based on mastery of primary sources in local languages, which is the hallmark of historical study. No universal theory will eliminate the crucial value of grounded ethnographic and archival research. How can scholars devoted to the local and national reach beyond the current limits of the discipline while maintaining the foundation of their craft.³

Perdue aptly portrays the need for specialized expertise within globalized paradigms.

Similarly, images are understood by their origins, need to be rigorously identified and contextualized, and thus are local, grounded, and specific while at the same time being universally “readable” beyond the constraints of language, and in this way global. Any collection of images, whether large or small, corrals intersections between maker and subject, past and present, point of origin and mass circulation, and a host of contradictions that require history’s investigative protocol. Perdue’s multivolume release brings together a variety of authors and topics, but the visual has yet to enter the discussion in a serious way. The virtual terrain may offer a future for transnational visual discussion. The rise of transnational history, described by historian David Thelen as the exploration of “how people and ideas and institutions and culture moved above, below, through, and around, as well as within, the nation-state, to investigate how well national borders contained or explained how people experienced history”⁴ breaks old paradigms that could help the visual find footing within scholarship.

Proposing a Digital Model

In a practice-led approach, this thesis develops both aspects of historiography: a method of historical representation and a body of original historical work on a selected topic. For the former, a digital model replaces the book to convey history through the visual record. For the later, the case study opens a window on the Boxer Uprising in China, c. 1900. While many written histories of the Boxer Uprising exist, its extensive visual record appears here for the first

³ Ibid.

⁴ David Thelen, “The Nation and Beyond: Transnational Perspectives on United States History,” *The Journal of American History*, Vol. 86, No. 3, *The Nation and Beyond: Transnational Perspectives on United States History Special Issue*. (Bloomington, IN: Organization of American Historians, December, 1999), 967.

time. Sources from around the world in a wide variety of media commingle in a digital data set rich with previously unexplored historical themes.

A series of experiments in the case study culminate in a proposed “Visual Narrative Field” (VNF) model. In this model, meaning emerges in patterns observed between images within a complex visual field. The model gives historians the tools for authoring narrative relationships between images. Choices include single images with zoom, juxtapositions, series, illustrations within written essays, and sortable visual databases. This finite set of interactions makes the model technically feasible and scalable, qualities necessary for a new media form to spread. Readers become active explorers in a visually immersive environment. The rarified world of primary sources, usually open only to experts, becomes accessible to the reader. Readers move into an observational perceptual mode, facilitated by the model’s design supports active looking, in which images align to illuminate historical themes and provocative sub-texts. The qualities of narrative embedded within a visual data field are experiential, immersive, and freed from the grammatical structure of text-based narrative in which sentences unfold linearly with a period at the end, sustain a state of complexity without the need for resolution.

Theories of visual thinking inform the software model, imparting knowledge that is often intangible and sensory in nature. Theories of history address the non-traditional, non-academic ways of embodying the past that have proliferated with the rise of digital media. Unlike the quantitative “big data” approach to digital humanities, this research explores visuality itself as an image-based narrative mode for authoring and reading history. The resurfacing of the visual record in a tidal wave of digitization changes the way historians “do history.” The ability to reproduce images as easily as written texts means that pictures effectively become texts.

Authority for Study

Authority for the study comes from my expertise in new media theory and design, derived from: (1) over a decade of collaboration with historians on the Visualizing Cultures project⁵ at the Massachusetts Institute of Technology; (2) conceiving and producing large-scale

⁵ The Visualizing Cultures project at the Massachusetts Institute of Technology, Research Associate and Creative Director, 2002-2014. visualizingcultures.mit.edu

projects as president of a new media company, Botticelli Interactive⁶; and (3) my research and artwork as a graduate and Fellow at MIT's Center for Advanced Visual Studies, founded in 1967 as the first institution to focus on the integration of art, science, and technology.

In addition, I conducted interviews with historians who collaborated with MIT Visualizing Cultures to better understand the needs and approaches to history in the digital medium. Sixteen historians, art historians, archivists, and curators discussed their interactions with digital visual sources during research, authoring, and teaching.

Key Questions

The change in expository medium, from print to digital, brings questions about historiographic forms and the language of digital images:

- (1) If visual images in the digital medium become the elements of a visual language, what is its grammar?
- (2) What narrative mode does the author use when composing a visual text?
- (3) Can image-based narrative meet the basic standards of comprehension and the rigorous standards of historical research?
- (4) Can historical representations convey sensory visual knowledge of the past?
- (5) Can visual historical representations enter the larger discourse in the field of history?
- (6) Is new knowledge of the past contained in complex visual data fields?
- (7) Can the semantic web extend a connected and constantly changing visual narrative framework?
- (8) Can a digital model offer a scalable solution as an image-driven historiographic form?

⁶ Center for Advanced Visual Studies, MIT, SMVisS and Research Fellow, 1987-1992; and interactive documentary television and educational applications with Botticelli Interactive, Inc., President, 1997-2002.

1.2 Thesis Overview

Document Structure

The thesis develops a theory of visual narrative as it is uniquely possible in the digital medium, and uses it, along with experiments in a case study on the Boxer Uprising, to postulate a historiographic model based on the digital visual record.

- (1) Chapter 1 introduces the problem and approach.
- (2) Chapter 2 surveys the literature and theorizes digital, visual narrative as a form of history.
- (3) Chapter 3 presents the Visualizing Cultures project at MIT as background research.
- (4) Chapter 4 proposes a digital model for authoring and reading visual texts based on my theory of visual narrative described in Chapter 2.
- (5) Chapter 5 presents three examples of visual history from my case study on the Boxer Uprising that show different aspects of visual narrative.
- (6) Chapter 6 presents a summary and conclusion.

Chapter 2 Theorizing the Visual Narrative Field

Chapter 2 investigates the literature and theory of historical representation and narratology, towards the formulation of (1) a grammatical structure for visual narrative, and (2) its usefulness as an historiographic method.

Theories of history argue that historical representation can include far more evidence of the past than traditional academic forms allow. I examine how proven historical methodologies can be preserved in a digital landscape.

Narrative strategies are explored that connect the polarized cognitive modes of reading and looking. Perceptual learning studies describe the nature of optical knowledge. Narratology theory expands narrative forms beyond the written text as “transmedial narratology.” Narratological analysis of historical writing discusses the current forms in use, and offers ideas such as colligation as sources for positing the syntax of narrative relationships within sets of diverse visual sources, described by Lev Manovich as “network relations” in his recent article, “Data Science and Digital Art History,” in the new journal, *Digital Art History*.⁷

⁷ Lev Manovich, “Data Science and Digital Art History,” *International Journal for Digital Art History*, Issue 1, (Munich: Graphentis Verlag e.K., June, 2015), 15. http://www.dah-journal.org/issue_01.html Accessed October 2015.

Quantitative approaches to qualitative research using visual images pushes boundaries, further necessitating a working description of visual narrative. While linear, rational, intellectual cognition dominates scholarly discourse, nonlinear, observational, sensory cognition can also create knowledge.

The chapter ends with “Precedents,” showing examples of visual narrative from the past. Going back to 17th century collection methodology, these examples show how creators choreograph relationships between visual images to give narrative meaning.

Chapter 3 Background Research: MIT Visualizing Cultures

Chapter 3 covers my research as Creative Director of the Visualizing Cultures project at the Massachusetts Institute of Technology. The discoveries and limitations I encountered in this role inspired me to consider the “next step” through the current research.

Over the course of the project I worked with many historians to create Visualizing Cultures units that mined the visual record, to form a visual history of Japan and China in the early modern period. Founded in 2002 by Pulitzer Prize-winning historian John W. Dower and linguistics professor Shigeru Miyagawa, Visualizing Cultures pioneered image-driven scholarship on the web, publishing on MIT’s OpenCourseWare initiative. Today, the website is a respected resource widely used for teaching and research, and as a motivator in the movement towards digital image-driven scholarship.

My design for the Visualizing Cultures website was purposely conservative in order to be scalable, and connected to current scholarship. The fixed, hard-coded format mirrors traditional essays, but takes a then radical image-driven approach. Most historians, with the exception of art historians, are not trained in the use of visual images. In my work with the nineteen authors invited to create the more than forty units on the website, I discovered that these accomplished historians were daunted when pictures were elevated to a lead role. Allowing images to drive scholarship disrupted their research patterns, and I observed the limitations of both the tools and methodologies for working with images.

Visualizing Cultures collaborated with multiple institutions to negotiate use of their visual images for academic scholarship. Changing approaches towards disseminating their images over the course of the project also contributed to my understanding of the promise and

pitfalls of visual databases. I worked with many different types of historical images, which revealed patterns in how we come to understand them as visual data in digital sets.

The 2006 Visualizing Cultures controversy is discussed, and the ramifications of putting controversial and offensive historical images in an open environment like the web. The protection that linear forms like books give authors disappears when content can be ripped away from any surrounding text and circulated across the globe.

Chapter 4 Modeling the Visual Narrative Field

The model I propose for my case study on the Boxer Uprising is a historical representation that conveys these events in China visually using images from the historical record. The model is an example of visual historiography that formulates a “next step” in the practice of digital history, and incorporates a decade of collaboration with historians on the MIT Visualizing Cultures project.

The goal here is to build a conceptual and practical foundation for a software model, an interface design that facilitates the non-linear syntax of visual sources. I propose a model that has a 3-dimensional integration, approaching what David J. Staley calls “the four-dimensional complexity of the past” in his 2003 study of “prose into image,” *Computers, Visualization and History: How New Technology Will Transform Our Understanding of the Past*:

Because the historian must “line everything up” in a written account, the order is an important choice, as significant as the choice of words. Even if we deny that the linear procession of words implies linear causal connections, with each sentence we write we engage in what Arnheim describes as cutting one-dimensional paths across the four-dimensional complexity of the past.⁸

Digitization of images transmits the images directly to the viewers without translation to text. But is that history? Can a model of historical representation be developed in which the visual images become the building blocks of a visual language that communicates with precision and scholarly depth? Digital tools facilitate the building of visual models, both (1) in response to theoretical ideas as tests of the hypotheses, and (2) as experiments in order to observe and test the attributes of visual historiography.

On the web, a pervasive example of a visually rich digital platform, users generally respond to images as: illustrations to texts; visual slide shows; icons that elicit clicks and

⁸ David J. Staley, *Computers, Visualization and History: How New Technology Will Transform Our Understanding of the Past*, History, Humanities, and New Technology Series, (Armonk, NY, London: M.E. Sharpe, 2003), 29.

choices; and advertisements. Interactions skim the surface at lightning speed as images are used for ease of recognition and to trigger the intangible, emotive messages of desire used to stimulate commerce. Users interact, but often superficially, as spectators.

To create historical representations with the depth of written texts, a more complex level of interaction is needed. The user must slow down to contemplate and explore, in order to cultivate a deeper level of looking that approaches an understanding of the complex historical past. Visual narrative design needs to recognize and encourage embodied visual thinking and facilitate interactive gestures that support looking as a form of deep inquiry.

Constructed narratives within the VNF visual field-based model make visual databases the spine of a “neo” book. Instead of elaborately designed and hard-coded graphic layouts, image sets should, in the future, self-assemble in response to data calls input by both author and reader. Blending the expertise and authoring skills of historians with user-driven choice connects readers with visual sources in a textural field model that redefines the nature of narrativity itself.

In a shift away from the hypothesis, experiment-driven inquiry associated with the scientific method, observation and comparison methodology has reemerged in response to data rich media. Just as DNA research depends on patterns within large data sets, research using visual primary sources unified within a digital data field suggests a new type of historical inquiry and narrative.

The VNF model for visual narrative is field based, that is, narrative is embedded within a fluid field of connections. Medial attributes shift according to genre—photograph, stereograph, illustrated news, cartoon, map—to trigger varied sensory responses. Quantitative methodologies, such as machine-based image recognition, intersect with the qualitative research used in much of the humanities and social sciences, in particular, in observing images. In the future, data-driven narrative will redefine, augment, and expand static forms with fluid visual narrative interactions. The evolving semantic web and connective database intelligence will facilitate a narrative model yet to be defined.

Chapter 5 The Case Study: The Boxer Uprising, China 1900

Looking back one hundred years to the turn of the 19th century, a small but far-reaching historical event in northern China was documented during a period of burgeoning media technology and proliferation that mirrors the communications revolution of today. The “Boxer Uprising” came to a head over the summer months of 1900, culminating in the famous 55-day “siege of Peking” (Beijing) in which foreigners and Chinese Christians defended the legation quarter against attacks by Boxers and Qing dynasty troops. The siege precipitated a brief war between China’s Imperial government and an unprecedented alliance of eight international powers. These Allies marched into China to free the besieged legations, and to repress the anti-foreign, anti-Christian risings of Boxer and other peasant groups.

As the drama unfolded, Boxer-related events were sensationalized around the globe in a wide array of visual media. Cross-cultural comparisons make the Boxer Uprising visual record an ideal historiographic test bed. For the first time, digitization aggregates these historical artifacts into a single, easily accessible format with the potential to reveal new themes and story lines in the visual patterns. In a heuristic approach, this visual test bed informed my theory and working model of visual narrative, showing that:

- (1) visual narrativity behaves more like a field-based model than a linear model, and
- (2) a state of unresolved complexity is the normative state of a data field—and therein lies its power.

While the Boxer Uprising has received extensive coverage in written histories over the past century, its visual record had yet to be compiled. Having collected over 2400 Boxer-related images originating between 1899 and 1901, I was able to look for historical narratives in the visual evidence left behind by those who were there. The visual record gathered in a digital fabric conflated time, place, and events to present a new representation of this history. Patterns in the visual database suggested unusual themes, connections, and emphases not typically prominent in the written histories.

The attributes of the digital data field helped define the qualities of visual narrativity and historical representation. For example, the relational pathways that stood out as repeated motifs in the data set could be viewed as the “connectome” to use a brain science term—a sort of Boxer Uprising identity—within the turn-or-the-century DNA represented by the data set.

Freed from a linguistic structure that requires resolution, grammatical language and the period at the end of the sentence, as well as the mono-linear point of view of the author, visual historical representation sustains an unusual state of unresolved complexity. Lifting the constraints of linear written history poses new challenges in formulating image-based history.

The Boxer Uprising at the turn of the 20th century has been written about from many points of view. Each author's unique perspective filters these histories, touching on internal and global politics; loot and greed; technical and cultural communication problems; and military imbalances. The modern army assembled by the coalition of world powers took on the violent anti-foreign, anti-Christian movement spreading across the poverty-stricken northern provinces. War came when the "Boxers"—so named for their martial arts practice—were joined by official Qing government troops in the fight to rid China of foreign intrusion. The naval bombardment of the port at Daku was an irrevocable step in launching this small war—one of Rudyard Kipling's "savage wars of peace"⁹ that, following a fierce battle to take Tianjin, might be reduced to a march some 75 miles in blistering heat to China's capital, Beijing. The visual record offers a kaleidoscopic global perspective on this much-debated conflict.

Chapter 6 Outcomes

This research has three outcomes.

- (1) A theory of visual narrative is formulated that questions the written text—books, essays—fundamental to historians' methodology as the optimum format for historical representations based on the visual record in the digital medium. Intangible forms of memory, sensory, affective and visual thinking underpin a theory of history that embraces a wider definition of historical knowledge. Perhaps the most important contribution that visual images make to historical representation is that as non-verbal texts they embody complexity as an unresolved state. In other words, historical models based on visual imagery, innately spatial and non-linear, may in some ways more accurately convey the complexity of historical events than written texts that are structurally linear. The observational methodology prevalent in 16th and 17th-century collections science that looks for connections within visual data makes a resurgence in today's digital archives where meaning is derived from patterns in a complex data field.
- (2) Ideas for a new historiographic model are derived and tested within the case study on the Boxer Uprising, ca. 1900. An extensive visual data set has been collected that offers an as yet unseen account of these historical events. A visual narrative approach yields new historical insights in both technical and qualitative ways.
- (3) A digital model for visual historiography is proposed. Based on experiments in the case study as well as a research foundation of over

⁹ Rudyard Kipling, "The White Man's Burden." *McClure's Magazine*, (New York: The S. S. McClure Co., February, 1899). <http://legacy.fordham.edu/halsall/mod/kipling.asp> Accessed October 2015.

twelve years within the Visualizing Cultures project at the Massachusetts Institute of Technology, collaborating with historians to create online units using the visual record, a new digital model is suggested for historical visual narrative.

Chapter 2: Theorizing a Visual Narrative Field

2.1 Chapter Overview

This chapter builds a theoretical foundation for visual narrative as digital historiography. History has traditionally focused on the written text, both for source documents, and output as historical representations. With digitization, pictures can become the foundation of a new historiographic model based on the visual record. My research investigates the narrative interactions of images in the digital environment, with the goal of raising the status of images in historical research to grammatical elements that convey concepts, narrative, and argument along with, but not dominated by, written texts.

Theories that address history, visual thinking, affective knowledge, archives and databases, and transmedial narratology—the idea of media specific narrative structures—help to formulate a language of images. Together, they undergird the development of an image-based historiography and a proposed software.

This chapter is organized into five sections. Part one broadens the definition of historical representation to include visual history. Parts two through four discuss the three stages of interaction with visual sources: (1) immersion, (2) observation, and (3) authoring; and compare interactions in physical archives with digital databases. Part five looks at historical knowledge unique to a visual approach.

2.2 History is not the Past

Expanding Definitions of Historical Representation: the Past-History Divide

History is not the past. Here, I paraphrase theorist Keith Jenkins in his 1991 book, *Rethinking History*, "...history is a discourse about, but categorically different from, the past." Jenkins makes a "past-history distinction" critical to expanding what we think of as history—"that which has been written/recorded about the past"—and the past he defines as, "all that has gone on before everywhere."¹⁰

...the past and history are not stitched into each other such that only one historical reading of the past is absolutely necessary. The past and history float free of each other, they are ages and miles apart.¹¹

The discipline of history has come to represent the past with methodologies honed over hundreds of years, primarily centered around printed books researched and written by academically-trained historians. But the past includes everything that happened in the "before now," available to all who might travel back to capture it, as Jenkins characterizes it. The limitless past is open for interpretation, with an inescapable subjectivity in its historicization:

Nobody has a patent on 'the past'; it can be used or ignored by everyone. And why is this? Because the so-called past (the before now) doesn't exist 'meaningfully' prior to the efforts of historians to impose upon it a structure or form; 'the before now' is utterly shapeless and knows of no significance of its own either in terms of its whole or its parts before it is 'figured out' by us. Consequently, no historian or anyone else acting as if they were a historian ever returns from his or her trip to 'the past' without precisely the historicisation they wanted to get; no one ever comes back surprised or empty-handed from that destination.¹²

Historians have relied on a written model for disseminating history to the point that history and its written form have become indistinguishable. Text has become synonymous with history to the extent that without text, history would cease to exist.

Prying apart the identification of the past with its historical description opens up space for alternate forms of historical representation that include the visual image primary source. Rather than being described second-hand in the historian's prose, images can be reproduced digitally, to be seen and studied directly by readers.

¹⁰ Keith Jenkins, *Rethinking History* (London and New York: Routledge, 1991), 6.

¹¹ *Ibid.*, 5.

¹² Keith Jenkins, *Refiguring History: New Thoughts On an Old Discipline* (London and New York: Routledge, 2003), 11.

Extensive theoretical discourse on the ontology and linguistics of text, context, and meaning in historical narrative goes far beyond the scope of this research, which merely makes space for alternative, non-linguistic historiographic forms in response to the digital turn.

David J. Staley, a historian researching the impacts of computing on his field, points at an unquestioning acceptance of text in what should instead be a choice of mediums or, in his phrase, a choice in “information design.” Staley argues that, “Historians will not be able to think about the visualization of history in digital form until they carefully rethink this axiomatic core of our discipline.”¹³

As a rule, historians rarely examine the role of the idiom in our way of thinking. In a few instances when we do inquire about the relationship between writing and history, we tend to ask questions like “What is the best way to write?” or “What should we write about?” Only a very few ask “What are the effects of writing on history?” or the even more radical question “Should we write at all?”¹⁴

The dominance of written texts in historical research can only be challenged with the rise of the visual record newly accessible in the digital medium. With digital reproduction, written narratives needlessly distance visual primary sources from readers. Written history has also evolved as an aesthetic art practiced within the academy. Raphael Samuel, a British twentieth century historian and leftist intellectual, argues that a top-down model of professional historical practice artificially limits knowledge of the past. “Academic papers are addressed to a relatively narrow circle of fellow-practitioners,”¹⁵ he writes in *Theatres of Memory*, published in 1994. “All of this involves a very hierarchical view of the constitution of knowledge, and a very restricted one.” Samuel recasts history as historical memory, embracing non-academic sources such as oral traditions, children’s theatricals, and photography in a “history from below.”

In an increasingly image-conscious society, and one in which children are visually literate from a very early age, the learned journals stand out as one of the very few forms of publication on which historical illustration has yet to leave its mark. Except for art historians, pictures do not count as a source, nor is there any call for seminars and lectures to be turned into slide-shows. For some, such as those who condemn the open-air museums and theme parks, the visual seems to be disqualified because of its association with the popular. Easy on the eye but undemanding, it is also thought of as being in some sort morally dubious – a kind of pedagogic equivalent to the fling.¹⁶

¹³ Ibid., 16.

¹⁴ Staley, *Computers, Visualization and History*, 16.

¹⁵ Raphael Samuel, *Theatres of Memory: Past and Present in Contemporary Culture* (London, New York: Verso, 2012, originally published in 1994), 3-5.

¹⁶ Ibid., 38.

The idea that history includes all artifacts from the past challenges the rigor of the discipline, when many come without proper identification. “Images,” Samuel writes, “came to be chosen – not least by historians themselves...for their aura of ‘pastness’.”¹⁷ While period photography convinces by its appearance of age, the absence of identifying text renders family portraits, so dear to those who made them, almost meaningless to historical practice that depends on verification through dates, subjects, locations, creators, and so forth. Yet, by collecting multiple anonymous images, they become historically insightful, even without text, through a kind of image-to-image verification. This comparative methodology is precisely the premise of a 2015 exhibit, “Unfinished Stories,” at Boston’s Museum of Fine Arts (MFA), discussed in Chapter 4. Anonymous photographs, carefully curated, convey information about subjects, cultural norms, environment, and photographic technologies.

In all its complexities and semiotic challenges, the digitized visual record remains without a historiographic position in a field that could be represented by the formula:

text = history ≠ past.

Digitality

As history moves into the digital age, not only new sources emerge, but a platform shift occurs. Transferred from archives to bits, visual images gain “digitality,” a concept used in media studies to mean the condition of living within digital culture, first described in MIT Media Lab founder Nicholas Negroponte’s 1995 book, *Being Digital*. Digital gestures, such as mid-sentence micro searches, connecting similar data, and skimming the ever-present multi-layered environment, redefine the context of the original image and how it is experienced.

Ephemeral images are rarely static once lifted out of archival storage and certainly in their original lives were seen, transported, transferred, copied, written on, parodied, and perused in a variety of forms. Movement continues in the digital medium following virtual rhetoric. Visual culture specialist Patricia Rodden Zimmermann writes, “digitality presents new ways for historians to consider visualizations as important as writing” and poses questions around computer-based scholarship:

Yet, for historians and archivists, digital nodes and networks leave important historiographic questions unanswered and untheorized even as the digital presents new opportunities to imagine the form and function of visual culture

¹⁷ Ibid., 322.

history. What is the nature of evidence? What is an artifact? What is the relationship between primary and secondary evidence? What models can be deployed to generate powerful explanatory models? What models of continuity and contiguity, linearity and spatiality can help to explain events and data in meaningful ways?¹⁸

Digitality mirrors post-modern descriptors of history in conveying the intangibility of both the digital state and visual memory. Theory of history is searching beyond its textual foundations, or “verbal turn,” to find expression within visual culture, or the “visual turn.” The linguistic structure and fixed grammar of textual media does not allow for the flexible, modular structure characteristic of visual media.

The return of the visual primary source through the countless artifacts being digitized for the first time forces not only questions of form—how images communicate—but also, of content—how visual images redefine historical memory. Visual culture studies emerged in the 1970s to include visual ephemera, the “throw away” images long ignored by art history concerned with high art and artists. Newspaper illustrations, stereographs, posters, postcards, and other mass media make the most useful digital sources for historical research.

Visual culture pioneers John Berger, Roland Barthes, and György Kepes examined the image in relationship to culture and technology, presaging emerging visual languages enabled by digital technology today. In the *Journal of Visual Culture*, historian Martin Jay comments on the changing role of images that “long served as illustrations of arguments made discursively” and the need to examine them “in their own terms”:

Although images of all kinds have long served as illustrations of arguments made discursively, the growth of visual culture as a field has allowed them to be examined more in their own terms as complex figural artifacts or the stimulants to visual experiences. Insofar as we live in a culture whose technological advances abet the production and dissemination of such images at a hitherto unimagined level, it is necessary to focus on how they work and what they do...¹⁹

Pictures represent intangible knowledge, filling an evidentiary role otherwise missing from the historical record. “Images can bear witness to what is not put into words,”²⁰ Peter Burke wrote in his 2001 book, *Eyewitnessing: The Uses of Images as Historical Evidence*:

¹⁸ Patricia Rodden Zimmermann, “Computers, Visualization, and History: How New Technology Will Transform Our Understanding of the Past” (review), *The Moving Image*, Volume 4, Number 2, (Minneapolis, Minnesota: University of Minnesota Press, Fall 2004), 141-145.

¹⁹ Martin Jay, “That Visual Turn: The Advent of Visual Cultures,” *Journal of Visual Culture* Volume 1, (London, Thousand Oaks, California, and New Delhi: SAGE Publications, 2002), 87-92.

²⁰ Peter Burke, *Eyewitnessing: The Uses of Images as Historical Evidence*, Picturing History, (Ithaca: Cornell University Press, 2001). 31.

...evidence of phenomena that many historians want to study: mentalities, ideologies and identities....the testimony of images is essential for historians of mentalities, because an image is necessarily explicit on issues that may be evaded more easily in texts.²¹

That “explicit” power, especially preserved in disturbing historical images, can sear present-day viewers who react to images instantaneously and viscerally. Viewers can also be blinded by their own reactions that include misinterpretations of what they are looking at.

Digital databases that openly circulate online democratize knowledge. Burke writes:

Another major trend is the democratization of knowledge, especially in the sense of its increasing accessibility to many people in many places...a digital archive has the possibility of turning into a ‘people’s archive’, an ‘archive without walls’ that provides an information service for the general public.²²

Interdisciplinary Convergence

Traditional written histories are linguistically linear, and until recently, were literally bound in a fixed sequence. In the digital environment, interactivity, open access, and primary source images complicate authoring without the spine of the book to hold a forward flow intact between the covers. Authors lose control over exposition, and the democratization of knowledge in the free-flow of raw images removes the images from much-needed context created by the author. Emotional responses may overcome thoughtful contemplation without the author’s lead. Interdisciplinary collaboration between authors and designers critically informs the move into digital modalities where interactivity and visual design together reinvent the narrative formerly controlled by text.

Likewise, the theory and practice of history have greater need for each other in the no longer hypothetical production of history in a new medium. The written model of history now shares the field of historical representation with genres that have the potential of restoring the diverse sensibilities of the past to historical argument. In emerging sensory models of history, visual images can be seen first hand by readers in raw databases, thematic sequences, and authored narratives.

Theorist Beverley Southgate, who examines the “territory that lies between history and the visual arts,” suggests that historical narrative imposes structure while truth is more likely held in the shadows of what can’t be clearly seen. “Through the fog that constitutes the past,

²¹ Ibid., 30.

²² Peter Burke, *A Social History of Knowledge, II: From the Encyclopaedia to Wikipedia*, (Cambridge, UK: Polity Press, 2012), 271.

then, we may descry clear outlines of people and events.” Clarity, he continues, is, “acquired only by ignoring or turning a blind eye to all the fuzzily blurred context from which our own selection is derived.”²³

The academic historical community is beginning to recognize image-driven scholarship. However, with a long tradition of text-based methodologies, change is slow. Visual knowledge challenges core practices in the narrative art of history, and the academic training of historians that follows rigid and exacting protocols designed to produce credible results in the field.

Theorists have described the potential of non-verbal history and historiographic forms that legitimize the sensory information of archives, and scholars increasingly acknowledge the validity of sensory “experience” in historical practice. Visual digital historiography implies a change in genre in historical representation, putting visuals in the foreground as the primary narrative elements. This change in genre has been discussed by theorists, but not tested in implementation. Theory and practice both matter because digital methodologies are necessarily trans-disciplinary, and move traditional approaches into untested terrain.

Boxer Uprising History: Experience and Myth

The events comprising the case study for this research, the Boxer Uprising, have undergone consistent reinterpretation over time. In the preface to *The Origins of the Boxer Uprising*, Joseph W. Esherick comments on the enduring fascination and changing interpretations of the Boxer episode:

There are remarkable divergences in scholarly opinion on the Boxers. In fact, there is no major incident in China's modern history on which the range of professional interpretation is as great.²⁴

Histories change as new sources are uncovered. For Esherick, oral histories and a “flood of publications”²⁵ in Shandong archives shed new light on the Boxers. Another prominent Boxer scholar, Paul Cohen, partitioned his book, *History in Three Keys*, into different types of historical narrative: “Boxers as Event,” the historical narrative; “Boxers as Experience,” the past as it was experienced by participants; and “Boxers as Myth,” the past as it has been mythologized over time. He thus acknowledged different types of memory and interactions

²³ Beverley Southgate, “History and Art: Some Meeting Points,” *Rethinking History: The Journal of Theory and Practice*, 15:4, (London: Routledge Online, 2011), 515.

²⁴ Joseph W. Esherick, *The Origins of the Boxer Uprising*, (Berkeley, Los Angeles, London: University of California Press, 1987), xiv.

²⁵ *Ibid.*, xv.

between the present and the past. Histories, he writes, are rewritten by “each generation of historians.”

Although we have rules of evidence to help keep us honest, a large subjective element necessarily enters into all historical scholarship. Which facts we choose and which meanings we invest them with are deeply influenced by the questions we ask and the assumptions we operate under, and these questions and assumptions, in turn, reflect the concerns that are uppermost in our minds at any given moment. As times change and concerns shift, the questions and assumptions reflecting them also change. Thus, it is often said, each generation of historians must rewrite the history written by the preceding generation.²⁶

Incorporating multiple visions of the past puts pressure on the reliable framework of this old discipline. That history reinvents itself in response to the technologies and mores of its time, by asking new questions, responding to new sources, and trying out new narrative approaches, keeps the genre relevant and alive. History’s response to the data deluge, digitality, and the “visual turn” reveals much about scholarship moving online.

I suggest that in relation to the past, the term “digitality” means more than being embedded within an interactive ontology, but describes a shared ephemeral fabric of digital sources transposed from their original states. Perhaps history encoded as quantitative data gains a dark core that adds a complexity of interconnections to the ways we describe the past.

²⁶ Paul A. Cohen, *Discovering History in China: American Historical Writing on the Recent Chinese Past* (New York: Columbia University Press, 2010), Preface (unnumbered page).

2.3 Immersion: From Archive to Database

Stages of Research

The following three sections investigate how research patterns acclimate to the digital environment when pictures are the primary sources and focus. The historian's practice is divided into three stages:

- (1) immersion in sources;
- (2) observation of sources;
- (3) authoring with sources.

Key questions include:

- (1) How do the traditional methodologies change in the digital medium?
- (2) How do visual image primary sources change the historical analysis and semantic approach?

The immersion stage draws on multiple lines of theory related to: archival research; affective knowledge; optical perception; big data; the gestures of looking; immersive disorientation; and cultivating at a state of "ignorance" as a perceptual path.

Historians describe powerful archival experiences anecdotally, but seldom include them in their historical narratives. Though not often acknowledged by historians in their professional work, the tactile connection with objects in the archives carries emotional overtones. In 1931, Historian Herbert Butterfield described a passionate relationship with sources as "the romance of history" that was critical in forging a "genuine relationship with the actual."

...the historian's passion for manuscripts and sources is not the desire to confirm facts and dates or to correct occasional points of error in the historical story, but the desire to bring himself into genuine relationship with the actual, with all the particularities of chance and change...It is a study of the complexity that underlies any generalisation that we can make.²⁷

In digital historiography, the immersive experiences of the archive are suddenly accessible to the reader through primary source images and databases.

The Work of Art in an Age of Digital Reproduction

Historical research requires "Sitzfleisch" according to China scholar Peter C. Perdue, that is, the ability to endure long periods of sedentary research and attention to detail in the

²⁷ Herbert Butterfield, *The Whig Interpretation of History*, (New York: W. W. Norton & Company, 1965, first published 1931), 41.

process of annotating, transcribing, and cataloging boxes lifted out of storage. Physical endurance while immersed in sources forges a heightened bond to the subject. Though devoid of dust, heft, fingerprints, age, and uniqueness, digitized visual sources hold a similarly immersive sway over researchers. It is during the process of observing, identifying, and collating sources that researchers become intimately familiar with the digital data.

My training in visual art and design often contrasted with historians unfamiliar with visual research, showing the importance of assuming an open, childlike mind in perceiving visual sources, making room for the observations and intuitions of “the optical unconscious.”²⁸ The affective knowledge demonstrated in the historian’s emotional-physical reaction to sources offers clues to decoding the aesthetic language of visual sources, a language that resonates in the body, usually preceding logical reasoning. As readers gain access to sources in the digital domain, such affective knowledge moves out of the background to play the lead role in communicating historical information. In the past, archives were the province of researchers, but in digital publications, readers can explore the data set firsthand, making the complex interactions with sources a newly creative aspect of reading history.

In my own experience, paging through piles of illustrated newspapers from the year 1900 at Harvard University’s Widener Library, the intangible tactile and olfactory sense of the “original” cast its spell as I felt myself reenacting the pose of the long-vanished reader and touching what those-who-were-there touched. The illustrations filled the oversize pages with dramatic skirmishes, exotic locales and peoples as they were imagined, tabloid-style.

Despite their origin as disposable ephemera, the century-old newspapers had survived, fragile, precious, and fiercely protected by the librarians. With the passage of time, these mass media reproductions had acquired the physical qualities of the “original” described by Walter Benjamin in his 1936 essay, “The Work of Art In The Age of Mechanical Reproduction.” Benjamin argued that photographic reproduction could not replicate the physicality of a unique object.

Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be. This unique existence of the work of art determined the history to which it was subject throughout the time of its existence. This includes the

²⁸ Martin Jay, “Ocularity,” from *Sensorium: Embodied Experience, Technology, and Contemporary Art*, Caroline A. Jones, editor (Cambridge, Massachusetts: MIT Press, 2006), 190.

changes which it may have suffered in physical condition over the years as well as the various changes in its ownership.²⁹

By surviving for over a hundred years the mass-produced newspapers in Widener Library gained the status and qualities of rare originals. In another method of reproduction, these nouveau-originals are now being digitized to once again circulate widely, this time divested of their physical attributes of size, shape, feel, smell, and publication format.

Additional dissociation occurs when images are extracted from the original page layouts as often happens when they are used as illustrations and in databases. Counter to Benjamin's argument, illustrations reproduced in newspaper pages have greater value to historians than the original sketches by artists. The surrounding content on the page contextualizes the images in relationship to other events, large and small. Whether the periphery features ladies' garters, globetrotter travel, or news headlines, our perception of the graphics changes when they are seen as part of the broader world at the time of publication.

While projects like Visualizing Cultures rely on the free circulation through the Internet to disseminate scholarship, digital networks can also separate images from context leading to controversy. The very real implications for publishing historical images online are discussed in section "3.4 Open Environments and Controversial Images," focusing on a global incident known to academics as "The 2006 MIT Visualizing Cultures Controversy."

From Atoms to Bits: from Archive to Database

Nicholas Negroponte's phrase, "from atoms to bits," heralds a dramatic change in the way information is disseminated, with "exponential" and often unforeseen consequences brought on by a core medial shift:

The change from atoms to bits is irrevocable and unstoppable. Why now? Because the change is also exponential—small differences of yesterday can have suddenly shocking consequences tomorrow.³⁰

In the movement from physical archives to digital databases countless images are not only surfacing to be widely seen, but as representational icons are becoming dominant as the primary interface between user and data. Visual thinking begins with the visual thumbnail sets that respond to search calls. In a 2011 article in *Library Trends*, Sarah de Rijcke and Anne

²⁹ Walter Benjamin, "Work of Art in the Age of Mechanical Reproduction," essay originally published 1936, *Illuminations*, (New York: Schocken Books, 1968, English translation), 220.

³⁰ Nicholas Negroponte, *Being Digital*, (New York: Vintage Books, 1995), 4-5.

Beaulieu examine the potential of “new, networked technologies for visual knowledge production.”³¹

These possibilities are important for the way in which knowledge can be created. Furthermore, they constitute an understudied form of visual knowing.³²

Repositories are looking at new methodologies and tools based on understanding “the skills needed to interact with the images and the skills needed to produce and evaluate visual knowledge via this interaction.”³³ Digitally coalesced images form new knowledge that presages the future in these changing ways of envisioning the past. As historical discourse moves beyond the book model toward digital models, ephemeral bits commingle the past with nascent designs that reflect the communication and knowledge creation of the future, still only glimpsed in the present.

Library studies of user interactions in digital databases affirm my own observations on the use of databases made over twelve years of working with images sets on the MIT Visualizing Cultures project, and in my case study on the Boxer Uprising. The way users move through data—for example, the importance of zooms and high resolution scans—will be discussed in Chapter 4, that describes the software model. User interfaces have a long history, perhaps best known to new media content producers like myself who have worked with interactive media since the 1980s. An early adopter of digital experiments, historian Joshua Brown, writes of the visual turn and warns that a conservative “anti-ocular bias” in the field of history will limit the expansion of knowledge through the digital medium:

...our understanding of history coalesces into images the significance and meaning of which we may know or, more often and alarmingly, not know. Yet the orientation of US historical scholarship—not to mention teaching—remains resolutely textual....The ramifications of this puzzling anti-ocular bias have grown in significance as we enter into the new representational, pedagogical and epistemological realm of digital media.³⁴

³¹ Sarah de Rijcke and Anne Beaulieu, “Image as Interface: Consequences for Users of Museum Knowledge,” *Library Trends*, Volume 59, No. 4, (Baltimore, Maryland: Johns Hopkins University Press, Winter 2011), 663-685.

³² *Ibid.*, 668.

³³ *Ibid.* 679.

³⁴ Joshua Brown, “History and the Web, From the Illustrated Newspaper to Cyberspace: Visual Technologies and Interaction in the Nineteenth and Twenty-First Centuries,” *Rethinking History: The Journal of Theory and Practice*, Volume 8, No. 2, (London: Routledge Online, June, 2004).

Search: Down the Rabbit Hole

Historical research begins with compiling a deep reservoir of sources. A digital archive generated by the collection of visual sources unifies many genres of original media into a single format. No longer an esoteric, site-specific interaction with physical primary sources, digital searches expose widely accessible, optical representations where the layering of sources aggregates multiple views of the past. At the time of writing, a Google search on the “Boxer Uprising” produced some 195,000 results in 0.53 seconds. In 2009, a similar search yielded 100,000 fewer results and a jumble of confused threads spanning from archaic to contemporary time along with random images.

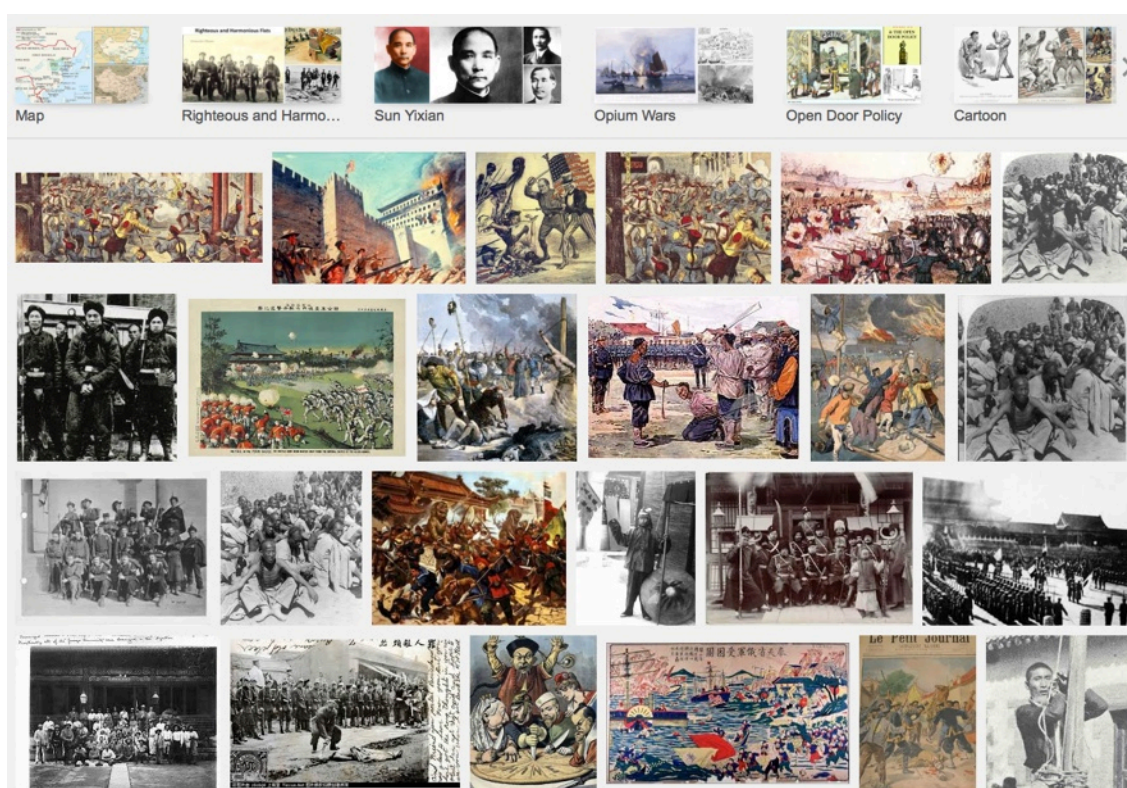


Figure 4. Google image search on “Boxer Uprising,” 2015.

Screenshot, Sebring.

[015_google_search_BX]

Search technology steadily improves. In a 2015 Google search (Figure 4), appropriate sub-headings span the top with options for selecting media type, events, maps, key figures, and historical topics. The thumbnails themselves have grown clearer and larger, making it easier to observe for patterns, common themes, and narrative pathways. The research experience is flipped on its head. No longer a request to librarians based on catalog lists in which specific documents are sought, the search results are displayed in an unmediated, non-linear visual field.

The researcher observes and searches again, heuristically parsing the queries to skew and refresh the mass-data in various views. Digital search presents a commingling of individual images as an entry point to historical events that is sense-based and experiential.

Virtual time bends the linearity of past and present by flattening themes across epochs and historical inquiry acquires dimensions of contemporary digital synchronicity. Conclusions that might come to a historian following a long period of research appear, to a perceptive eye, in the images at first glance. The sometimes surprising inclusion of images from the present time in a query about the past can disrupt the researcher's preconceptions and redirect the research path by making thematic connections. An example would be search results that include today's "war on drugs" in a search on the Opium Wars of the 19th century.

Historians willing to go "down the rabbit hole" into a world of images will be rewarded with a view of the past that is both personal, seen through the image-makers' subjective lens, and expansive, as themes move fluidly across media, culture and time, interweaving not so much into a historical narrative as into a layered narrative texture.

Historical research through the visual record, as opposed to traditional text-based, document sources, is an emerging research paradigm. Each step in this digitally-facilitated process exposes shifting qualities of intellectual engagement that color the historian's perceptions.

Dust in the Archive: Eroticizing the Past

Digital databases display a torrent of inchoate visual matter that can be overwhelming, disorienting, distancing, and, in a morphing semantic web, without end. Yet, the digital experience echoes the submersion in sources during archival research, as can be seen from Arlette Farge's description in her 2013 book, *The Allure of the Archives*.

It is excessive and overwhelming, like a spring tide, an avalanche, or a flood. This comparison with natural and unpredictable forces is not arbitrary. When working in the archive you will often find yourself thinking of this exploration as a dive, a submersion, perhaps even a drowning ... you feel immersed in something vast, oceanic.³⁵

Emotion and eroticism enter some writing on sources. For example, Caroline Steedman writes of archive fever that "starts in the early hours of the morning, in the bed of a cheap hotel,

³⁵ Arlette Farge, *The Allure of the Archives*, The Lewis Walpole Series in Eighteenth-Century Culture and History (New Haven: Yale University Press, 2013), 4.

where the historian cannot get to sleep.”³⁶ Julia Adeney Thomas begins an article on the excavation of visual sources as a sort of date:

Photographs flirt. This is why historians love them, and why they drive us crazy. Unlike texts, which we usually approach with delicacy and suspicion, photographs often disarm us. They appear to offer immediate access to past realities, and yet, when we try to embrace vanished worlds through them, we meet with resistance. We are left feeling baffled, even jilted, as photographs coyly withhold the full knowledge we desire.³⁷

Keith Jenkins describes the past as “utterly promiscuous.”³⁸

The past has and always will go with anybody without a trace of jealousy or a hint of permanent fidelity to any particular caller: hagiographers, antiquarians, professionals, Marxists, Annalists, Structuralists, fascists, feminists, pragmatic neo-Rankeans, anybody can have it. And why not? Nobody has a patent on 'the past'; it can be used or ignored by everyone.³⁹

Historical sources appear to be like forces of nature—as in Farge’s “spring tide, an avalanche, or a flood”—that draw those who study them into a relationship far beyond the dispassionate reconstruction of events and analysis. By the time the historical work is written, personal passion translates into prose and argument where the focus moves to the events and analysis rather than the researcher’s personal experience. Yet, visual sources maintain the need for sensitivity to physical cues and sensory language as a more sophisticated rhetoric around embodied responses develops. Rather than jettisoning the classic, essential archival experience from historical representations, digital historiography invites readers in to the virtual archive. Writers need to find expression within this intangible sensory data.

Immersion and Ignorance

A “time traveller” loses footing while navigating an unfamiliar environment in the past and, disoriented, becomes acutely aware of the lexicon of the senses. Images are collected and analyzed as artifacts of sensory historical knowledge. Image-driven narrative frees images from the subservient role as illustrations to textual argument, and instead, gives readers an experiential understanding. Breaking the paradigm of linear text-based exposition may be disorienting, but only hints at the freedom for informed looking that a reader would have in a

³⁶ Caroline Steedman, *Dust: The Archive and Cultural History* (New Brunswick, New Jersey: Rutgers University Press, 2002), 17.

³⁷ Julia Adeney Thomas, “The Evidence of Sight,” *History and Theory*, Theme Issue: Photography and Historical Interpretation, 48, No. 4 (Middletown, Connecticut: Wiley-Blackwell on behalf of Wesleyan University, December 2009): 151.

³⁸ Jenkins, *Refiguring History*, 10.

³⁹ *Ibid.*, 10.

digital model. An anthropomorphized metaphor for historical inquiry, such as a time traveller, raises the notion of embodiment in the research paradigm. In such a metaphor, sensory data dominates as it would in real life. For example, when driving at night in an unfamiliar city, disorientation heightens perception and observation leads cognition.

Cultivating knowledge based in the senses, particularly visual knowledge, can upset classical historical practice that is deeply identified with the written word. In his arguments against the exclusivity of the rigid academic model, historian Raphael Samuel includes the visual in history's "unofficial knowledge":

A historiography that was alert to memory's shadows—those sleeping images which spring to life unbidden, and serve as ghostly sentinels of our thought—might give at least as much attention to pictures as to manuscripts or print. The visual provides us with our stock figures, our subliminal points of reference, our unspoken point of address.⁴⁰

A historian-as-explorer who confronts a world in the past with open senses gives up the autonomous control that a measured analysis through prose brings using the benefit of hindsight. The past contacted through visual primary sources is direct and uninterpreted. Cultivating a receptive state of "not knowing" or disorientation enables researchers to be sensitive to perceptual, visual information.

Visual immersion can be a research technique. The methodologies and affective knowledge transmitted through the contact with primary sources in an unsorted state causes disorientation that supports exploratory learning. Jenkins argues that history is transmitted and understood best by doing it ourselves:

For it is only when communication breaks down—when you 'just don't get it'—that the only meaningful acts of communication take place. It is only when—to make sense of it—you have to rewrite it for yourself, figure it out for yourself, that there is the chance of 'real' communication (real 'understanding') occurring.⁴¹

Interactive immersion in digital media puts the reader in the role of explorer following multiple trajectories. In his book, *Ignorance: How It Drives Science*, neuroscientist Stuart Firestein advocates the value of "ignorance" as the state of mind most helpful to scientific investigation. Not knowing where you are going as a researcher and letting go of the primacy of facts facilitates discovery.

⁴⁰ Samuel, *Theatres of Memory*, 27.

⁴¹ Jenkins, *Refiguring History*, 26.

History, as a subject, could be said to be fundamentally unknowable; the data are lost and they are not recoverable. So it's not so much that there are limits to our knowledge, more critically there may be limits to our ignorance. Can we investigate these limits? Can ignorance itself become a subject for investigation? Can we construct an epistemology of ignorance...⁴²

To allow for and embrace disorientation is to look for clues, to slow down, to observe the affective power of images, and thus enter the world of visual thinking. Disorientation supports complexity in processing contradictory, powerful, subtle, and mundane messages in the visual set.

In summary, digital data takes the place of the physical archive where historians interact with original sources and texts. In the past it was the province of historians who immersed themselves in the sources, and described them to readers. Now, readers can enter the archival realm themselves digitally. Further, the affective, sensory knowledge of visual images can come to the forefront, lifted out from the storage basement to confront readers directly.

Sensory information needs to be acknowledged as having historical value to validate a visual text in the digital environment. The written descriptions that currently dominate history can now work in partnership with the exposure to visual sources. Thus, affective, sensory, and optical knowledge needs to be valued and better understood.

⁴² Stuart Firestein, *Ignorance: How It Drives Science* (London: Oxford University Press, 2012), 30.

2.4 Observation: Return of the Collecting Methodology

Perceptual Learning and Arranging Visual Data

Having collected a digital database of visual sources, the researcher enters the observation stage. Observation moves beyond spectatorship—passively witnessing the deluge of imagery in media environments—into contemplation and comparison. The senses go on high alert in this immersive state, scanning for signposts and pathways through the data. “Perceptual learning” is defined as the ability of the senses to discriminate and sort such stimuli. Studies in field of psychology demonstrate not only the existence of perception-based knowledge, but its effectiveness as a learning method that can be enhanced through training. That differentiation and categorization of stimuli happens so quickly, means that this process is often overlooked as a method of learning and knowledge production. An open mind, sometimes achieved by cultivating a state of ignorance, can sharpen focus on the split seconds that precede cognitive reasoning.

Described in the work of James J. Gibson and Eleanor Gibson in the latter’s seminal 1969 book, *The Principles of Perceptual Learning and Development*, perceptual psychology offers insights into how to make sense of the burgeoning visual databases in the sciences and other fields confronting an onslaught of digital data with few tools for processing it. Perceptual psychology helps define the nature of sensory learning. For example, movement and comparison lead to comprehension, as discussed in Karen E. Adolph and Kari S. Kretch’s essay, “Gibson’s Theory of Perceptual Learning”:

In the Gibsons’ view, the ambient arrays of energy surrounding the observer—light, sound waves, patterns of pressure on tactile receptors, and so on—are structured by the objects and surfaces in the environment in ways that specify those objects and surfaces; thus, information arrives at sensory receptors already richly imbued with structure. This structure is not carried in a static image; it is only apparent in relations that emerge over transformations in space and time (movement of objects or the observer, edges, gradients, flow, etc.).⁴³

Because comprehension results from comparisons that can only be seen through movement, the malleability that enables users to explore with nearly instant interactions sets digital collections apart from the archival collections of the past.

⁴³ Karen E. Adolph and Kari S. Kretch, “Gibson’s Theory of Perceptual Learning,” in J. D. Wright, editors, *International Encyclopedia of the Social and Behavioral Sciences*, 2nd ed., Volume 10, (New York: Elsevier, 2015), 127-134.

In the observation stage researchers learn by scanning, selecting, sorting, studying, and comparing. Art historian Caroline A. Jones writes about the senses and body as “turning and re-turning” in the process of internalizing visual stimuli:

The pathway from ignorant blindness to philosophical insight leads through the body: its turning and re-turning, its willed shift from retinal sight to mental image.⁴⁴

The sensory dynamics of visual research suggest an experiential protocol with a heuristic approach. The researcher’s interaction with image sets involves immersive disorientation and subsequent tracking of visual/tactile/emotional responses. My practice-based observations resonate with Jones’ description of an “oscillatory movement” between the acts of looking and conscious awareness.

True vision in this narrative necessarily involves oscillatory movement: turning away from spectacle, or if one cannot turn the whole body, closing one’s eyes to the visible world—or its mediated image—to question what one sees.⁴⁵

An oscillatory act of looking moves images from the physical to the mind’s eye. Slowing down and noticing bodily responses to images means that their internal imprints can be sorted in various relationships, the baseline for their functioning as grammatical “narremes.” Jones writes of campaigns during the “short American century (from 1945 to the turn of the millennium),” to purify, and as a result bifurcate, individual senses. The ocular gains dominance over a deodorized and sanitized body, colluding with mass media to create a sharpened, idealized view of self.

Ocularism can only become more extreme in the new century of screen-based apps moving ever faster in response to our input and, increasingly, cueing our behavior with a pervasive, device-based flow of messages, updates, and filters to enhance our selfies and personal brand through image sharing. (Just what the photo stills being produced in unimaginable numbers will mean as sources for future historians only begins to be imagined in this visual/digital research.⁴⁶)

Algorithms to parse data will be needed to supplement or replace the human “Mechanical Turks” engaged in crowd-sourced image tagging. Narrativity also must expand

⁴⁴ Caroline Jones, “Senses,” from *Critical Terms for Media Studies*, W. J. T. Mitchell and Mark B. N. Hansen, editors, (Chicago; London: The University of Chicago Press, 2010), 89.

⁴⁵ Ibid., 1465.

⁴⁶ Katherine Freer is part of a film team exploring the radical impact of personal, cellphone photography in a documentary titled, “Brave New Camera,” <http://www.bravenewcamera.com> Accessed October 2015.

exponentially to add a layer of depth to the current vertical/horizontal grids of data. We will read in three dimensions as data cascades in narrative streams with sensory speed. Readers fast-forward and slow down at will to ponder visual connections through touches and swipes, a tactile connection to narrative exposition that foreshadows image-based prose.

Discoveries about the eye and vision validate the early findings of perceptual psychology. Parts of “Reverse Hierarchy Theory” propose that crude representations are collected in specific cortical areas, followed by lower-level information that improves the resolution, a tiered action that echoes the oscillatory description of looking.⁴⁷ In a startlingly interdisciplinary move, science is turning to the visually skilled, such as artists, to consult on large visual data sets, according to Benedict Carey in his *New York Times* article, “Learning to See Data.”

The information is all there, great expanding mountain ranges of it. What’s lacking is the tracker’s instinct for picking up a trail, the human gut feeling for where to start looking to find patterns and meaning. But can such creative instincts really be trained systematically?⁴⁸

Carey cites studies that show perceptual learning as faster and more accurate than deliberate study, and that document its trainability, crucial for scholars who want to learn to work with visual databases.

Collections Methodology

A precedent for visual discovery can be found in the collect-and-compare approach prevalent in the natural sciences from the 14th to 18th century. In a paper presented at MIT in 2011, Bruno Strasser, a historian of science, writes of collections as “centripetal places” where items can be compared.

They concentrate objects often otherwise dispersed around the world (such as plants and animals) and partially standardize them in order to make them more easily comparable.⁴⁹

Strasser discusses the contemporary resurgence of visual databases, for example, in genome research, reinvigorates the methodology of data-driven science. His description of the

⁴⁷ Merav Ahissar and Shaul Hochstein, “The reverse hierarchy theory of visual perceptual learning,” *Trends in Cognitive Sciences*, Volume 8 No. 10 (New York: Elsevier, October 2004), 457-464.

⁴⁸ Benedict Carey, “Learning to See Data,” *The New York Times*, Sunday Review (New York: The New York Times Company, March 27, 2015). http://www.nytimes.com/2015/03/29/sunday-review/learning-to-see-data.html?_r=1 Accessed October 2015.

⁴⁹ Bruno J. Strasser, “The ‘Data Deluge’: Reinventing Authorship, Credit, and Community in the Life Sciences” (paper presented at MIT, November 7, 2011), 27.

goals of historical collections also captures the power of digitization to unify diverse sources within a single medium, sortable and viewable in both full and detail.

When objects become accessible in a single place, in a single format, they can be arranged to make similarities, differences, and patterns apparent to the eye of a single human investigator; collections concentrate the world, making it accessible to the limited human field of view. As Buffon put it in 1749: “the more you see, the more you know.”⁵⁰

Breaking into an era of hypothesis-driven experimentation using the scientific method, the current digital data deluge is, Strasser argues, a “coming age of ‘data-driven science.’” His paper also makes a connection to the feminine in the “intimate, personal, and even intuitive grasp of similarities” in associative observational research and discusses the work of female researchers overlooked in hypothesis-driven scientific discourse, including Jane S. Richardson, an MIT lab technician whose data-driven work in biology made breakthroughs in the 1970s.

Her comments express the observational stance, “exhaustively looking...with a receptive mind and eye” and relational knowledge, “unexpected patterns in those endless details.”

...exhaustively looking, in detail, at each beautifully quirky and illuminating piece of data with a receptive mind and eye, as opposed to the more masculine strategy of framing an initial hypothesis, writing a computer program to scan the reams of data, and obtaining an objective and quantitative answer to that one question while missing the more significant answers which are suggested only by entirely unexpected patterns in those endless details.⁵¹

This shift in both research style and the presentation of findings suits the complexity of digital interactivity, a medium that becomes linear only by design rather than inherent functioning. Unlike experimental science, “relational systems”⁵² such as collections and databases rely on detailed comparisons to generate knowledge.

Zooming in: Signposts, Afterglow, and Picture Pathways

Jane Richardson conveys the aesthetic side of data-driven research, and the “beautifully quirky and illuminating” allure of visual immersion. Research shows that perceptual learning continues in passive states, such as sleep,⁵³ which may explain the prolonged impact of aesthetically and informationally haunting images. The MIT Visualizing Cultures project team

⁵⁰ Ibid., 27.

⁵¹ Ibid., 42.

⁵² Ibid., 25.

⁵³ Perceptual Learning and Sleep Laboratory, Athinoula A. Martinos Center for Biomedical Imaging, Harvard University. <http://www.nmr.mgh.harvard.edu/pls/> Accessed October 2015.

described “hot” images—those that stayed in the mind’s eye after several days with a kind of afterglow. We learned to wait several days to confirm our initial impressions in choosing key images in the narrative and thematic hierarchy. In working with numerous visual data sets, I recognized these signature graphics as signposts in unfamiliar visual terrains and stepping stones in the observation process. And like signposts, they often appeared at crossroads where research could take multiple directions, described in my 2011 paper, “Visual Narrative in Historical Research. Part 1: Search - Down the Rabbit Hole”:

Picture points of entry interplay like a deck of cards: pick ten from the thousands of images pertaining to a historical event. Lay the images out in a row and notice that each of these ten images is a window on a unique story and is simultaneously at play with each of the other images. The selected subset of ten can be varied, expanded, or shrunk to modulate the visual window on the past.

The researcher works through the sense of sight to intuitively shuffle the deck and decide what images to choose. Though images impart strong first impressions, these impressions are not predictably accurate. Reading databases of archival images is as rigorous and time consuming as traditional historical research using texts. Image vetting leads to valuable primary source texts, unexpected cross-links, and thematic revelations.⁵⁴

Digital historiography unfolds in dynamic picture pathways. A photograph of the 6th Cavalry at the Boxer Uprising leads back in time to images of the regiment during the Philippine-American War, and before that, fighting Indian Wars in the United States. Then, fast forward through their engagements following the Boxer Uprising to a 2007 deployment to fight in Iraq.

The United States Army 6th Cavalry regiment (“Fighting Sixth”) appears in different types of media during the Boxer Uprising, including photographs, stereographs, and illustrations. The soldiers appear capturing Boxer prisoners, at executions, marching to relieve the siege in Peking, sightseeing at the Ming Tombs, in triumphal parades through the Forbidden City, and in commemorative portraits. Their presence in the photographic record conflates time, distance, and media in a way that expands these pre-digital narratives.

⁵⁴ Ellen Sebring, “Visual Narrative in Historical Research, Part 1: Search - Down the Rabbit Hole,” Skilled Art Conference, publication, (Porto, Portugal, February, 2011).



*Figure 5. United States Army 6th Cavalry regiment at the Ming Tombs, China, 1900.
Photography by Francis O'Keefe, U.S. Department of Defense.
[6th_Cavalry_Ming_Tombs]*

Users can move in multiple directions from a single image. The men of the 6th Cavalry no longer stare at us, frozen in a single pose, pigeonholed by the frame. Through visual association, a broader view emerges and leads to our own time—for example, deployment to Iraq—that undermines historical distance and the perception of the “other” as a bygone, nameless agent of the past. If the sought-after empathy with the past can be found in strings of pictures, motion and the ways of traveling through these interconnected visual sets animate them as comparative views, like sentences and paragraphs in a virtual text.

Zooming Out: Visual Fingerprints

Zooming out gives a different view, revealing patterns and, unexpectedly, that unique visual fingerprints are encoded in the historical record. Art and music can be identified stylistically by time period, but until digital databases consolidated disparate sources, temporal stylistic patterns in visual ephemera could not be easily seen. I discovered that a historical event can be recognized by graphical elements in thumbnail views when working on Visualizing Cultures units about the Opium Wars. In the mid-1800s, two Opium Wars were waged by the West upon China, separated by only fourteen years. I collected images for both wars and created two databases. I noticed that within the short time span between wars, visual media changed

enough to give each a distinct look or visual “fingerprint.” Rotating a model comparing each sample sideways, as may be possible with a 3-d digital model, historical change could literally be seen in the threads that connect them.



Figure 6. Fingerprints of First and Second Opium Wars. Image from the First Opium War (1839-1842), left, and Second Opium War (1856-1860), right, show that there are recognizable visual “fingerprints” for historical events. Separated by just fourteen years, the media footprint had changed, when photography was first used on the battlefield by Felice Beato. Sebring, 2010.

[fingerprint_grid_OW1_2_2010]

The “look and feel” of war can be seen in these evidentiary fingerprints, one that reflects a disappearing past, and the other a changing future. One of the most unusual records of the First Opium War, a set of journals full of watercolors painted by Dr. Edward Cree, a naval doctor, contrasts with the first battlefield photography, staged by Felice Beato during the Second Opium War. Both show the horrors of war.



Figure 7. Dr. Edward Cree, watercolor from his journal on the First Opium War, c. 1842.
Source: National Maritime Museum, Greenwich, UK.

[cree_103b]



Figure 8. Felice Beato, re-staging the battlefield for a photograph made on site,
Second Opium War, 1860. (detail). Source: Wellcome Library, London.

[1860_Beato_24_NoFortTaku_wlc]

Dr. Cree's watercolors are personal and expressive, red with the blood of Chinese families who committed suicide as enemy troops approached: "...bannermen had killed themselves and their families en masse rather than face the rape, plunder, and disgrace of surrender."⁵⁵ Beato's medium, photography, reduces death to stark black-and-white mechanical reproduction, bodies crumpled like shadows in the photographic landscape.

Recognition versus Excavation

Image-first questing asks researchers to immerse in looking, to let go of control, and embrace chaos to find patterns. Sensibilities often come from "nonsensical" ways of seeing. Images stimulate our senses and imagination in communication that precedes critical thinking. Strong first impressions imparted by images bypass informational filters that check them for accuracy. Archival images require the same rigorous research methodologies as those used in documents research. Like documents, images often lead to valuable primary source texts, unexpected cross-links, and thematic revelations.

While art historians, visual culture specialists, and curators are trained in visual image methodologies, historians are less prepared to incorporate the visual record significantly in their research. In her article, "The Evidence of Sight," historian Julia Adeney Thomas juxtaposes "recognition"—the surface appeal of images used as illustrations in historical texts—with "excavation"—a deeper engagement in the visual archeology of images.

...historians are not relegated to appropriating photographs only as sensuous, non-linguistic data. Another strategy, what I will call "excavation," uses the tools of discursive analysis familiar to us through the work of Michel Foucault and others to treat sight as an experience located within historically specific regimes of knowledge.⁵⁶

Identifying the origin of images and the environment in which they circulated is an exhaustive process tracing many incarnations, but the effort brings critical understanding. "Excavation," Thomas writes, "stresses contiguity—not what the thing was like and unlike, but what it was part of, the discursive and material whole out of which it emerged."⁵⁷

Thomas admits that few historians choose this route:

⁵⁵ Peter C. Perdue, "The First Opium War," three units, MIT Visualizing Cultures, (Cambridge, MA: MIT OpenCourseWare, 2011). http://ocw.mit.edu/ans7870/21f/21f.027/opium_wars_01/ow1_essay03.html Accessed October 2015.

⁵⁶ Thomas, "The Evidence of Sight," 152-153.

⁵⁷ *Ibid.*, 153.

Such excavation is demanding. Any single image serves as a node in many complex networks, and the archival conventions identifying images are lax.⁵⁸

In efforts to get their collections online, some institutions have moved forward despite less than perfect metadata, choosing to make images accessible and to catch up with the massive job of data tagging over time. Many times, researchers push the digitization and tagging of images during this period of rapid digital conversion. *Visualizing Cultures*, for example, often requested digitization by Yale University libraries and Boston's Museum of Fine Arts in order to create units based on their holdings.

Captions alter viewers' perceptions of images and must be included in the analytical process of image excavation. Annotations by image creators often offer valuable insights into technical processes and cultural subtexts. Photographer James Ricalton's descriptions written for the backs of his stereographic cards reveal him to be a traveller swept up in dramatic events in "exotic" locales. The historian mines both the visual images and annotations of the image maker, journalist, private citizen, or publisher, to critique attitudes of the makers and audiences.

Unfortunately, excavation also uncovers problems with captions that perpetuate misidentifications when publishers reprint and/or write captions to suit their editorial needs. When I taught a module on the Boxer Uprising for the course "Visualizing Asia in the Modern World" at MIT (2012 and 2013), the most frequent error made by students was misidentifying images based on captions and appearances. Failing to cross-check sources lead to papers based on improperly identified images. For instance, a postcard of Westerners standing over the decapitated bodies of Chinese men on a roadside purported to show the barbarity of the invading nations toward the Boxers, supported by incorrect captions. I discovered that the postcard reproduced a much older photograph of Western men looking at the bodies of pirates executed by the Chinese government. Yet the photo circulated for over a decade as, on the one hand, a demonstration of China's cruel punishments, a subject of great fascination to the West, and on the other hand, as a depiction of Western ruthlessness. Some students interpreted the expressions on the Western faces as the ruthless arrogance of conquerers. (For a complete discussion of the varied interpretations of this image, see the section below, "Namoa Pirates in the Metaverse.")

⁵⁸ *Ibid.*, 160.

Initially, students also presented images in papers and talks without the basic identification of dates, place, origin, artist, medium, and publisher. Lacking fundamental knowledge of their sources left them vulnerable to critical errors. They quickly learned that the year and, preferably, month and day an image was made and/or published, and the difference between these two dates, placed it in relationship to other images and within a historical timeline. Chronological organization may be debated as a value in contemporary historical representations, but sorting visual datasets in a chronological progression is a necessary first step. Taking visual sources at face value lead to analytical errors that basic research and image “excavation”—identification and deeper contextualization—would have solved.

2.5 Authoring: Developing a Visual Narrative Mode

What is a Visual Narrative Mode?

This section hypothesizes a visual narrative mode using digital images, and addresses the following key questions:

- (1) Can a non-verbal, image-based narrative mode exist?
- (2) If so, what are the basic grammatical elements of a visual narrative mode?
- (3) What are the differences in textual and visual exposition and how can they be balanced?
- (4) What is the relationship of the author and reader in an interactive digital narrative form?

Authoring Author-Free Environments

Researchers enter the authoring phase having chosen key images and thematic subsets within the visual data as a visual outline of the narrative arc. But, here the process falters. First, software programs do little to support authoring with images and scholars are forced to fall back on traditional written forms, especially if they want to get published. Second, creating a text means choosing a narrative mode with grammatical rules for point of view, voice, time, and so forth. No narrative authoring mode exists for an image-driven grammar where images carry narrative.

The digital platform means that, for the first time, unlimited numbers and types of images can circulate freely, but publishing formats tailored to historians and visual sources have yet to be developed. The software scholars use, such as the presentation software, Microsoft PowerPoint, and word processing software, Microsoft Word, support specific scenarios with linear progressions.

On the front lines of digital database creation, libraries acknowledge user interactions with sources as “an understudied form of visual knowing” with untapped potential for knowledge creation.

While the description is static, the image has built-in functionality. Users are invited to interact with it, either with the image itself in visual terms (zoom, crop, move) or with the image as a digital file in a networked setting (print it, e-mail it, preserve it). They can also make it part of their own selection and create their own space in the database. It is also easy to take it out entirely and have it travel to other settings and to other media—including this publication. These

possibilities are important for the way in which knowledge can be created. Furthermore, they constitute an understudied form of visual knowing.⁵⁹

Non-linear, image-rich digital environments put readers into an exploratory role. The relationship of reader and author shifts as readers take their own pathways through the material. Authors create narratives within a range of author-reader and image-text relationships, some of which operate as “author-free” zones where readers interact directly with sources. The seeds of a digital visual narrative mode lie in authoring for a reader who interacts with visual images that have a role equal to text. The actions of knowledge-seeking and the types of knowledge transmitted may differ dramatically from the familiar paradigms of language-based argument. With images, readers quest and immerse in a sensory visual language of intangible associations rather than the more explicit, precise articulation of language.

Hierarchy in the Author-Reader Relationship: an Active Reader

The digital medium shifts the balance of power between author and reader towards curation and exploration. Authors no longer use written text to mediate their exclusive access to sources, but instead mediate an “all-access pass” to sources accessible to all. In a uniquely digital paradigm, primary sources move to the center of the author-reader relationship:

source | author | reader ⇒ *author | source | reader*.

Raising historical visual images to narrative status removes a block between subject and reader represented by the author’s unequivocal control of the narrative. The author no longer always dominates, but frames experiences for readers. Such a move liberates the sources from the author’s interpretation, but also risks losing the coherence of the author’s narrative. Preparing readers for meaningful first-hand contact with the past through primary sources becomes part of the author’s work. Multiple narrative configurations—the essay, image series, and dataset—intertwine in the creation of meaning for and by readers.

The reader’s move away from passive spectatorship towards active looking involves slowing down and entering an immersive state according to art historian Jennifer L. Roberts, a professor at Harvard University who designed a course on “The Art of Looking.” Roberts argues that educators need to create “opportunities for students to engage in deceleration, patience, and immersive attention.”

⁵⁹ de Rijcke and Beaulieu, “Image as Interface,” 668.

Just because something is available instantly to vision does not mean that it is available instantly to consciousness. Or, in slightly more general terms: access is not synonymous with learning. What turns access into learning is time and strategic patience.⁶⁰

Informed by the author's analysis, the reader's exploration of sources differs dramatically from an unmediated exposure to raw databases. Armed with information, readers experience the visual data set like researchers. They can zoom in and look closely, scan, compare, and take time to test and absorb information within and between images. Readers examine the author's claims and scrutinize the sources, coming up with their own arguments.

Hierarchy in the Image-Text Relationship: an Active Image

The hierarchy in the image-text relationship moves from fixed to variable as the print book model gains a range of narrative choices in digital models. Static images are often understood through the captions and texts that surround them, but at the same time, stranding images within texts in fixed formats undermines the multiple meanings that can be derived from visual associations. Comprehension comes from images being seen in context across multiple uses. In a digital model, the dominance of text-over-image or image-over-text shifts freely according to expository needs. Interactive formats expand typical e-book design (often digital reprints of hardbound books), enabling authors to maneuver images in unlimited numbers and configurations as narrative elements that "show" rather than "tell" the reader.

Namoa Pirates in the Metaverse

How does a print essay change when transposed into a digital format that supports authoring with images? The following example shows how narrative expands in a digital framework that links source images and online searches, and recasts the reader's role from passive to interactive. In a printed essay, the author retains privileged access to the archival sources and full control over a linear narrative. In non-linear digital formats, readers interact with the sources in order to "see for themselves." Published in a 2009 book, historian James Hevia's essay, "The Photography Complex: Exposing Boxer-Era China (1900-1901), Making Civilization,"⁶¹ offers tantalizing glimpses of photographs in the grainy black-and-white

⁶⁰ Jennifer L. Roberts, "The Power of Patience: Teaching students the value of deceleration and immersive attention," *Harvard Magazine* (Cambridge, MA: Harvard Magazine Inc., Nov.-Dec., 2013), 42. <http://harvardmagazine.com/2013/11/the-power-of-patience> Accessed October 2015.

⁶¹ James L. Hevia, "The Photography Complex: Exposing Boxer-Era China (1900-1901), Making Civilization," *Photographies East: The Camera and Its History in East and Southeast Asia*, Edited by Rosalind C. Morris (Durham & London: Duke University Press, 2009), 79-119.

graphics. If it were a digital publication, Hevia's essay would become a provocative catalyst for reader investigations within the metaverse of a virtual interactive environment.

Examining one particular photograph that Hevia discusses shows how exposing readers to the chaos of primary sources can conflate historical research and exposition, revealing the historian's process. Searching through multiple variations for the photo's origin shows how images can become the pawns of propaganda and salacious spectatorship. Visual perception joins with captions to hoodwink researchers and viewers alike.

Hevia reproduces the July 28, 1900 cover of the American illustrated newspaper, *Leslie's Weekly*, featuring a grisly photograph of Western men standing over decapitated Chinese corpses. Hevia discusses the photograph and caption, "The Thirst of the Chinaman for Human Blood," as an imperialist denigration of the Chinese. The cover appeared at the height of the Boxer Uprising. China declared war on foreign powers in response to their June 16 attack on the Taku harbor, and the Foreign Legations in Beijing fell under siege on June 20th.



Figure 9. "The Thirst of the Chinaman for Human Blood." A photograph of Europeans standing over beheaded corpses, bottom half of the July 28, 1900 cover of Leslie's Weekly.

[civ_leslies_1900_v90_2_015]

But what is the true subject of the photograph? Given the date of publication, we might assume that it shows the foreign allies who have invaded China standing triumphantly over the

corpses of Boxer rebels they have executed. The charged East-West juxtaposition fueled impassioned arguments against imperialism, including one of the student papers in the 2012 MIT class I taught,⁶² echoed by numerous similar misreadings online. The fine print in the newspaper caption, however, states that the photograph was “Reproduced from ‘*Leslie’s Weekly*’ of October 25th, 1894,” thus pre-dating the Boxers by at least six years. An online search yields many versions of the photograph, the earliest dated May 11, 1891.



Figure 10. Photograph of “Execution of Namoa pirates,” China, 1891.
 Handwritten caption: “Execution of the Namoa pirates which took place on the 11th May 1891 at Kowloon City China.”
 [1891_Namoa_pirates]

John Kleinen’s book on maritime piracy, *Pirates, Ports and Coasts in Asia, Historical and Contemporary Perspectives*, recounts surprisingly inaccurate uses of this photograph that

⁶² Excerpt from student paper: “This photographed card depicts a grisly mass execution of Chinese (15). At least ten decapitated bodies are lined up on the countryside, where eight western figures—ranked officers by their attire and posture but perhaps not from the same country—stand to take credit for their joint effort. The only caption, ‘Chinese Execution’, offers no reason or justification; to the audience, it might just seem like sadistic western imperialists helping each other commit a brutal act of violence. The fact that this photograph was taken at all, and showed the officers in relaxed mood after having put several Chinese to gruesome deaths, is a measure of the brutalizing effect of the war, western racism, and imperialist propaganda.” submitted for 21F.027 Asia in the Modern World, MIT, April 2012.

speaking not only to recycling the image for shock value during its own time, but to the low status of visual images in historical research. The dead are misidentified as Boxers in Richard O'Connor's 1973 book, *The Spirit Soldiers; A Historical Narrative of the Boxer Rebellion*.

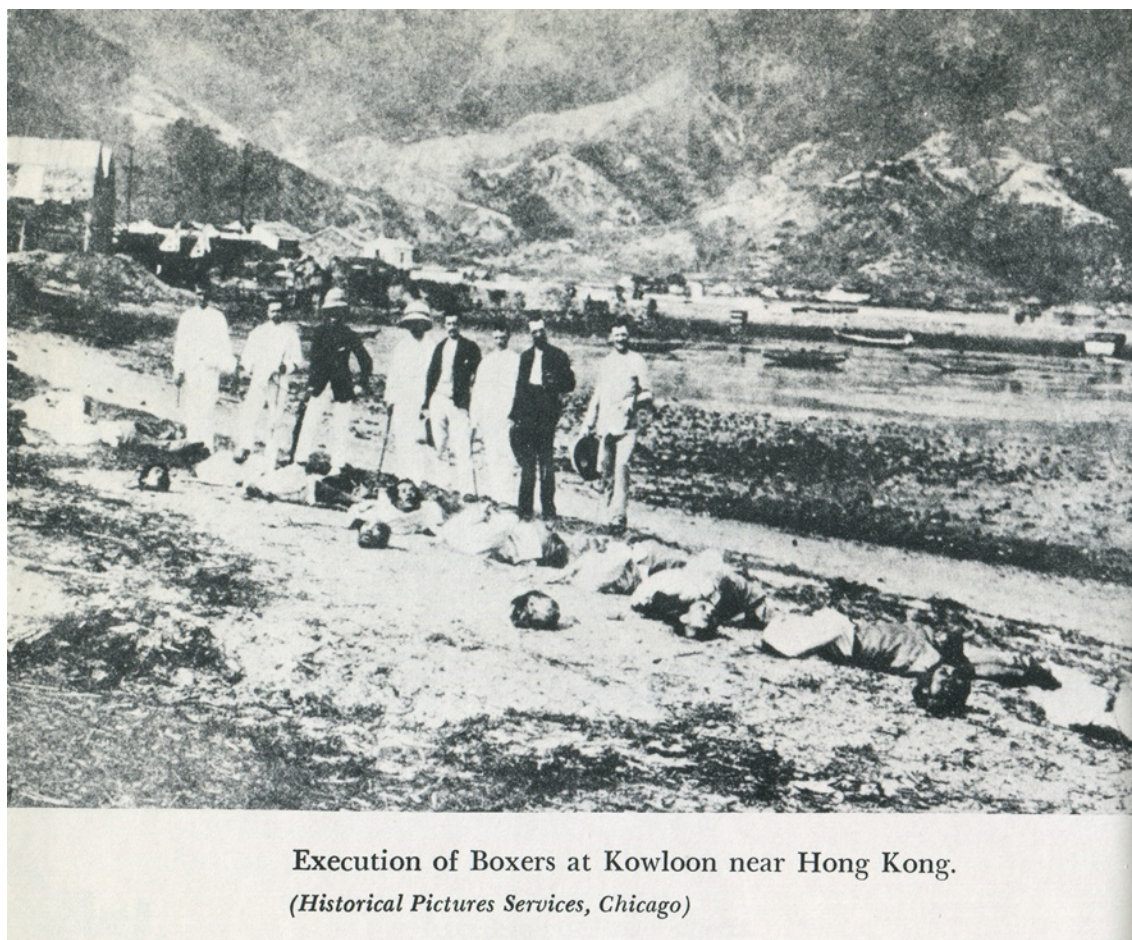


Figure 11. Misidentified photograph “Boxers at Kowloon.”
Photograph with caption misidentifying the scene as “Execution of Boxers at Kowloon near Hong Kong. (Historical Pictures Services, Chicago)” in Richard O’Connor, The Spirit Soldiers: A Historical Narrative of the Boxer Rebellion. (New York: G. P. Putnam’s Sons), 1973, 190.
[1973_OConnor]

Two studies of the Vietnam War identify the dead as Vietnamese executed by the French (below): in 1981 by Edward Doyle and Samuel Lipsman, and in 1985 by Thomas Boettcher.⁶³ As often happens with misidentifications, the latter study may have taken the reference from the earlier book and amplified it with a more definitive caption.

⁶³ John Kleinen, “Maritime Piracy through a Barbarian Lens: Punishment and Representation (the S.S. *Namoa* Hijack Case, [1890-91],” from *Pirates, Ports and Coasts in Asia, Historical and Contemporary Perspectives*, John Kleinen and Manon Osseweijer, editors, (Singapore: ISEAS, 2010), 100.

As the peasants' existence worsened, many took to banditry or political activity. The French made no distinction—they called them all bandits. Beheading was often their fate.

member. During a seance on Christmas Eve, 1925, Cao Dai made his second appearance, this time before Le Van Trung. Cao Dai announced that he was



Figure 12. Misidentified photograph “beheaded peasants.”

Photograph with caption misidentifying the scene: “As the peasants’ existence worsened, many took to banditry or political activity. The French made no distinction—they called them all bandits. Beheading was often their fate,” as it appears in Edward Doyle and Samuel Lipsman’s *The Vietnam Experience: Setting the Stage*. (Boston: Boston Publishing Company), 1981, 160.

[1981_Doyle_Lipsman]

granted him immediate support for his public works program. The colony was awarded a 200-million-franc loan to begin. So ambitious were his projects and so great were his organiza-

Frenchmen beheaded Vietnamese who opposed their rule or were guilty of serious crimes.



Figure 13. Misidentified photograph “Frenchmen beheaded Vietnamese.”

Photograph with caption misidentifying the scene: “Frenchmen beheaded Vietnamese who opposed their rule or were guilty of serious crimes,” as it appears in Thomas D. Boettcher, *Vietnam: The Valor and the Sorrow*. From the home front to the front lines in words and pictures. (Boston and Toronto: Little, Brown and Company), 1985, 15.

[1985_Boettcher]

Visually, the explicit violence and the tension evoked by the juxtaposed rows of men—the living and dead, Westerners and Chinese—kept the image in print. Kleinen traced the photograph and two other exposures to the Hong Kong Museum of History. By cross-referencing the three images, the narrative is broadened and the data set clarified.

Kleinen used these sources to determine the date of the photograph as April 17, 1891—a date that appears on none of the source photos, many having copied other authentic-looking captions. It documents the execution by the Chinese government of pirates who hijacked the *S.S. Namoa* in Hong Kong bay, killing a number of Chinese passengers as well as two Caucasians, the ship's captain and a lighthouse keeper. Although six of the pirates were executed on May 11, the date that appears on many versions of the photograph, Kleinen argues that it was taken at an earlier execution on April 17th. Evidence comes from the presence of the Westerners. Since the incident occurred outside of their legal jurisdiction, the British contingent, members of the Chinese Maritime Customs Service, were only on site because of the murdered lighthouse keeper who was part of their organization. Kleinen references the passion of members of the Maritime Customs Service for photography, and notes that the man in the photograph second from the right appears to be checking his watch. He was most likely timing the photograph for his assistant who controls the shutter.

Though the conclusion may be the same, the convoluted provenance of the *Namoa* pirates execution scene only emerges in the excavation of digital, semantic data sets that reach far beyond the few pictures reproduced in Hevia's essay, making the process by which he reaches these conclusions much more transparent.



Figure 14. A Google search on the terms “execution Namoa pirates.” A google search shows many variants of the photograph and several related photographs apparently taken at the scene.
 [2015_google_search_namoa_pirates]

A scholarly discussion about the uses of pictures as propaganda and the veracity of captions—including, as Hevia points out, those that “feel” genuine such as handwriting on hundred-year-old prints—would be supported by a visual narrative series featuring the many ways this image was reproduced. Upon visiting the U.S. Army Military History Institute in Carlisle, Pennsylvania, Hevia observed:

In white ink directly on the print, it bore the label “Scenes after the Beheading of 15 Boxers in China.” Thus, for some unknown pen wielder, *Leslie’s* editorial speculation on future events in China had been moved into the realm of “fact,” manufacturing a new reality in which the ten or eleven dead “pirates” were transmuted into those of an even larger body count of “Boxers.”⁶⁴

Visual narrative sequences could pivot in several directions: first, showing the permutations of the photograph as reproduced and captioned in period media and historical references up to the present day; and second, introducing related images to show how image reception changes over time, as the “barbarian” label pointed at the Chinese by turn-of-the-century audiences shifts to the Western imperialists in the eyes of contemporary audiences, including Hevia.

⁶⁴ Hevia, “The Photography Complex,” 111.

...*Leslie's* editors and craftsmen created a new China, one that was no different from any other place where natives had transgressed against a white world of "civilization" and "civilizing missions."⁶⁵

Integrating the broader life of the photograph links China and the West through the media machine that makes an otherwise tangential image a pivotal content node.

The shift from stasis, in a book reproduction, to motion, in the digital terrain, connects images in visual narratives, and associated data sets that can be reconfigured repeatedly in response to variations in search terms. Giving readers access to sources, albeit digital, enables them to enter a depth of search and comparison that rivals the author's superior position, the difference being that professionals pursue access to physical archives and build on their knowledge as specialists.

In this case, Kleinen visited the Hong Kong Museum of History to view three photographs as a set documenting the executions and was able to piece together the narrative by studying the prints in detail (though one wonders how he observed the close up detail of the man looking at his watch, which would be best done with a high resolution digital scan).

The conclusion of the excavation process yields only part of the story, since the many journeys this photograph took tell much about imperial thinking and the fate of photographs, their moment of creation and subsequent reproduction. Benjamin's "aura" of the original envelops a complex set of search results as the raveled provenance exposes historical data layered through time, suggesting a 3-dimensional model still in flux. In this case, historical sources connect the present to the past with a visible lineage of reinvention, making the image as it appears with its many twins a purveyor of history of equal value to any discussion about it.

Finally, what significance do pirates executed in 1891 have for the Boxer Uprising in 1900? As part of the visual record the image recycled to justify attacking a foreign nation can be seen in the *Leslie's Weekly* cover as trumped up evidence of moral superiority. Readers learn this not only from James Hevia's prose, but from uncovering the mystery of the image's origin. Unconscious attitudes raised and then debunked by the excavation of imagery helps viewers become circumspect about their own stances.

In terms of historical themes, the photographic excavation suggests multiple topics: the Chinese Maritime Customs Service and their role in foreign relations and documentation; the

⁶⁵ Ibid., 108.

shifting locations indicating where trials and executions occurred; legal jurisdictions in China; the unfortunate victims of the hijacking, many of whom were Chinese laborers returning from the United States with their hard-won earnings; the dire economic circumstances and natural disasters that lead to maritime banditry; the “bond between secret societies and pirates,”⁶⁶ secret societies being a prominent theme in the Boxer Uprising; the *tanka* semi-nomadic water people; and, of course, the themes of punishments, exoticism, and yellow peril.

While both authors provide essential research, and Hevia cherry picks from a large sampling of visual images to conceptualize a media apparatus manipulating what he calls the “photography complex,” the visual data on its own also takes shape as a knowledge base. A narrative structure in motion means readers as well as scholars can test and contribute to an evolving story.

Transmedial Narratology

Narratology codifies narrative structure and modes in the field of literature. Can this type of analysis help expose the narrative structures latent in visual, digital media to undergird an emerging historiographic form? Unlike written narratives, images countermand linearity and forward-moving logic with circular structures based on several phases of looking: (1) irrational perceptual responses during the “first glance”; (2) the second look or “double-take” of thinking over what has been seen; and (3) consolidating the details into a conclusion. These interactions play out as a narrative with a beginning, middle, and end.

Theorist Marie-Laure Ryan challenges the literature-centric field to include narrative in non-textual forms under the banner of “transmedial narratology.”

The dissolution of "narrative" into "belief," "value," "experience," "interpretation," or simply "content" can only be prevented by a definition that stresses precise semantic features, such as action, temporality, causality, and world-construction. A transmedial definition of narrative requires a broadening of the concept beyond the verbal, but this broadening should be compensated by a semantic narrowing down, otherwise all texts of all media will end up as narratives.⁶⁷

The study of narratology focuses primarily on fiction, and in digital forms, explores multilinear plot devices, characters evolved by Artificial Intelligence, and hypertext linking.

⁶⁶ Kleinen, *Pirates, Ports and Coasts in Asia*, 105.

⁶⁷ Marie-Laure Ryan, *Avatars of Story*, Electronic Mediations, Volume 17, (Minneapolis, London: University of Minnesota Press, 2006), 6-7.

While Ryan raises the possibility for transmedial narratology, she does not speculate on what it might be, claiming only that it will vary according to media type.

We no longer believe that all media offer the same narrative resources and that all stories can be represented in media as different as literature, ballet, painting, and music. Nor do we believe that the migration of a story from one medium to another does not present cognitive consequences. A core of meaning may travel across media, but its narrative potential will be filled out, actualized differently when it reaches a new medium.⁶⁸

Traditional, text-based historiography also pushes the boundaries of narratological analysis. Daniel Fulda compares a number of theories of historiographic narrative, the most common being “explication,” in which history becomes inseparable from a common narrative form “organizing material by naming adversaries, establishing or imputing intentions and identifying obstacles and factors in overcoming them.”⁶⁹

He describes historical narrative as a structure created by picking and choosing from the “amorphous happenings of the past” to configure a coherent history, reiterating from a narratological perspective, Keith Jenkins’ past-history distinction:

The dramaturgical model and narrative linking structure serve as heuristics for selecting among the amorphous happenings of the past (as attested by sources) and configuring them historiographically as a consistent and hence understandable (hi)story...⁷⁰

Fiction and non-fiction historical writing (“factual narration”) diverge most clearly in the gaps or holes in the story, Fulda notes. In fiction, unlike history, no world exists outside of the imaginary construct to fill them in.

While historiography’s epistemological gaps may be filled by using new sources or arguments, gaps in fiction are ontological, since there are no referents beyond the fictional world. This also applies where fictional narrative masquerades as historiography.⁷¹

Fulda’s observation highlights how much historical writing that appears single-voiced lies within a continuum of scholars and sources. Over time, new research fills in gaps, inaccuracies, and oversights, converging in an overarching, many-voiced narrative across time

⁶⁸ Ibid., 4.

⁶⁹ Daniel Fulda, “Historiographic Narration,” from *The Living Handbook of Narratology* (Hamburg: Interdisciplinary Center for Narratology, University of Hamburg, March 7, 2014), 1. <http://www.lhn.uni-hamburg.de/article/historiographic-narration> Accessed October 2015.

⁷⁰ Ibid., 1.

⁷¹ Ibid., 3.

and space. Without the interchange of argument and counter-argument, a weak historiographic structure built on parallel texts would collapse.

Narremes and Algorithms

Since visual narratology remains largely hypothetical, a heuristic approach with a case study, here the Boxer Uprising, supports discovery of a narrative framework. Casting images as “narremes” offers a way to imagine how they operate within a grammatical structure of visual relationships. The word “narreme,” though not widely used, refers to a basic unit of narrative structure. According to Henri Wittmann, within a narrative algorithm a narreme represents “any minimal narratively functioning unit.”

Let us call "narreme" (following Dorfman 1969) any minimal narratively functioning unit having the superficial structure (S₀, ..., S_n) where S stands for "sentence" linked to other sentences in a relationship which cannot be ungrammatical as to logical form; and let us call "narrative" any string of narremes with a preceding narreme always being the effective cause of the following one.⁷²

In a trans-medial version of Wittmann’s algorithm, narremes can be pictures arranged in relation to each other to form meaning. Defining narrative as “any string of narremes with a preceding narreme always being the effective cause of the following one”⁷³ forces authors to reconsider images as relational objects apart from their stand-alone or illustrative uses. The narreme itself, Wittmann continues, consists of a “set of narrative concepts.” Narremes, then, have complex content, more like a sentence than a word, that make up the interdependent elements of a linear sequence to produce narrative.

The underlying structure of the narreme may be defined as a set of narrative concepts, each concept being a structural unit with its own specific function to perform.⁷⁴

In a transmedial shift, the algorithm can describe visual narrative if “S” equals historical pictures rather than sentences. Several problems emerge. First, while both sentences and pictures have the internal narrative content of narremes, sentences have flexible content, but historical pictures preexist making the content inflexible. Authors cannot alter them, but can only sort and deconstruct them.

⁷² Henri Wittmann, “Topics in the theory of narrative algorithms,” Volume 3, No. 1, *Travaux Linguistiques*, (Trois-Rivières: Université du Québec à Trois-Rivières, 1974), 1. <http://www.nou-la.org/ling/1974b-topics%20.pdf> Accessed October 2015.

⁷³ Ibid., 1.

⁷⁴ Ibid., 1.

Second, while narrative unfolds linearly in an author's prose, narrative in pictures appears non-linearly all at once. The temporal aspect of narrative unfolds in the viewer's observation. Immutable images with non-linear, simultaneous content obviates Wittmann's dependency hierarchy in which each narreme necessarily causes the next one. Can the algorithm still hold up?

In digital forms such as visual narrative, algorithms play an active role in compositional techniques as well as historiographic and narrative theory. In recent research by Babak Saleh and Ahmed Elgammal at Rutgers University, algorithms sorted large fine art data sets, expanding basic object recognition to search for style, genre, and artist, working significantly faster and making connections new to art historians.

In this paper we investigated the applicability of metric learning approaches and performance of different visual features for learning similarity in a collection of fine-art paintings. We implemented meaningful metrics for measuring similarity between paintings. These metrics are learned in a supervised manner to put paintings from one concept close to each other and far from others.⁷⁵

Putting "paintings from one concept close to each other and far from others" represents a first step in new narrative construction, providing authors with a subset of narremes. Several articles on Saleh and Elgammal's research point out the growing effectiveness of quantizing tasks previously tied to human intelligence and perception.

Computers are getting better at some surprisingly human tasks. Machines can now write novels (though they still aren't great), read a person's pain in their grimace, hunt for fossils and even teach each other. And now that museums have digitized much of their collections, artificial intelligence has access to the world of fine art.⁷⁶

Determining whether an algorithm that defines narremes as images can work depends on how an authored sequence differs from sorted data sets. A sequence composed by an author from a subset of narremes unfolds linearly, raising the visual data from patterns to a statement. Dependencies between the narremes come, not from sentences, but from visual cues.

Algorithms that simulate man-made narrative show how narrative itself can be quantized across various media types. Quantizing narrative structure means better tools can be

⁷⁵ Babak Saleh and Ahmed Elgammal, "Large-scale Classification of Fine-Art Paintings: Learning The Right Metric on The Right Feature," (Rutgers, NJ: Rutgers University Department of Computer Science, May 5, 2015), 16. <http://arxiv.org/abs/1505.00855> Accessed October 2015.

⁷⁶ Marissa Fessenden, "Computers Are Learning About Art Faster than Art Historians," *Smithsonian Magazine*, (Washington, D.C., Smithsonian Institution, May 13, 2015), 2. <http://www.smithsonianmag.com/smart-news/computers-are-getting-better-identifying-artists-art-historians-are-180955241/?no-ist> Accessed October 2015.

developed to support analysis and communication using the monumental volume of historical visual imagery now digitally accessible.

Several examples of algorithmic sorting would reveal elusive subtleties within the Boxer Uprising case study as new historiographic information. Digitally annotating and overlaying Chinese *nianhua* (woodblock prints) would reveal duplicated motifs, and conflated battle scenes to highlight the way time and simultaneity differentiate these images from Western visual approaches.

Algorithmically sorting and contrasting the two photographic records documenting the siege of Beijing illuminates subjective variations in each photographer's approach. Juxtaposing these data streams adds granular texture to the narrative by underscoring their differences, and increasing the frame surrounding the siege as experience, not fact. Search-and-sort algorithms would enable authors and readers to sift through various expository lenses with such speed and ease so as to make these actions a narrative rather than research activity.

Few other techniques align images in narrative structures that approach the complexity of text. The goal in positioning visual sources as historiography differs from art historical research that focuses on artists, their creative process, genres, and output. Algorithmic machine support would facilitate digital narrative in seamlessly displaying visually recorded view points as a panoramic scene in a picture window on the past.

The intelligence behind the image streams and their interactions elevates them to narrative beyond random or simple sorting rituals. As visual narrative evolves, authors will likely fill machine templates with images and set them on an evolving course fulfilled by algorithmic searches for similarities and differences.

Narrative in the Hands of the Reader

Visual historiography, lacking emplotment, depends on associative links that, in the words of Daniel Fulda, "require considerable narrativizing effort on the part of the recipient."⁷⁷

The reader must fill in the narrative structure, fortunately a task natural to digital interactions. Indeed the externalization of narrative—placing it outside the media into the hands of the reader—may be the primary syntactic element missing from new digital forms where traditional linear narrative is seen to be at odds with the reader's behavior.

⁷⁷ Fulda, "Historiographic Narration," 4.

Since the late 1970s, theory of history began moving past the linguistic turn as characterized in the work of Frank Ankersmit with the theory of “narrative substances” in his 1983 book, *Narrative Logic*. Ankersmit’s “sublime experience” expands history to include the intangibles of memory and presence in his 2005 work, *Sublime Historical Experience*. Inescapably subjective, historical writing continues to evoke the impenetrable and unaccountable past and language continues to be central to the practice of both history and theory. Challenges to the efficacy of language as representation remains in the realm of deep theory.

That life, as lived, becomes narrative, once it is related and recalled, illustrates the fission between the past and narrative. Whether visual language, as enabled by an immersive and interactive digital medium, can realize pre-cognitive, emotional, and intangible forms of history remains to be seen. Such practice only began in isolated, bifurcated disciplines during the past decade, with the greater humanities moving towards integrated digitality at an even slower pace. Visual historiography blends textual and visual modes of narrative. The interaction between pictures, however, requires most attention as a new digital form.

If images become the narremes or smallest grammatical elements in a visual narratology, then meaning emerges from their sequencing and re-sequencing. Diffusing the iconic images often elevated to illustrate historical ideas also makes unambiguous expository readings obsolete. Images converge in pictorial fields native to digital media.

Perhaps the single most important contribution visual historiography can make to current scholarship is the idea that complexity in a state of unresolved contradictions is a form of historical analysis unique to the digital environment. Themes weave together in a data field as a series of narratives that conflate narrow and broad perspectives as decisions are made.

Thick Description and Colligation

The concept of “thick description” demonstrates how the complex density of image-to-image interactions within subsets of visual sources needs only the historian’s interpretation to move from non-narrative patterns to narrative verisimilitude.

Thick description, a term originating with philosopher Gilbert Ryle, and popularized by anthropologist Clifford Geertz in his 1973 book, *The Interpretation of Cultures*, now applies across disciplines, including history, that depend on qualitative more than quantitative research

methodologies. In contrast to “thin” description that captures only behaviors observed in the moment, thick description develops context for behaviors by adding details, and discusses the intentions behind the behaviors.

Thick description uses prose to evoke emotions, sensory cues, and the larger web of interactions among the participants in order to transform the data patterns to recreate the scene for readers. Verisimilitude, Joseph Ponterotto writes, is the goal of thick description.

Thick meaning of findings leads readers to a sense of verisimilitude, wherein they can cognitively and emotively “place” themselves within the research context.⁷⁸

Visual narrative can aspire to the same cognitive goals that add connective, web-like detail to achieve verisimilitude.⁷⁹ The test will be whether readers can be transported into the scene through visual sequences evoking a sense of place, emotions, relationships, and sensory stimulation. The difficulties of thick description cause historical writing to sometimes teeter between description and argument, according to Jill Lepore:

Many narrative histories written by academics take readers on sea-sickening sails that endlessly tack back and forth between story and argument.⁸⁰

Visual narrative seeks to integrate story and argument through image connections. Images aren’t easily separated from story, but the overwhelming suspicion among historians is that they can’t convey argument. While text excels at reasoning and nuanced explanations, images excel at non-verbal forms of knowledge hinted at by the idea that “seeing is believing.” Digital imagery broadens the definition of historical experience, expanding rather than mimicking textual scholarship.

Non-narrative image sets tell us, by contrast, about narrative sequences. The following graphic shows the path of an image to a narrative state.

⁷⁸ Joseph G. Ponterotto, “Brief Note on the Origins, Evolution, and Meaning of the Qualitative Research Concept ‘Thick Description’,” *The Qualitative Report* Volume 11 Number 3 (Nova Southeastern University, September 2006), 543. <http://www.nova.edu/ssss/QR/QR11-3/ponterotto.pdf> Accessed October 2015.

⁷⁹ Jill Lepore, “Historical Writing and the Revival of Narrative,” *Nieman Reports*, Volume 56, No. 1. (Cambridge, MA: The Nieman Foundation for Journalism at Harvard University, 2002). <http://niemanreports.org/articles/historical-writing-and-the-revival-of-narrative/> Accessed October 2015.

⁸⁰ Jill Lepore, “Writing for History: Journalism, History, and the Revival of Narrative,” from *Why We Write: The Politics and Practice of Writing for Social Change*, Jim Downs, editor, (New York, London: Routledge, Taylor & Francis, 2006).

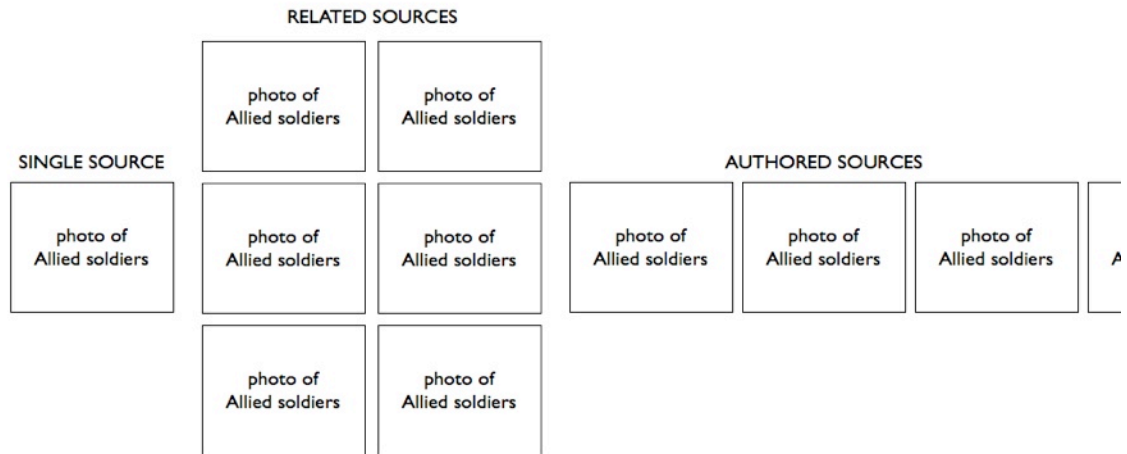


Figure 15. Transition of visual sources to narrative states. Visual relationships show increased narrativity of images: (1) single source = not narrative; (2) related sources show patterns in the data set; (3) authored sources in a linear sequence. Graphic: Ellen Sebring, 2015.

[source_to_narrative]

The graphic refers to specific photographs in the Boxer Uprising case study: (1) a photo of a group of Allied soldiers from many countries taken in Tientsin prior to the march on Beijing; (2) a collection of the many images of Allied soldiers in the database sortable by nation, medium, purpose, and so forth; and (3) a narrative that reconstructs the ten day march from Tientsin to Beijing through the photographic record, assembled chronologically and correlated to maps. The initial image by Japanese photographer Sanshichiro Yamamoto (below), shows the complexity within a single image that inspires a narrative pathway. Multiple thematic directions are suggested in the internal relationships.

A fascination with soldiers from different parts of the world was apparent in the many photographs made as troops gathered in Tianjin. They posed in representative international groups, and in various angles to record their uniforms and kits. Chinese soldiers were also covered in the Western press, in drawings and photographs, many posed as well.



Figure 16. Soldiers of the Allied forces in Tianjin, China. A studio portrait taken by Japanese photographer Sanshichiro Yamamoto in 1900. The nationalities were labeled for the visual narrative (presented in Chapter 5). Sebring, 2014.

[bxvn_march]

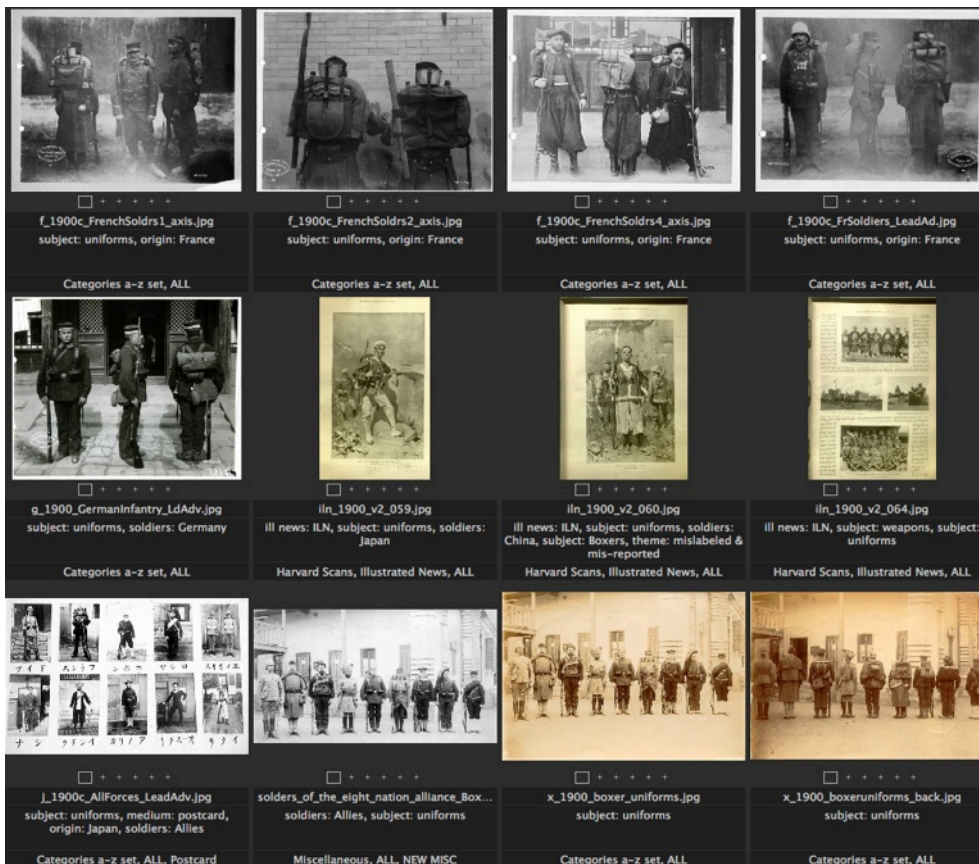


Figure 17. Database theme: Soldiers. Screenshot from Boxer Uprising database. Sebring, 2015.

[soldiers_thumbnails]



Figure 18. Soldiers of the Allied forces in Tianjin, China, photographed from the front.
[1900_boxeruniforms_front]



Figure 19. Soldiers of the Allied forces in Tianjin, China, photographed from the back.
[1900_boxeruniforms_back]



Figure 20. "Actors in the Chinese Drama: A "Boxer."
The caption to the full page drawing in the Illustrated London News labels the subject a Boxer; but the uniforms in the background suggest Qing soldiers.
1900.

[iln_1900_v2_060]

"Colligation," the binding together of different things, was described in the 1950s by theorist W. H. Walsh as a way "of explaining an event by tracing its intrinsic relations to other events and locating it in its historical context."⁸¹ Walsh suggests carrying the historian's method of finding meaning through connections into the narrative.

...we ought perhaps to take a closer look at the actual practice of historians. If we do that we cannot help being struck by their use of a procedure...of explaining an event by tracing its intrinsic relations to other events and locating it in its historical context. This is the process which was described in our introductory chapter as one of "colligation," and it will certainly be worth our while to consider its nature and importance.⁸²

⁸¹ W. H. Walsh, *Philosophy of History: An Introduction* (New York: Harper Torchbooks, 1958), 59.

⁸² *Ibid.*, 59.

Visual narrative links sources in a “web of interconnections.”⁸³ Such digital image interplay upends the dominance of iconic images used illustratively in text-based media to redistribute meaning across a pictorial array. Meaning not only shifts with alternating juxtapositions, but emerges from the cracks between similar scenes as visual parallax. Images in relationship to other images conflate non-quantifiable aspects of the past, finding narrativity beyond the patterns of a database. Authored visual relationships link intangibles such as emotion and perception to convey historical experience with the qualities of thick description.

Colligation, the historian’s procedural evidence often filed away once a book is published, becomes an active element in a digital publication as a narrative strategy for linking diverse items to create meaning. Thick description and colligation support the intuitive process of relational composition and are also transformed by the digital platform. Both become interactive as images fill multiple roles in the text and data set in the hands of the author and readers alike.

⁸³ Peter P. Icke, “Frank Ankersmit’s *Narrative Substance*: a Legacy to Historians,” *Rethinking History: The Journal of Theory and Practice*, Vol. 14, No. 4, (London: Routledge, Dec. 2010), 3.

2.6 Precedents

This section examines a number of pre-digital examples of visual narrative. The history-past divide mirrors the verbal-visual divide that has long limited diversity in historiographic forms. The digital platform facilitates an uneasy alliance between these polarized media, described in an essay on ocularism and writing by Catherine L. Hobbs, a historian of rhetoric:

Why does the verbal find the visual lurking and vice versa? Perhaps this is because of the long history of translation of one into the other and the presumed convertibility of one to the other. Yet as with two circles overlapping, not quite congruent, there is, nonetheless, a wild zone each has to itself that has nothing to do with the other.⁸⁴

Interdisciplinary approaches have long placed visual images in narrative relationships as a form of knowledge creation that rivals the dominance of verbal forms. In the 1960s, the digital revolution quietly advanced the collaboration between art, science, and technology alongside more visible social, political revolutions. The digital platform can now draw on these precedents for forms that support visual expression.

Wunderkammern and The World in a Box

Creating meaning in the gray area between art and science, and between ocular, sensory perception and intellectual reasoning has precedents, including 17th century collections methodology. The practice of displaying collections as objects within a room designed to showcase them remains a strong image today especially with the increasing viability of immersive media technology. *Wunderkammern* (wonder chambers) or “Cabinet of Curiosities” displayed relationships in natural science through immersive environments that often spread over the ceiling and specifically designed architectural staging. The form continued in frontispiece illustrations of *Wunderkammern*, heralding the rise in book circulation and the transition to print as “mass media” in late 17th century.⁸⁵ The viewer navigates the space following the connections set up by the author/collector to create meaning. Guides are prominent in the frontispiece drawings. The *Wunderkammer* concept is alive and well today, for example, as multi-artist collaborations at the 2012 and 2013 Venice Biennale.

⁸⁴ Catherine L. Hobbs, “Learning From the Past: Verbal and Visual Literacy in Early Modern Rhetoric and Writing Pedagogy,” from *Language and Image in the Reading-Writing Classroom: Teaching Vision*, Kristie S. Fleckenstein, Linda T. Calendrillo, Demetrice A. Worley, editors. (New Jersey: Lawrence Erlbaum Associates, 2002), KINDLE

⁸⁵ Helmar Schramm, Ludger Schwarte, and Jan Lazardzig. *Collection, Laboratory, Theater: Scenes of Knowledge in the 17th Century Theatrum Scientiarum*. English Edition. (Berlin; New York: Walter de Gruyter, 2005), XXX



Figure 21. Ferrante Imperato, *Natural History Cabinet*, 1599.

[Wunderkammern_RitrattoMuseoFerranteImperato_wp]

Image-based knowledge creation finds another model from the collecting era in Johann Siegmund Stoy's "Picture Academy for the Young." Researched in Anke te Heesen's book, *The World in a Box: The Story of an Eighteenth-Century Picture Encyclopedia*, the role of images in learning is described as "knowledge transmitted through the senses":

One can distinguish, here, between sensible and conceptual knowledge. In the eighteenth century, sensibility numbered among the roots of knowledge and was associated with immediate perception of an object...It was a commonly held view at this time that depictions served a more than merely illustrative function. Above and beyond this, they were held to play a role in the creation of knowledge.⁸⁶

Packaged as a box of picture cards—52 copperplate etchings each with nine image fields—Stoy's encyclopedia of knowledge was designed to be examined and sorted by users. The recombinant set of images made up the basic elements of narrative structure, acting as the narremes of a visual model. Historical narrative seen through this visual matrix is multi-linear and experiential rather than linear and hypothesis-driven. Texts become textural as narrative

⁸⁶ Anke te Heesen, *The World in a Box: The Story of an Eighteenth-Century Picture Encyclopedia* (Chicago: University of Chicago Press, 2002), 43, 45.

encompasses simultaneous geopolitical spaces and points-of-view. Te Heesen pursued her study of this knowledge system by working through the elements of the object itself, “writing tactile history.”

In following Stoy's gripping enterprise, the object itself determines which historiographic approach this analysis must take. Piece by piece, compartment by compartment, my study advances toward an encyclopedic vision of the eighteenth century; if I were to choose a term for this object-oriented investigation, it would be writing tactile history.⁸⁷

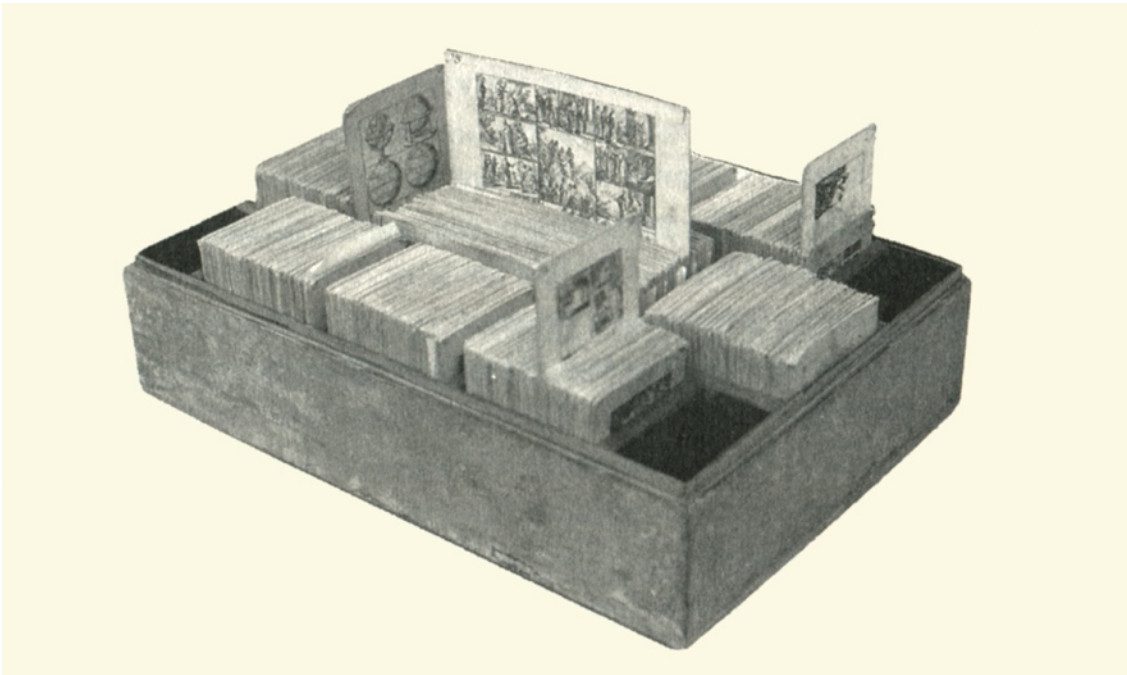


Figure 22. Johann Siegmund Stoy's "Picture Academy for the Young." Illustration from Anke te Heesen's book, The World in a Box: The Story of an Eighteenth-Century Picture Encyclopedia, Chicago: University of Chicago Press, 2002, page 3. Caption: "Storage box of Stoy's Picture Academy (photograph by the author)." Stoy's visual encyclopedia took the form of sortable cards housed in a seventeen by twelve inch box.

[stoy003]

If visual narratives complement rather than replace text in such alternate historiographic forms, the implication for author and reader, designer and technologist is to create historical works that facilitate shifts between sensibilities within one document. Composition with media in their native languages supports the goal of an expanded model of digital visual narrative. The ephemeral and fluid qualities of digital models of visual narrative, though dreamed of, were not possible in the print book era. (And what might post-digital sensibilities suggest in the dreamed of narratives to come?)

⁸⁷ Ibid., 10.

Moholy-Nagy: Painting, Photography, Film (1925)

László Moholy-Nagy's 1925 book, *Malerei, Photographie, Film* (Painting, Photography, Film), reconfigures the book form as a hybrid visual construction that blends the aesthetics of the book, graphic design, and photographic collage.

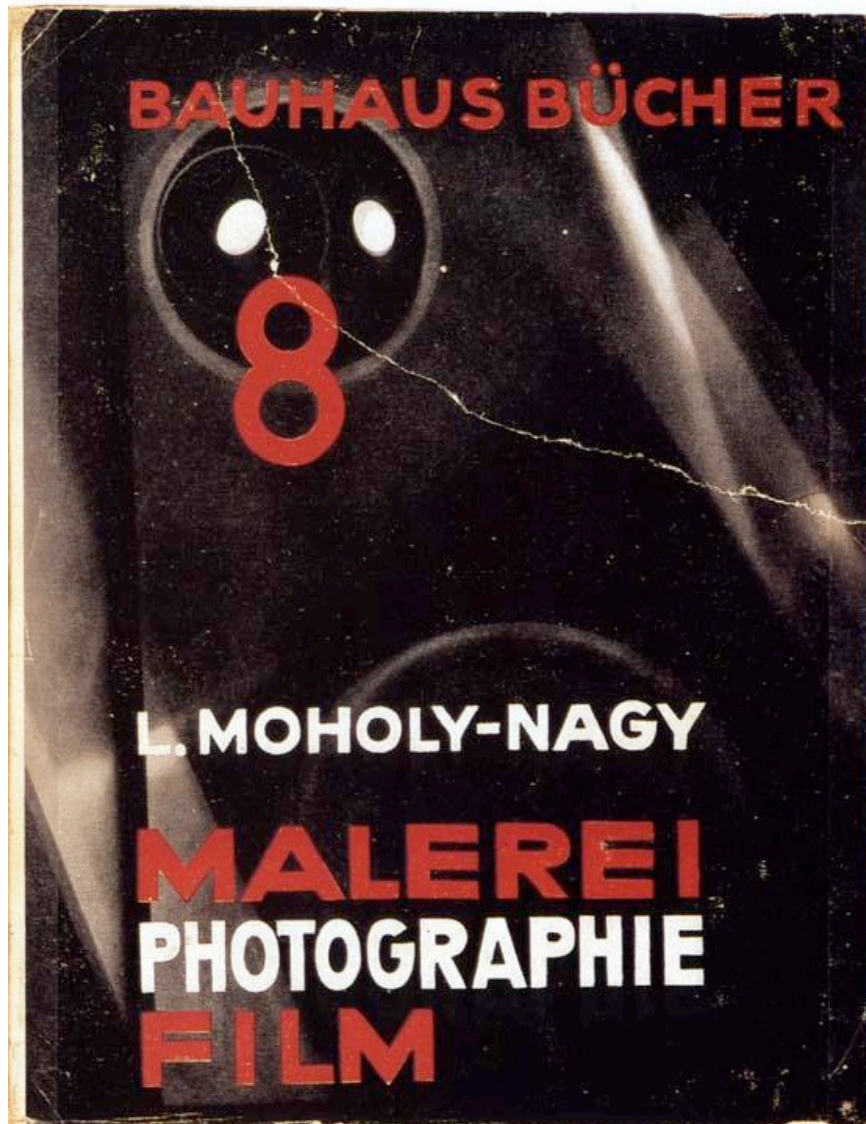


Figure 23. László Moholy-Nagy, Malerei, Photographie, Film, 1925. (Painting, Photography, Film), cover; No. 8, Bauhaus Books, Albert Langen-Verlag, Munich, 1925.

[moholy-nagy-book_cover]

The work was number eight of 14 “Bauhausbücher” published by Moholy-Nagy and Walter Gropius in Munich from 1925-1930. Bold typography, written commands, signage, and photographs culled from the burgeoning illustrated news media in Germany pushed readers into

observational overdrive. Readers literally animated the book as they flipped forward and back through the pages, and rotated it in response to the purposeful layout.

Malerei, Photographie, Film concludes with a 14-page film script, titled “Dynamik der Gross-stadt” or “Dynamics of the Metropolis” (pictured below). Thick lines simulate a progression of vignettes comprised of words, symbols, numbers, short texts, and images. The densely-packed pages stimulate the full spectrum of senses with musical and cacophonous dynamics through punctuation, repetition, onomatopoeic phrases, photographic manipulation, and multi-sensory atmospheric sights, such as bursts of steam that evoke multi-sensory responses including sound, moisture, touch, force, and disorientation.

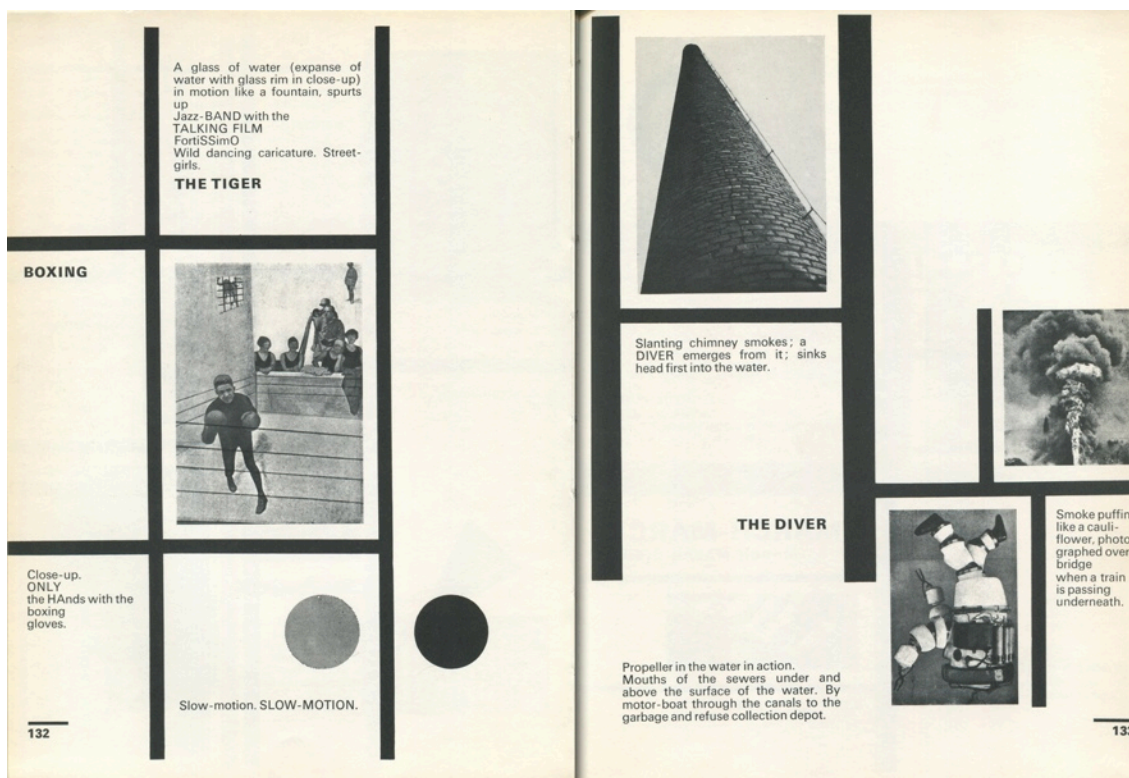


Figure 24. László Moholy-Nagy, “Dynamics of the Metropolis,” 1925. Two pages from the film script included in *Malerei, Photographie, Film*, Bauhaus Books, Albert Langen-Verlag, Munich, 1925. [moholy-nagy_132-133]

This evocation of the city, a paper “Ballet Mécanique,”⁸⁸ confronts mechanization through photography’s second sight, similar to the films, “Berlin: Symphony of a Great City” (Walther Ruttmann, 1927), and “Man with a Movie Camera” (Dziga Vertov, 1929).

⁸⁸ Film by Fernand Léger, 1924.

A non-linear temporality drives the narrative, with the added complexity of photographic images that conflate time at the moments of exposure between subject, the eternal past, and viewer, the eternal present. Readers-cum-viewers experience a disorienting simultaneity, described by Pepper Stetler in her 2008 essay, “The New Visual Literature: László Moholy-Nagy's *Painting, Photography, Film*.”

Although these road signs point us to photographs and words on which our visual attention should be focused, we are guided around in no particular order, all at once and to everywhere. The simultaneity—of the metropolis and the film script—is disorienting, and just like traveling through the streets of an unfamiliar city we often lose our way through these pages. Near the end of “Dynamic of the Metropolis” we read, “the entire film will be shown BACKWARDS (shortened) from here until the JaZZ-BAND (also reversed).”⁸⁹

The reader as an active user has no opportunity to settle and observe, instead scanning continually, cued by both the layout and texts to circle the material repeatedly. Moholy-Nagy, Stetler argues, sought to keep readers suspended in the moment of perception rather than contemplation.

Scanning continually preoccupies the observer and provides no opportunity to process or reflect. To Moholy-Nagy, pausing for the contemplation of stimuli would have meant incorporating memory and the mind into the perceptual process, which would distance the observer from the “optical truth” of photography.⁹⁰

⁸⁹ Pepper Stetler, “The New Visual Literature: László Moholy-Nagy's *Painting, Photography, Film*,” *Grey Room*, No. 32, (Cambridge, MA: MIT Press, Summer 2008), 104.

⁹⁰ *Ibid.*, 108.

Aby Warburg: Mnemosyne Atlas (1924-1929)

Art historian Aby Warburg similarly authored with visual connections. His *Mnemosyne Atlas*, begun in 1924 and still incomplete when he passed away in 1929, consists of a series of panels covered with black-and-white photographs juxtaposed in heuristic, associative visual connections on topics of antiquity and memory.



Figure 25. Aby Warburg, section of the “Mnemosyne Atlas,” 1924-1929.
The Warburg Institute.
[warburg79-49]

According to Christopher D. Johnson in his book, *Memory, Metaphor, and Aby Warburg's Atlas of Images*,⁹¹ the third and final version of the *Mnemosyne Atlas* features 971 images, selected from more than 2000 over the course of the project, arranged and rearranged by Warburg on 63 boards that, today, exist only as photographic reproductions. Art historical relationships cover nine themes, including classical cosmology, astronomical and astrological thought, Renaissance and Baroque art, and artists such as Virgil, Dürer, and Rubens.

Warburg's associative approach—a visual, cartographical encyclopedia of intellectual history—continues to intrigue scholars and inspire artists. As art history practiced through relational visual images, the project foreshadows the visual databases of digital networks and

⁹¹ Christopher D. Johnson, *Memory, Metaphor, and Aby Warburg's Atlas of Images* (Ithaca, New York: Cornell University Library and Cornell University Press, 2012).

questions of meaning in associative visual narrative. Warburg kept written notes to accompany the panels which scholars draw upon for their analyses.

The overall display of the 150 x 200 cm boards likewise foreshadows contemporary immersive environments, instigating states of heightened perception in viewers who scan and search for pathways through the grids of content in smaller and larger patterns. Even the smallest unit, the single image, is a world unto itself. How then, the mind and eye ponder, do these designs fit together?

Invoking Mnemosyne, the Greek goddess of memory, indicates that Warburg sought to conjure the past through archetypal patterns. According to Johnson, memory is found by linking the familiar and the foreign, explaining Warburg's associative design built on links.

Memory, Hölderlin intimates, sets us an endless, impossible task in part because we are forever shuttling between the familiar and "the foreign." And if "language" is the principal means by which we remember, as the rich imagery and allusions in the hymn's three strophes urge, then this is because it is fueled by metaphor whose task, as Aristotle and many others after him have observed, is to exploit our thirst for the "foreign," that we might see similarities in things initially perceived as being quite dissimilar.⁹²

The large scale of the work contributes to its depth and lasting value, clearly articulating the author's voice even with its obtuse metaphorical vocabulary. While scholars use Warburg's written notebook, and draw on the cultural environment of Weimar Germany intellectuals to interpret the *Mnemosyne Atlas*, the experiential communication of intangible meanings may be its most powerful statement.

Attempting to reconcile historical differences and contingencies via formal similarities, his visual metaphors creates a mutable, utopian space of contemplation.⁹³

The *Mnemosyne Atlas* holds a rare position as a work of scholarship that functions like a work of art. Its murky black-and-white texture creates aesthetic unity and a mysterious tone. The multiple stages of photographic production involved in mounting it, and enabling the resorting of objects, make it as much about photography as about antiquity. Layers of meaning, intellectual and aesthetic, continue to intrigue viewers. That historians might create visual models, as suggested by David J. Staley in *Computers, Visualization, and History*, also implies skill at visualization for these works to have lasting impact.

⁹² Ibid., 2.

⁹³ Ibid., 19.

The challenge of such work, shown in Warburg's prolonged effort, becomes manageable with digital tools. But, making what is possible also meaningful lies in the gray area between scholarship and art, as can be seen in the beautiful, revelatory, yet often obtuse output of data visualization programs. Inspired by Warburg, artists have taken curatorial roles prescient of digital databases, collecting and manipulating photographic reproductions, including art historian André Malraux's "Le Musée imaginaire," Hanne Darboven's *Kulturgeschichte 1880-1983* (Cultural History 1880-1983), and Gerhard Richter's "Atlas."



Figure 26. André Malraux, "Le Musée imaginaire," 1947.

Photo: Maurice Jarnoux [[link](#)]

[adams_malraux_3]



Figure 27. Gerhard Richter, "Atlas," 1962-2013. [[link](#)]
[richter_atlas]



Figure 28. Hanne Darboven, *Kulturgeschichte 1880-1983*.
(*Cultural History 1880-1983*), Dia, New York, 1980-83. Photo: Florian Holzherr [[link](#)]
[darboven_1980-83]

Dorothea Lange: MOMA Exhibition (1966)

In 1964, Dorothea Lange was preparing the first one-woman exhibition of photography at the New York Museum of Modern Art (MOMA). Preceded by only five one-man exhibitions, Lange's work was part of a movement to establish the credibility of photography as fine art. Sadly, Lange was in the last stages of cancer as she mounted photographs on a cloth-covered wall in her Berkeley, California home.



Figure 29. Dorothea Lange prepares her MOMA exhibition, 1964. At home in Berkeley, California. Photograph by Rondal Partridge.
[1964_Dorothea_Lange_MOMA_prep]

A film captured her at work with husband Paul Taylor, son Dan Dixon, and MOMA's revolutionary Curator of Photography, John Szarkowski. The process of making thematic sequences from her life's work put photographs taken between 1920-1965 into new relationships. Lange explained the narrativity gained by ordering her photographs:

Your viewer, and he's a very mysterious person. You have to keep him in mind always too. And you don't know him. When he looks at such a wall, on relationships, what my hope would be that he would say to himself, "Oh yes, I know what she meant. I never thought of it. I never paid attention to it." Or something like, "I've seen that a thousand times, but won't miss it again. Won't miss it again." You've told about the familiar, the understood, but in calling attention to what it holds, you have added to your viewer's confidence or his understanding.⁹⁴

"She described it as making sentences out of photographs and maybe, possibly, if you could be really good at it, you'd make a paragraph out of it," said Richard Conrat, Lange's darkroom assistant, in a 2014 film by Lange's granddaughter, Dyanna Taylor. "As the walls

⁹⁴ Dorothea Lange, from "USA: Photography – Dorothea Lange: Under the Trees," part 1 of 2, documentary film by Richard Moore, KQED for National Educational Television (WNET), filmed 1964-1965, broadcast 1966. <http://watch.thirteen.org/video/2254813771/> Accessed October 2015.

developed, as themes developed, pairs of pictures, groups of photographs coalesced around each other and made visual sense.”



Figure 30. Photo wall for Lange’s MOMA exhibition. Berkeley, California, still frame from the film “Dorothea Lange: Under the Trees,” by Richard Moore, filmed 1964-1965, broadcast on PBS in 1966.

[1965_under_the_trees]

On removing one from a pair of photographs, Lange reacted, “Once you’ve seen a pair like this...you miss it. It’s really only half a sentence.”⁹⁵ To Lange, photographs transformed when seen in relationship to other photos, making the editing process vital. “This group of pictures, like all my groups of pictures, suggests the possibilities of this medium.” She is visibly moved when contemplating a row of three photos tacked up on the board:

Underneath those three trees is a beautiful statement. Just those three. It’s a beautiful statement. Can you see that? I can, just as they are on the wall there.⁹⁶

⁹⁵ “Dorothea Lange: Grab a Hunk of Lightning,” film directed by Dyanna Taylor, American Masters, PBS, first broadcast, August 29, 2014.

⁹⁶ Lange, from the film “USA: Photography – Dorothea Lange: Under the Trees,” 1965.

György Kepes and the Center for Advanced Visual Studies, MIT (1967)

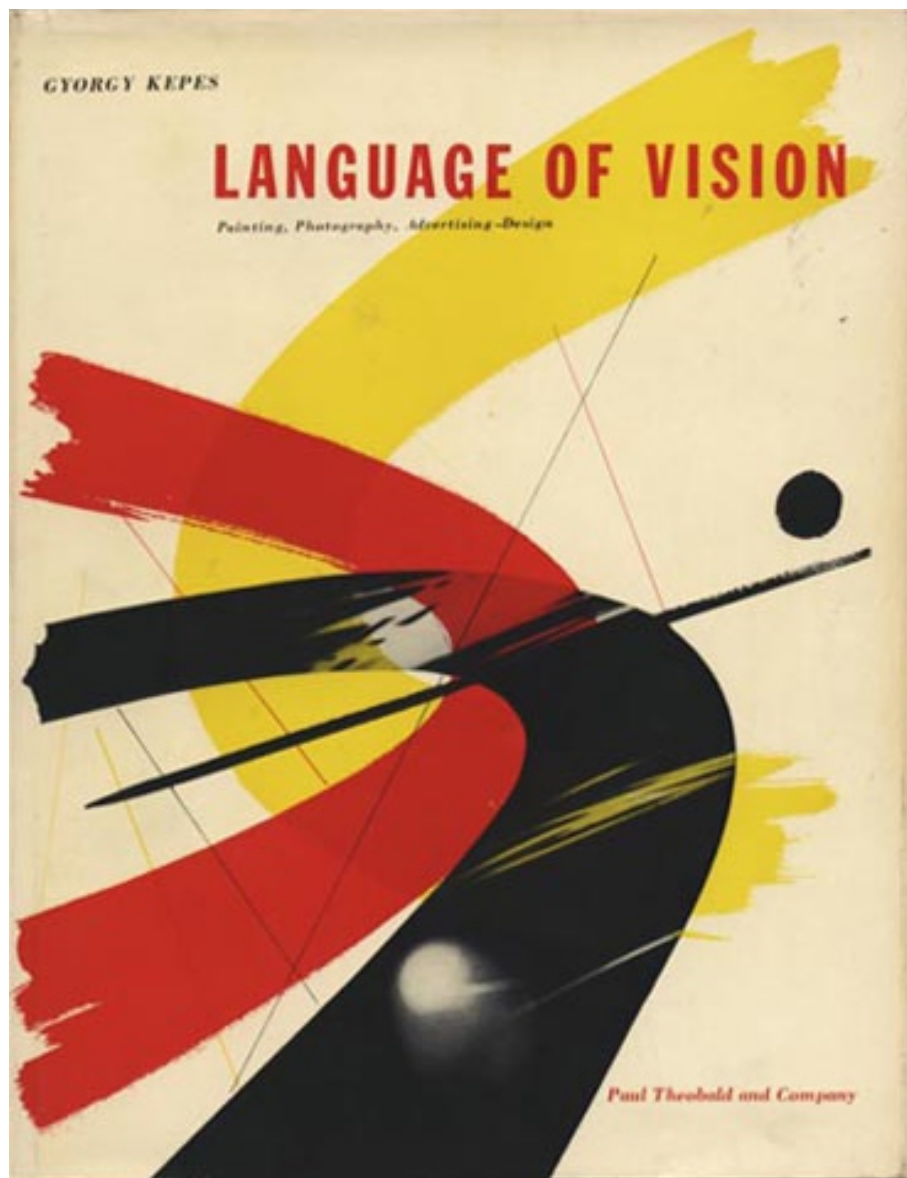
As a graduate of the Center for Advanced Visual Studies (CAVS) at the Massachusetts Institute of Technology, and subsequent Research Fellow, I studied with CAVS' second and longest director, Otto Piene. I experienced firsthand the Center's ground-breaking interdisciplinary visual thinking, and the fearless embrace by artists of emerging technologies, as well as the open curiosity of scientists about artistic insights in their research.

Founded in 1967, CAVS was a longtime dream Kepes advocated for over 20 years during his tenure as an MIT Professor in the School of Architecture and Planning. Its time came, in part, as MIT's response to student protests against technology tied to military contracts and the American war in Vietnam. Nested in the heart of this leading engineering school, the arts would contribute new directions and ways of thinking for scientists and vice versa towards peaceful uses of technology. But more than technological art, the Center would spread visual thinking across disciplines, and out into the environment, the streets, and sky. New ways of seeing, and new ways of creating artistic experiences were forged in a uniquely collaborative atmosphere.

Much of this agenda was set by the Center's founding director, György Kepes, an artist, designer, educator, and theorist rooted in the Bauhaus and New Bauhaus of the 1920s and 30s, who engaged in repositioning the arts in a scientific age. His 1944 book, *Language of Vision*, looked for the deeper structures of nature and life forms in the environment that could be revealed with emerging imaging technologies. Kepes described a visual narrative approach to his 1956 book, *The New Landscape in Art and Science*:

This book is meant to be looked at more than read. It is a picture book, arranged to bring attention to a newly emerged aspect of nature, hitherto invisible but now revealed by science and technology. The "text" of the book is not its message. Primarily, a body of material is presented, rather than scientific information or esthetic theory. The material is organized to help the reader to *see*, with the hope that he will grasp significant connections for himself.⁹⁷

⁹⁷ György Kepes, *The New Landscape in Art and Science*, (Chicago: Paul Theobald, 1956), 1. http://rekveld.home.xs4all.nl/tech/Moholy_Kepes_fragments.pdf Accessed October 2015.



*Figure 31. György Kepes, Language of Vision.
With introduction essay by S. Giedion, and Si. I. Hayakawa, Chicago: Paul Theobald, 1944.
[kepes_language_of_vision]*

Kepes reverses the usual relationship of text and image in print, calling the book a “laboratory experiment” that “fuses visual images and verbal communication in a common structure” where the pictures “brought together” are the content, and the verbal statements are the illustrations.⁹⁸ The fusion was fueled by technology that revealed previously invisible processes through microscopic and x-ray photography, light, and so forth.

Visual language stands at the center of Kepes and CAVS’ approach to art-science interaction according to Anne Collins Goodyear:

⁹⁸ Ibid, 1.

Based on the conviction that visual language represented a bridge between art and science, the Center put into practice the Bauhaus and constructivist ideals Kepes had embraced since the beginning of his career.⁹⁹

CAVS eventually became a model for art-science-and-technology centers worldwide, beginning with the Center for Art and Media in Karlsruhe, Germany (ZKM), and the Academy of Media Arts, Cologne (KHM) both founded in the mid-1980s. Since the founding of CAVS, especially with the digital revolution, the art-science-technology fusion has come into common usage by the general public. Gone are the behemoth computers in specially-cooled rooms staffed by student experts who answered coding questions for visitors, like me, who came to tap out simple Emacs (an early text editing software originating MIT) commands. The original Wiesner Building of the MIT Media Lab, completed in 1985, devoted an entire sub-floor to the computing infrastructure. Technology, design, commercial, and creative need rapidly pushed digital development from theory and speculation into tangible and ever-smaller, ubiquitous forms. Technology caught up with Kepes' dream of a "visual language" in the first decade of the 21st century. In mass media such as the dominant platform, Facebook, social media interactions are image-driven. Print newspapers and magazines, like *The New York Times* and *Vogue*, are experimenting with visual narrative approaches as they adapt to digital dynamics.

⁹⁹ Anne Collins Goodyear, "György Kepes, Billy Klüver, and American Art of the 1960s: Defining Attitudes Toward Science and Technology," *Science in Context* 17(4), (Cambridge: Cambridge University Press, 2004) 616-617. [[link](#)]

Rudolf Arnheim and Visual Thinking (1960s)

The 1960s also saw the popularization of “visual thinking,” through the work of psychologist Rudolf Arnheim. Arnheim contributed an essay titled, “Visual Thinking,” to Kepes’s, *Education of Vision*, the first of his six volume, multi-authored, *Vision + Value Series*, published in 1965 and 1966.

Arnheim discusses children’s drawings as evidence of visual, pre-verbal thinking emanating from perception but exuding complex concepts on par with intellectual, verbal reasoning. In the illustration below, a child portrays herself as a queenlike figure at the dinner table, lit by candles, arms flung out, exuberantly dominant over her submissive parents who appear “like two saints flanking the Virgin in an altar painting.”¹⁰⁰



Figure 32. Rudolf Arnheim, illustration from essay, “Visual Thinking.” *Education of Vision*, Volume 1, *Vision & Value Series*, György Kepes, editor, New York: Braziller, 1965.

[Arnheim_EoV_p9]

¹⁰⁰ Rudolf Arnheim, “Visual Thinking,” *Education of Vision*, György Kepes, editor, Volume 1, *Vision & Value Series*, (New York: Braziller, 1965), 9. <http://www.designers-books.com/vision-value-György-kepes-1965-1966/> Accessed October 2015.

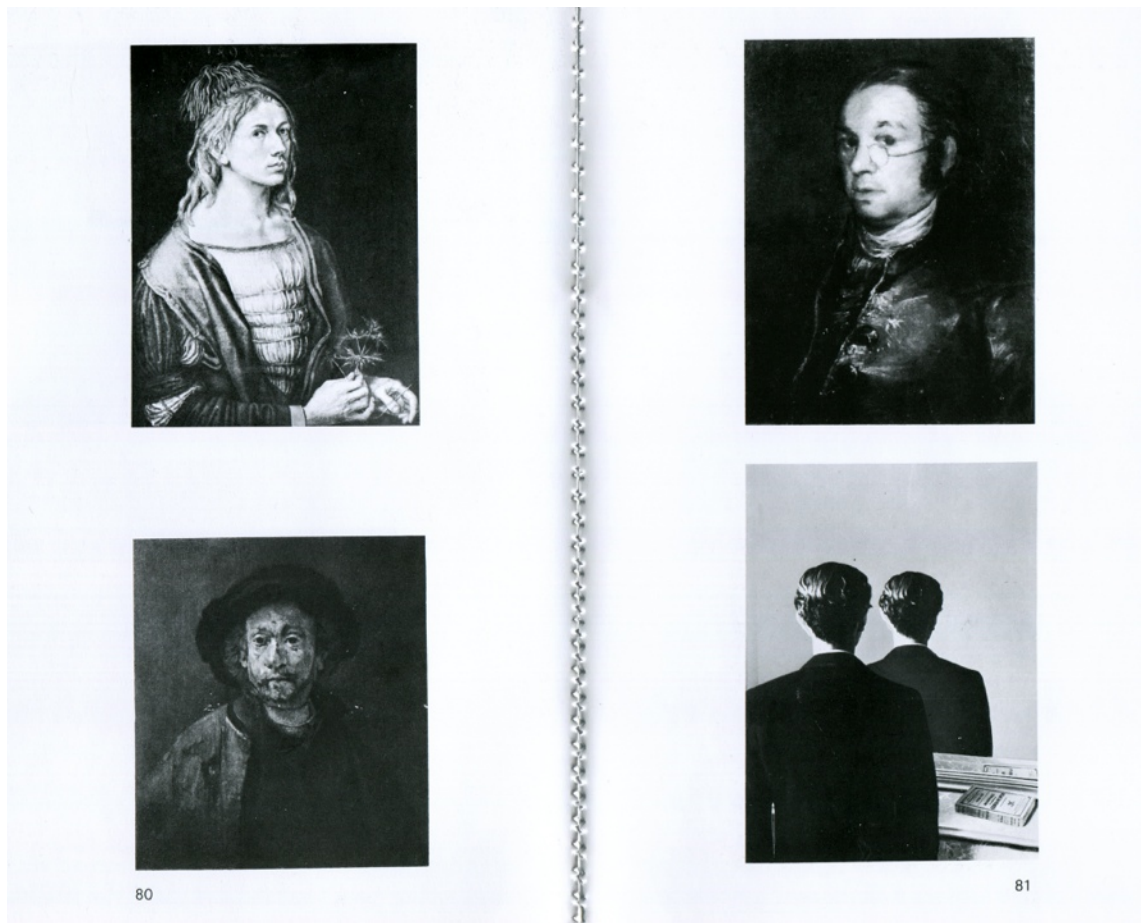
Arnheim writes, “Many processes of thought...are likely to originate in the perceptual realm and be translated into intellectual operations later.”¹⁰¹ Considering the speed at which visual perception travels, the dangers of misinterpretation and precognitive, emotional reactions to historical visual artifacts create dangers in visual authoring. Visual, perceptual, pre-verbal thinking has a powerful, even dominating, role in knowledge production according to the rules of visual thinking posited by Arnheim. Along with the rules of visual grammar posited by Kepes, these concepts become critical once images are elevated from the role of illustration to primary text.

¹⁰¹ Ibid., 10.

John Berger: *Ways of Seeing* (1972)

“Seeing comes before words. The child looks and recognizes before it can speak.” The opening of John Berger’s 1972 co-authored book, *Ways of Seeing*, affirms the knowledge of sight in its very structure. The narrativity of pictures equals that of text in the seven essays to “be read in any order” (a nod to non-linear narrative) as the “Notes to the Reader” states:

Four of the essays use words and images, three of them use only images. These purely pictorial essays (on ways of seeing women and on various contradictory aspects of the tradition of the oil painting) are intended to raise as many questions as the verbal essays.¹⁰²



*Figure 33. John Berger, page spread from Essay #4.
One of three image-only essays in Ways of Seeing, 1972, pages 80-81.
[berger80-81]*

Berger, an art historian, discusses the circular nature of looking, unconsciously and continuously observing relationships to make sense of things:

We never look at just one thing; we are always looking at the relation between things and ourselves. Our vision is continually active, continually moving,

¹⁰² John Berger, with Sven Blomberg, Chris Fox, Michael Dibb, and Richard Hollis. *Ways of Seeing*. (London: Penguin Books, 1972), Note to the reader.

continually holding things in a circle around itself, constituting what is present to us as we are.¹⁰³

The ocular dynamic of the observational process gathers information through associations until it comes to a decision of understanding rather than a belief that the whole has been seen. The innate unrest of looking, waiting for input and searching for details, suggests that image-based narrative will be similarly unstable, circular, associative, and open-ended.

To quote the text without quoting the visual essays in *Ways of Seeing* misses the point. The book's spectrum of visual-verbal relationships acknowledges the differences in reading and viewing:

Sometimes in the pictorial essays no information at all is given about the images reproduced because it seemed to us that such information might distract from the points being made.¹⁰⁴

Berger believes that an image "could outlast what it represented," offering unique historical testimony that recorded not just an object, but what people of a previous time saw.

Images were first made to conjure up the appearances of something that was absent. Gradually it became evident that an image could outlast what it represented; it then showed how something or somebody had once looked - and thus by implication how the subject had once been seen by other people....No other kind of relic or text from the past can offer such a direct testimony about the world which surrounded other people at other times.¹⁰⁵

The book must be understood inter-medially as part of a seminal, 1972 BBC series also titled *Ways of Seeing*, consisting of four 30-minute films.

Episode 1 begins with Berger explaining that in the past, a work of art, like the eye, could only be in one place at a time, but that photography, the "camera eye," changed everything: "The camera reproduces it, making it available in any size, anywhere, for any purpose." Warburg's *Mnemosyne Atlas* could only be made in a photographic era.

¹⁰³ Ibid., 9.

¹⁰⁴ Ibid., 9.

¹⁰⁵ Ibid., 10.



Figure 34. Still frame from Episode 1 of Ways of Seeing. Four 30-minute films, a BBC series written and presented by John Berger, with producer Mike Dibb, 1972.
[berger_way_of_seeing_ep1]

The photographic eye and impact of reproduction expressed in Walter Benjamin’s text, “The Work of Art in the Age of Mechanical Reproduction,” dominates the first program, and indeed, much of art and media theory in the 20th century. The incursion of visual forms into intellectual life, as well as daily experience—Berger links the representation of the female form in high art with advertising—breaks down boundaries and lays the groundwork for the intermediality of the computer age.

Digital intermediality reaches far beyond the reproduction of art towards an incalculable landscape recorded visually, aurally, musically, still, and in motion, manipulated, circulated, and erased within the span of a day. The “ways we see” becomes the “ways we present” within an multi-player metaverse.

Chapter 3: Research at MIT Visualizing Cultures

3.1 Chapter Overview

This chapter examines the Visualizing Cultures project at the Massachusetts Institute of Technology, and its development as a foundation for my research on the intersection of visual narrativity and digital historiography.

As the Creative Director since the project's beginning in 2002, I designed the digital approach, collaborated with 18 invited scholars on the production of over 40 published units, and authored a unit taking a transnational approach to the Boxer Uprising and turn of the century imperial wars.

My interactions with visual images in a dozen years of work on Visualizing Cultures informs my desire to further develop this fledgling form of historical representation. The project makes an invaluable case study for visual historiography in the digital medium.

Topics include:

- (1) My decisions as the Creative Director of Visualizing Cultures shaping the design, pedagogical, and theoretical underpinnings of the project;
- (2) The project as an evolving methodology for image-driven scholarship;
- (3) Differences in authors' expertise: social/cultural historians, art historians, writers, filmmakers, archivists, curators, and visual artist/designers;
- (4) Interdisciplinary collaboration;
- (5) The output, achievements, and limitations of the project.

Key questions include:

- (1) How has Visualizing Cultures changed the discipline of history and its approach to the historical visual record?
- (2) In the spectrum of text-to-image balance, where does Visualizing Cultures fall and can design go further towards image narrativity?

3.2 Visualizing Cultures at MIT (2002-2015)

About Visualizing Cultures

In 2002, I was invited by two MIT Professors, Pulitzer Prize-winning historian, John W. Dower, and linguist and online education specialist, Shigeru Miyagawa, to begin a new project, Visualizing Cultures (VC) [<http://visualizingcultures.mit.edu>] The project's mission: to produce innovative digital scholarship using the newly-accessible visual record that meets the standards of academic publishing, scholarly argument, and teaching. Initially little-understood, the project predated the widespread emergence of digital humanities as an academic field.

In 2010, *The New York Times* praised VC for showing “how fluid, interactive and just plain gorgeous history and travel books would look in the coming world of electronic tablets”:

The site is a marvel of navigation, with topics and historical periods arranged in grids or in lists. Long before the advent of the iPad, the architecture set up to show the imagery and words gave a glimpse of how fluid, interactive and just plain gorgeous history and travel books would look in the coming world of electronic tablets, with links to essays, maps and processions of large, high-resolution images that scroll horizontally across the screen.¹⁰⁶

Now an internationally recognized resource with over 40 units by 18 authors, Visualizing Cultures promotes digital visual scholarship with secondary school curriculum and teacher training; several touring exhibitions in the U.S., Japan, and China; a collaboration with Harvard University on a Massive Open Online Course (MOOC); and five conferences, “Visualizing Asia in the Modern World” held between 2010 and 2015 at Yale, Princeton, and Harvard universities.

Awards include MIT's Class of 1960 Innovation in Education Award, 2004; National Endowment for the Humanities “EDSITEment,” 2005; and the Association of Asian Studies' Franklin R. Buchanan Prize for curriculum, 2011. The Visualizing Japan MOOC (VJx) was a finalist in the Creative Frontiers category of the prestigious Japan Prize, 2015.

Founding and MIT OpenCourseWare (2002)

Visualizing Cultures was founded to investigate the digital platform for image-driven scholarship based on the newly-digitized visual record. The website's mission statement reads:

Visualizing Cultures exploits the unique qualities of the Web as a publishing platform to enable scholars, teachers, and others to: (1) examine large bodies of previously inaccessible images; (2) compose original texts with unlimited

¹⁰⁶ Randy Kennedy, “Asian Culture Through a Lens,” *Education Life*, *The New York Times*, April 16, 2010. http://www.nytimes.com/2010/04/18/education/edlife/18visualizingculture-t.html?_r=0 Accessed October 2015.

numbers of full-color, high-resolution images; and (3) use new technology to explore unprecedented ways of analyzing and presenting images that open windows on modern history.¹⁰⁷

Visualizing Cultures began at a time when visual images were not significant in historians' training or practice. Unusual for the use of images in his research, Dower pointed out that technology was not his area of expertise, speaking at a 2008 seminar at Columbia University:

Dr. Dower began the presentation by explaining that he was, in fact, a historian and did not have a technology background. He became a collaborator on the Visualizing Cultures project because he was interested in how technology could be used for education and outreach. In particular, Dr. Dower was interested in image-driven scholarship and changing the way humanists and scholars approach scholarly work. He explained that media images shared in the classroom do not only illustrate what the professor is presenting, but that these images have their own trajectory.¹⁰⁸

Visualizing Cultures brought together historians and art historians to publish on MIT's revolutionary initiative to make courses freely available on the web, OpenCourseWare. The visual lexicon that emerged in Visualizing Cultures elevated design to a role in knowledge creation. A diverse group of scholars were asked to compose units in which images drove the research and narrative. Such highly developed visual content was unprecedented on the web. Creating a unit generally took four months of my time working with Dower as editor to research images, expand and design the core essay and visual narratives to fit the VC model. The final html coding and digital animations were then produced by team member Andrew Burstein before the unit was made public on the MIT OpenCourseWare site. The pervasive spread of digital technology attests to Visualizing Cultures' prescience, and its continued popularity confirms the value of image-driven historiographic models.

As Creative Director, I was responsible for the image-based digital model and interface, I developed content, collaborating with Dower on an image-driven historical methodology and an image-driven narrative structure. I authored the unit "Civilization and Barbarism: Cartoon Commentary & the 'White Man's Burden' (1898-1902);" and with China scholar Peter C. Perdue, contributed to the Boxer Uprising units in currently in production.

¹⁰⁷ From the "About" page, Visualizing Cultures website, <http://visualizingcultures.mit.edu>, Massachusetts Institute of Technology.

¹⁰⁸ Veena Vasudevan, "Image-Driven Scholarship and the MIT Visualizing Cultures Project Professor John Dower, History Professor at MIT and Scott Shunk, Program Director," *New Media in Teaching and Learning*, Seminar #683, (New York: Columbia University, March 20, 2008). http://cnmtl.columbia.edu/seminar/pdf/summary_032008.pdf Accessed October 2015.

“Black Ships & Samurai,” the First Unit

In 2002, Dower wrote the first unit, “Black Ships & Samurai: Commodore Perry and the Opening of Japan (1853-1854).” His area of expertise, modern Japan, determined the focus of the first wave of content. The site would later expand into China and the Philippines. “Black Ships & Samurai” chronicled a startling encounter that proved a seminal moment in U.S.-Japan relations. Perry’s gunboat diplomacy succeeded in ending Japan’s official policy of isolation (*Sakoku*) dating back to 1641. After such prolonged seclusion, the visual records of each side made a dramatic study in visualizing the “other.” In *Visualizing Cultures*, for the first time the full Japanese and American visual records could be seen side-by-side, digitally displayed in their full complexity.



Figure 35. Commodore Perry and the “Black Ships.”
Key juxtapositions contrasting “East” and “West” viewpoints in the unit, “Black Ships & Samurai,” by John W. Dower, MIT *Visualizing Cultures*, 2002

[bss_juxtapositions]

The arrival of Perry's "black ships" is still celebrated in the U.S. and Japan today. The Perry mission appears in a new way through the visual record. Key juxtapositions include portraits of Perry, on the Western side, a daguerreotype, and on the Eastern side, a Japanese woodblock print. The blue brushed into the whites of his eyes to depict a blue-eyed foreigner shows the remoteness of the subject. Second, an American oil painting of Perry's gunboat exudes expansionist missionary zeal with the description, "Carrying the 'Gospel of God' to the Heathen." On the other side, the Japanese print anthropomorphizes Perry's iron-clad paddlewheel steamer as a monster ship.

While such juxtapositions could be made in hard-bound texts, comprehensive comparison of the full visual records could not. In *Visualizing Cultures*, readers experienced a nuanced story capturing the shock, fear, aggression, humor, and mutual respect in these first steps towards Japan's shift from feudal to modern state. The *Visualizing Cultures* site carries this moment forward in other units that show where Japan's emergence as a world power leads, with great victories over China and Russia, up to disastrous defeat in World War II.

"Black Ships & Samurai" takes a high-low approach to history. While document sources often favor official voices, the visual record shows people-to-people encounters, such as the curiosity, humor, and emotions in drawings the Japanese made of Perry's crew.



Figure 36. Tasting hair oil. Interactions with Perry's crew from the "Black Ship Scroll." MIT *Visualizing Cultures*, 2002/2010.

[51_027_bscroll_hairoil]

Inviting Authors to Collaborate

Allen Hockley, a visual culture specialist and art historian at Dartmouth College, wrote the next set of units for *Visualizing Cultures*, following the same approach, and establishing a pattern of collaboration with outside scholars. Art history traditionally considered visual “ephemera”—illustrated newspapers, magazines, postcards, pamphlets, and broadsides—of little artistic value, although these materials make the best sources for historical research. Commercial materials have more recently become legitimate subjects of study and exhibition. In 2004, the Museum of Fine Arts Boston mounted the “Art of the Japanese Postcard,” exhibition featuring a wide range of postcards from the Leonard Lauder Collection. Dower found several unsorted boxes of the cards on the shelf that the MFA digitized use on VC. In units on the Sino-Japanese and Russo-Japanese wars, Dower contrasted Japanese cards with cards from the international community.

Unlike art historians, social/cultural historians were largely untrained in the rhetoric of images. Scholarship conveyed with images was, and still is, so far outside of academic protocols that the project had to work with tenured professors, since its publications would not help the portfolios of junior faculty in the quest for tenure.

The list of authors in order of appearance on site includes: Peter C. Perdue, Yale University; Lilian M. Li, Swarthmore College; John W. Dower, MIT; James T. Ulak, Freer Gallery of Art, Smithsonian Institution; Allen Hockley, Dartmouth College; Kathryn Edgerton-Tarpley, San Diego State University; Jeffrey Wasserstrom, University of California Irvine; Rebecca Nedostup, Brown University; Christopher Capozzola, MIT; Ellen Sebring, MIT; David Hogge, Freer Gallery of Art, Smithsonian Institution; Andrew Gordon, Harvard University; Christopher Gerteis, SOAS University of London; Gennifer Weisenfeld, Duke University; John A. Crespi, Colgate University; Akihiro Takahashi, Goro Shikoku, Tokyo, Japan; Linda Hoaglund, filmmaker, New York and Tokyo; Justin Jesty, University of Washington.

Collections and Copyright

Visualizing Cultures positioned itself as a nexus between the institutions that house image collections and the scholars who would like to use them, negotiating online publication for educational purposes under a creative commons license, thus circumventing one of the greatest difficulties in sharing educational materials digitally. Many institutions—notably, the

Museum of Fine Arts, Boston, The Beinecke Rare Book & Manuscript Library at Yale University, and The Arthur M. Sackler and Freer Gallery of Art at the Smithsonian Institution in Washington D.C.—collaborated with Visualizing Cultures by scanning historical postcards, pamphlets, photographs, rare books, and prints that otherwise could not be seen outside the library. VC was an early partner with libraries in their investigations into ways of bringing collections into the digital age.

More than scholars themselves, whose methodologies respond to the demands of tenure and intellectual property set by rigid publication guidelines, libraries understand that their future will be utterly different from the past. It will be digital, ephemeral, global, and interactive. It will also be visual. The vaults will be opened, releasing pictures, scanned in unimaginable numbers. Select images no longer need to represent a larger whole, for every image will eventually appear.

The attitudes of museums continue to change in regard to making their assets accessible. After the initial shock over sharing their collections, many institutions offer reasonable rights for educational use. Still, size and reproducibility of digital assets change with each new technology and administration. The issues of digital collections and accessibility are now the subject of conferences, specialists, and academics. In addition, libraries sponsor research into how scholars use digital collections.

Outreach: Conferences, Curricula, Touring Exhibition

The project's outreach included multiple strategies that cross-pollinated between physical—exhibits, workshops, conferences—and virtual—website, digital curriculum, MOOC—formats. They addressed the scholarly community, general public, and secondary school teachers with.

- (1) a body of original research by recognized scholars from a variety of institutions and disciplines;
- (2) a series of academic conferences, “Visualizing Asia in the Modern World,” at Yale University, 2010, 2013, 2015; Harvard University, 2011; and Princeton University, 2012;
- (3) a professionally developed curriculum on the Visualizing Cultures website, teacher training workshops, and classroom use in secondary schools and universities;
- (4) a physical exhibition of “Black Ships & Samurai” toured the United States and Japan, including a version displayed for the Broadway

production of Steven Sondheim’s musical on the opening of Japan, “Pacific Overtures,” in 2005;

- (5) a MOOC, “Visualizing Japan (1850s-1920s): Westernization, Protest, Modernity,” on the EdX platform jointly developed by MIT and Harvard, September 2014;
- (6) an exhibit, “Rise and Fall of the Canton Trade System,” for the American Culture Centre in Shanghai, opening May 2016.



Figure 37. “Black Ships & Samurai” touring exhibition, 2003-2005. Photographed at the Colony House, on the 150th Anniversary of the Perry expedition in the city of its departure, Newport, Rhode Island, 2003.

[h_Newport_05_Enc3] [[link](#)]

Five conferences, “Visualizing Asia in the Modern World,” [visualizingasia.org] convened around image-driven topics related to all of Asia, broadening the scope of Visualizing Cultures beyond Japan, China, and the Philippines, and exploring the meaning of digital visual scholarship and history. All presentations were image-driven, and a number of them became the basis for units on VC. While the website’s focus is history, many attendees came from other disciplines, notably anthropology, digital humanities, museums, and social sciences. Although production at MIT formally ended in 2014, VC continues to grow with outside funding through Yale University, the U.S. Japan Foundation, and MOOCs including Visualizing the Philippines (VPx) that expand the number and reach of units.

The MOOC: an MIT / Harvard University Collaboration (2014)

In 2014, I was Lead Content Developer for the MOOC, “Visualizing Japan (1850s-1920s): Westernization, Protest, Modernity” (VJx), a first-time collaboration between the MIT and Harvard University branches of the online course platform, EdX, with Professors Dower (MIT), Andrew Gordon (Harvard University), Shigeru Miyagawa (MIT and U Tokyo), and Jennifer Weisenfeld (Duke University). The course was of six finalists for the 2015 Japan Prize, Creative Frontiers category.



Visualizing Japan (1850s-1930s): Westernization, Protest, Modernity

A MITx/HarvardX collaboration, this course explores Japan’s transition into the modern world through the historical visual record.



HARVARD
UNIVERSITY



Massachusetts
Institute of
Technology

Figure 38. Visualizing Japan MOOC on the EdX website.

*The course ran live in September of 2014 and 2015. The archived course can be taken at any time. [\[link\]](#)
[vjx_course]*

The course description explains the two-pronged approach: (1) looking at the evolution of modernism in Japanese history through three Visualizing Cultures units; and (2) learning the methodologies of image-driven historical research:

This co-taught course looks at Japanese history and the skills and questions involved in reading history through images now accessible in digital formats. The course is based on the MIT “Visualizing Cultures” website devoted to image-driven research on Japan and China since the 19th century.¹⁰⁹

Visualizing Cultures served as the textbook and image source for the course materials, avoiding the problems many online courses face regarding use of copyrighted materials. From the beginning Visualizing Cultures negotiated the digital rights for images to circulate as educational resources. HarvardX, looking at future monetization of the courses, will face renegotiating rights for a large number of images.

¹⁰⁹ “Visualizing Japan (1850s-1930s): Westernization, Protest, Modernity,” MOOC co-developed by MITx and HarvardX, premiered September 2014. <https://www.edx.org/xseries/visualizing-japan> Accessed October 2015.

When course development began in January 2014, I was surprised to learn that the EdX platform had no tools for embedding images in the courseware. EdX courses relied on video lectures and quantitative assessments. Despite massive enrollments, EdX courses generally had a 90% dropout rate. Concerned about the lack of visual interactions and passive user experience, I brought simple web-based history quizzes to a development meeting. The other team members were quickly drawn in, and agreed that visual gamification was an effective interactive strategy. Visual gamification meant using images in game-like interactions that put attention on visual sources and stimulated observation. I designed several visual assessment models that replicated a historian's interaction with sources. Our content expert used these templates to write questions and problems, and MIT undergraduates were recruited to code the software and build the lessons.

Collaborating with Harvard historians on VJx, Professor Dower and I prepared visual scripts. We selected and placed the strongest images in coherent sequences. Initially our collaborators questioned the usefulness of the visual scripts which they felt intruded on prepared lectures. Once they saw how the images brought new perspectives to the topic, they came to depend on the visual scripts, recognizing them as the building blocks for the MOOC's video lectures. The scripts also provided visual examples useful for all team members, including the video editors and authors of the courseware exercises.

VJx launched September 3, 2014 as a six-week online course running in tandem with a residential course taught by Professor Miyagawa at MIT, along with a separate section run by the group "Facing History and Ourselves"¹¹⁰ for teachers. The course had an exceptionally high completion rate of more than 30%, with significant global participation in the live discussions. Students gave the lectures their highest ratings, followed by the visual assessments. The high retention rate of active students may have been due to the pivotal role the visual images played in both the lectures and exercises, as a more internet friendly medium than long texts. Visual assessments engaged students in discovery and exploration.

Repeating the course in the fall of 2015, again with Professor Miyagawa's MIT class, means a new set of students worldwide will be taught by these eminent historians. Now Head of Digital Education at Tokyo University in addition to his MIT appointment, Miyagawa's lecture

¹¹⁰ Facing History and Ourselves, an international educational and professional development organization. <https://www.facinghistory.org> Accessed October 2015.

on VJx at the “Visualizing Asia in the Modern World” conference at Yale in May 2015, discussed the unexpected impact of online courses on residential classrooms changed how he taught and how his students learned.¹¹¹ Having already watched the lectures, class time was devoted instead to discussion. This “flipped classroom” was the subject of an article by the MIT News Office:

The students noticed. One student commented, “This class is much different than a typical lecture-style classroom, as the classroom setting is instead used as a form of class discussion.” Another student thought that although the MOOC attracted 9,000 learners, “it was in the classroom that the VJx MOOC saw its greatest impact.”¹¹²

Adoption of online courseware by universities is part of the major investment in e-learning just getting underway. In 2016, I will be co-developing a new course based on VC content, Visualizing the Philippines (VPx), the first MOOC in the History section at MIT.

¹¹¹ Shigeru Miyagawa, lecture, *Visualizing Asia in the Modern World 5*, conference, Yale University, 2015.

¹¹² “A MOOC sees its greatest impact in the classroom at MIT: Flipping a classroom enhances student and faculty experience,” Office of Digital Learning, November 14, 2014. <http://news.mit.edu/2014/mooc-sees-its-greatest-impact-classroom-mit-1114> Accessed October 2015.

3.3 Developing an Image-Driven Approach

The Heuristic Process of Working with Large Image Sets

In my role at Visualizing Cultures I worked with raw data sets that ranged from several dozen to thousands of images. I began to recognize a repeatable sequence with distinct patterns. At first distant and uninteresting, the images gradually became familiar, and revealed a visual vocabulary unique to each set. Mind-body focus and manipulation—looking, moving, and looking again—revitalized these long stored away historical images.

Generalizing from my experience, I identify several stages of discovery. (1) The process begins by casting a wide net over the sources. Detective work uncovers new sources, opening unexpected reservoirs of related images. (2) A composite digital grid continually updates the progression of the data set. Repeated viewing of this evolving grid means bonding with the images, and forming an internal vision of the historical event. (3) Themes and patterns emerge, sorting by chronology, location, events, topics, genre, and subjects. (4) At this stage, curiosity aroused, reading about the time period and events depicted becomes irresistible.

“Image-first” methodology draws readers into a visceral connection with historical time in a type of inquiry that flows from the personal to the general. Uncovering the story of a man in a photograph might result from a sympathetic response to the texture in the fold of his uniform, the heavy helmet worn in the desert heat, the touristic urge to dismount and be photographed by his fellow cavalymen at the Ming Tombs. This man’s image survived, captured in a moment of apparent pleasure and awe, whether he went on to kill or be killed or whatever fate unfolded. History tends to focus on the battle, but images bring us human beings and the conditions around them. In the case of photographs, we see and seek to understand the moment of creation.



*Figure 39. U.S. Cavalry at the Ming Tombs, northwest of Beijing, c. 1900.
Detail from photograph by Captain C. F. O'Keefe, working for the China Relief Expedition.
Source: U.S. Department of Defense.
[us_1900_ReliefExMing_DOD]*

Every image set is different. Excavating image sets in various states of uniformity shows, in their idiosyncratic overlaps, the nature of their combined narrativity. The meaning conveyed in visual relationships lies in the movement between sources. In *Visualizing Cultures*, the final product achieves a high level of refinement, but as a static statement leaves behind the early stage, grittier interactions with raw source. One of the secondary school teachers training to use the curriculum for “Black Ships & Samurai” requested that we leave more of the work unfinished so that her students would have topics to explore in the raw materials. Combining polished and unpolished views through digital interactivity may be the strongest method of bringing meaning to readers. Rudolf Arnheim described the intuitive nature of visual cognition as discovering “the relations between components”:

The more elementary visual product of intuitive cognition is the world of defined objects, the distinction between figure and background, the relations between components, and other aspects of perceptual organization....It is the product of complex operations that take place in the nervous system of the observer below the threshold of awareness.¹¹³

¹¹³ Rudolf Arnheim. *New Essays on the Psychology of Art*, (Berkeley, Los Angeles, London: University of California Press, 1986), 17-18.

Units Menu: a Visual/Temporal

Matrix

It cannot be overstated how challenging and rare it is for academic scholarship to be communicated through the interplay of images as opposed to texts. Visualizing Cultures aimed to achieve communication comparable to text-based arguments through the design layouts and visual treatments. The website opens with a units menu page comprised, unlike a typical table of contents, of a visual matrix. Designed in 2005, the thumbnail matrix predated Apple's icon-driven iPhone interface released in 2007, game-changing in using visual entry nodes to access content.

Figure 40. VC Units Menu, originally designed in 2005, here at it appeared on the MIT Visualizing Cultures website in 2016. The icons represent essays, visual narratives, and galleries and are organized by author, image sets, time period, and country.

Design: Sebring, Shunk, Burstein.

[vc_menu_units]



The site navigation or User Experience (UX) design, that in an earlier time would have been bound by the spine of a book, binds the content through visual relationships. The matrix brings visual sources to the forefront, and puts the reader into the sensory space of the visual record from first contact. Reading images depends on awakening conscious awareness of the sense of sight. Discussions of the units menu by the Visualizing Cultures Advisory Board centered on the lack of the simple linear structure intrinsic to text documents. Unlike an informational list (the menu is also accessible in a list format), a visual menu provokes a degree of disorientation. However, promoting sensory, visual choices over a cognitively rational list view stimulates the readers' perceptual system, encouraging the visual thinking so important to viewing the units.

Visual perception is constant, and perhaps because it is constant, it functions like an involuntary organ that usually works, as Arnheim noted, "below the threshold of awareness." When choices must be made based on visual perception, as when confronting the VC units menu page, there are a number of cues that informed our design that might be used by users:

placement = chronology

color = sets of units

style = time period and country

picture = historical event and/or topic.

By visually juxtaposing topics in the units menu, we hoped to suggest that the seeds of one event are embedded in another, and demonstrate the interconnectedness of historical events in a way not yet seen in traditional publishing formats. Attributes like time, place, culture, and events overlap, just as in real life. In this format, organizational mechanisms such as lists and table of contents take a back seat to simultaneity as images point in multiple directions at once. As the units menu expands, it interweaves multiple events to, in effect, illustrate a swatch of time.

Naturally, written texts can also describe the interrelationship of historical events, and indeed, elaborate with far greater specificity as the author evokes an imagined world for the reader. Whereas visual elements provoke a response, writing can explain and expand on these first impressions. Used together, text and image can unify the author's expertise with the reader's curiosity.

Afterglow: Recognizing Signature Graphics

In my work on Visualizing Cultures, it became clear that some images remained in the mind's eye with what might be described as a kind of "afterglow." The team used this phenomenon to identify key images for use as "signature graphics" that both suggested themes and carried the narrative. As a designer, I was sensitive to the intangible communication of images, but many of the collaborating scholars had to learn to heed embodied signals that made these particular images memorable. Our practice of image-driven scholarship meant excavating the data set for visual stories, recognizing key images as visual entry points to the past.

As published on the VC website, each unit opens with a splash page featuring a "signature graphic." Adding a unit's signature graphic to the units menu changes the texture and mapping of the overall grid and, inserted into a geographically and temporally appropriate spot, its historical representation. Professor Dower and I relied on the above-mentioned "afterglow" to narrow the field, as well as the interplay with other splash screens, deliberating both the intellectual and visual sensitivity of the choice. The process differed from choosing an image for a book cover. In Dower's experience, these images were often selected by the publisher for commercial reasons, or by a book designer who had not read the book, both of which reflect the low status of the historical image. Unit signature graphics exude charisma and strength both as dynamic graphics and in their embodiment of key topics in the unit.



Figure 41. Detail, Visualizing Cultures Units Menu. Several signature graphics represent the units and together show historical relationships in the menu. MIT Visualizing Cultures, 2015.

[vc_sig]

As an example of an image with immediate and lasting impact, a vibrantly modern Tokyo of the 1930s—often forgotten between the disastrous 1923 Great Kanto Earthquake and 1945 firebombing that both leveled the city—comes across in a Koizumi Kishio print lit up with neon Kanji and car headlights streaking across the nighttime cityscape. Transported into that world for a moment, viewers of the print reemerge with questions about Japan in the 1930s.



*Figure 42. “Night View of Ginza in the Spring (#12a), March 1931.”
Woodblock print by Koizumi Kishio (detail), from the MIT Visualizing Cultures unit “Tokyo Modern” by James T. Ulak. Image source: The Wolfsonian—FIU, Miami Beach, Florida, The Mitchell Wolfson, Jr. Collection.*

[kk012et_1931_Ginza_Street]

Three-Part Structure: Essay, Visual Narratives, Gallery

Each unit of Visualizing Cultures covered an aspect of history drawn from visual sources. I expanded Dower’s original concept of a “core exhibit,” his term for an image-driven essay, into a unit structure with three layouts: essays, visual narratives, and galleries.

(1) The essay emphasizes a written approach and the narrative builds linearly in text and image blocks in a 50-50 ratio. This closed, linear format approximates traditional historical research and publishing models closely enough to keep it relevant within academic discourse, while at the same time, differentiated by an image-driven thesis, prominence of visuals, and their sophisticated interactive graphical treatment made possible by the digital medium. The

narrative proceeds in alternating text and image blocks. Text entries set up the pictures that follow.

(2) The visual narratives emphasize the visual experience through immersive series of historical images that invite the user into direct contact with sources in authored thematic pathways. The narrative proceeds from image to image.

(3) The galleries emphasize the creative aspect of the units by making the images available in composite grids for readers to evaluate free of narrative structure. The user-perceived narrative derives from patterns observed in the thumbnails, and close examination of enlarged details.

Essay: a Scalable Core Exhibit

VC essays feature the author's voice in a linear exposition. Originally called the "core exhibit" to indicate a pictorial display with surrounding texts, the essay format approaches exhibition design. It serves as a model for image-driven scholarship that readers might emulate in creating their own interpretations of the image set. This fixed, traditional narrative rests in an interactive framework with native digital qualities and links.

Coming from an interactive company, Botticelli Interactive Inc., that designed new media content before and during the dot-com boom in the late 1990s, I found Dower's "core exhibit" approach alarmingly close to reproducing a traditional text online, underutilizing the web's associative interactive capability. Even so, it dramatically challenged academics in the humanities. We chose, therefore, to design a simple, linear template, and brand it as "the Essay" to further associate it with academic publishing. The template enabled us to: (1) build a large amount of high level historical content; (2) decrease the learning curve for readers through a repeatable UX design; and (3) interlink the units.

Scalability—a design that accommodates new content and wide distribution—was a vital concern. Many interactive projects that take full advantage of digital capabilities become dated in the fast pace of technological change. Creating a unique interactive model for every project forces users to learn multiple single-use interface designs, and discourages sustained engagement—users become fatigued with efforts to navigate and give up. In an analysis of his own early multimedia projects involving user choice and databases, historian Joshua Brown acknowledges the lack of an overarching emergent interactive form:

Despite the optimistic declarations of digital futurists about the eventual convergence of different media, multimedia has failed to coalesce into a new form and still operates as a fragmented collection of different types of information.¹¹⁴

Basing Visualizing Cultures on visual communication required interdisciplinary thinking that blended sensory and intellectual cognition. Authors unused to writing with images had difficulties with the image-driven approach, resulting in extensive collaborations with myself and Dower.

While acknowledging the unique treatments each data set required, I developed a palette of tropes as a visual narrative toolset, including full screen, details, pairs, series, and grids. These layouts form the basis of the software design proposed in the next chapter. Each set of sources involved discovery around its graphical qualities to determine design approaches that brought out the content. For example, in John A. Crespi's unit on Shanghai cartoons of the 1930s, the full cartoon and detail were both needed for the meaning to be clear. I designed a magnifying glass look, mimicking a "zoom" lens in a still, printable layout.

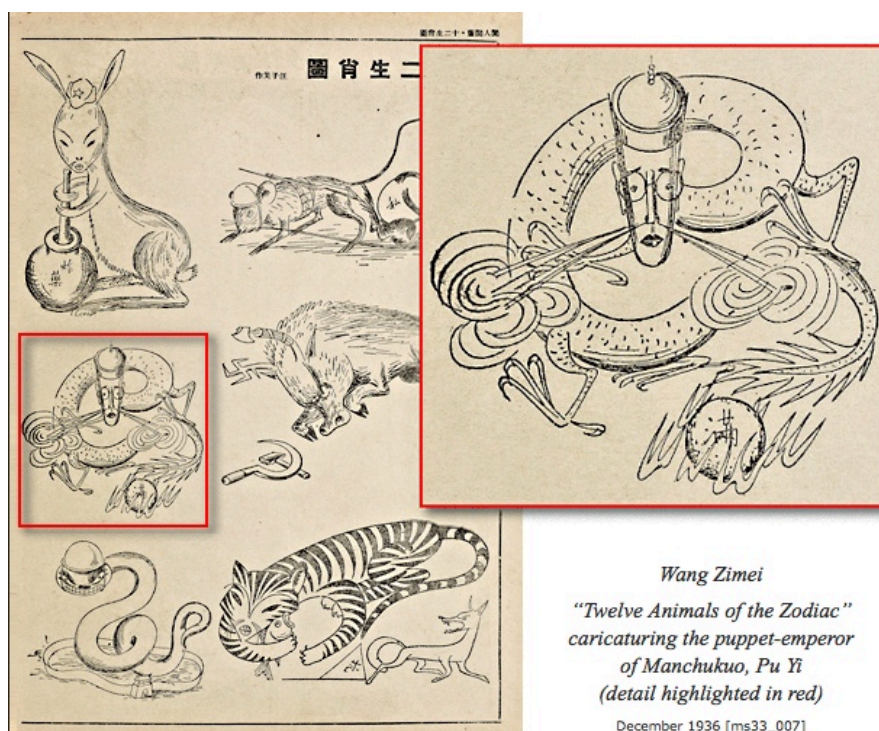


Figure 43. "Twelve Animals of the Zodiac," Wang Zimei, 1936. Cartoon with detail, MIT Visualizing Cultures unit, "China's Modern Sketch: The Golden Age of Cartoon Art, 1934–1937" by John A. Crespi. Design: Sebring. [crespi_Modern_Sketch_1936_wang_zimei_VC]

¹¹⁴ Brown, "History and the Web," <http://chnm.gmu.edu/essays-on-history-new-media/essays/?essayid=29> Accessed October 2015.

In another example of genre-specific design that can be fashioned in the digital medium, Dower's unit on postcards, "Asia Rising: Japanese Postcards of the Russo-Japanese War (1904–05)," simulates the tactile qualities of thematically-linked cascading cards.

Figure 44. Postcards spread the news of "Victory." Layout from "Asia Rising: Japanese Postcards of the Russo-Japanese War (1904–05)," MIT Visualizing Cultures unit by John W. Dower, 2008. Design: Sebring. [dower_Asia_Rising_essay_Victory]

Simulating motion in a still environment accomplishes the same cognitive "reveal" as an actual mouse click, but remains under the control of the author rather than reader. Illustrative devices that show multiples of an image, such as the full image and highlighted detail, also makes the content printable. We learned through our curriculum programs that readers preferred to print and read the units on paper rather than online.

After experimenting with sidebar links and videos, we decreased the number of links. While informational, they distracted readers, luring them away from the page. Readers who watched videos in the sidebar, for example, witnessed a summary of the content rather than the carefully researched, written, and produced content on the site, thus missing the original images in favor of an authoritative voice.



Links between essays, visual narratives, and galleries, however, encourage readers to explore the narrative through these alternate visualizations. In another example from Crespi's essay, "teasers" preview and link to related visual narratives.

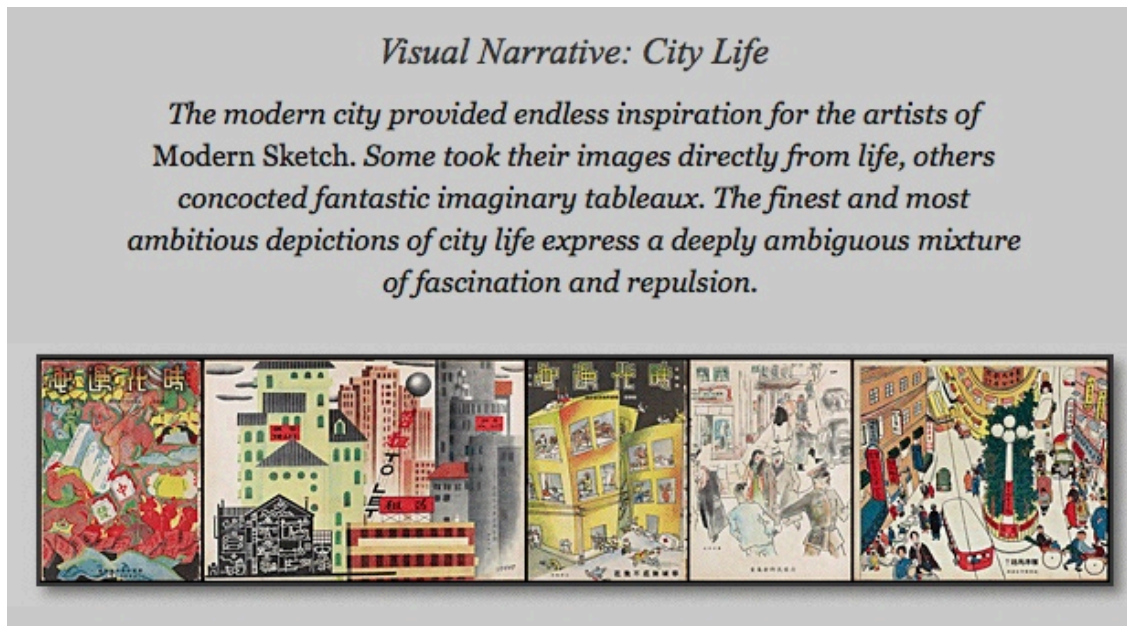


Figure 45. "Teaser" for the visual narrative "City Life."
Layout from the essay, MIT Visualizing Cultures unit "China's Modern Sketch: The Golden Age of Cartoon Art, 1934–1937" by John A. Crespi, 2011. Design: Sebring.
[crespi_Modern_Sketch_city_life_vn]

Open-ended questing with uncertain rather than known rewards stimulates strong responses in readers, comparable to the "information foraging" in Google searches.¹¹⁵ Stimulated by a quest to "see for themselves," active readers seek to resolve narrative ambiguities through alternate versions, and examine imagery in multiple ways. Content in the essay unfolds differently in the visual narratives where shifting scale and juxtapositions change and deepen meaning. As a side note, Google's search interface in which the page was cleared of everything but the logo and search bar was and remains today a seminal interactive design.

Visual Narratives: Immersive Series

My response to the rigid textuality of the essay design in Visualizing Cultures was to build visual sequences that performed as narratives, calling them "visual narratives." In my previous work at Botticelli Interactive, I developed visual narrative, particularly with still

¹¹⁵ Frank Rose, *The Art of Immersion: How the Digital Generation is Remaking Hollywood, Madison Avenue, and the Way We Tell Stories*, (New York, NY: W. W. Norton & Company, Inc., 2011), 273.

images and museum content, including the company's award-winning "Titian Kiosk" developed for the Isabella Stewart Gardner Museum in Boston.¹¹⁶

Visual narratives offer an alternative route through the material in counterpoint with the essays, and allow images to be seen in enlarged closeups and in meaningful relationships. This component of Visualizing Cultures lets images speak for themselves and immerses readers in visual language. Observing the database means sorting images into thematic sets. It's a small leap to refine and display them as large, high resolution series that visualize these themes.

The visual narratives hold the middle ground between essay and database. The author steps back to allow readers to gaze on the images in curated sets, in unprecedented digital views, that, unlike slide shows, unfold horizontally as the reader scrolls the content. Horizontal formats were discouraged at the time based on user tests, but as touch screens have proliferated, they appear prescient in anticipating user behavior, even as they refer back to the hand scroll, made up of connected images and texts.

Two aspects of the design contribute to readability: (1) the reader controls the speed of advance, looking as long as they wish and moving in either direction; and (2) the borders between images are visible, becoming narrative and creating sentence-like structure.

Visual narratives take many forms, from simple to custom layouts, but all serve the distinct qualities of the image set. In a custom design, the menu for the visual narratives in Alan Hockley's unit, "Globetrotters' Japan: People. Foreigners on the Tourist Circuit in Meiji Japan," gives an overview of themes that come directly from the visual image sources, such as "cultivating tea, silk production, service jobs, actors, priests, festivals" and so forth.

¹¹⁶ "Titian Kiosk," Botticelli Interactive for the Isabella Stewart Gardner Museum. Awarded the Silver Medal, Interactive Multimedia, New York Festivals, 1998.

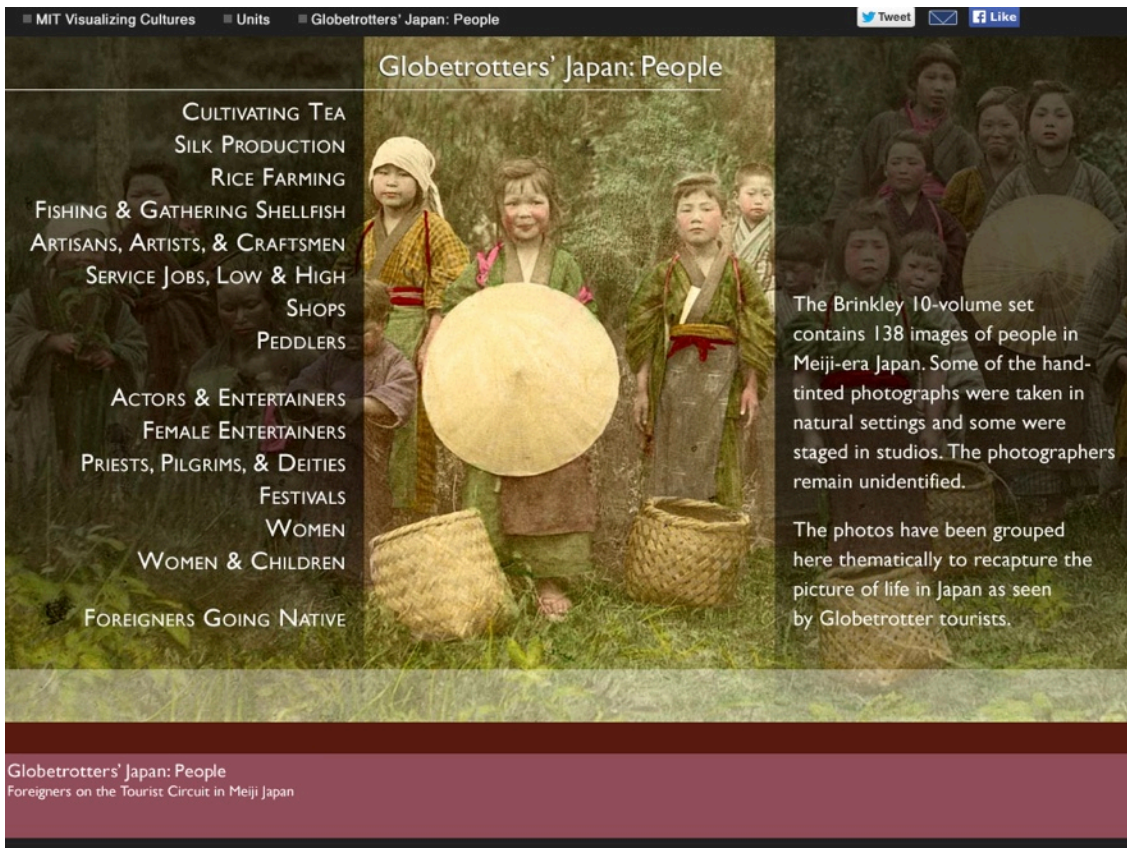


Figure 46. Thematic pathways in “Globetrotters’ Japan: People.” Visual narratives menu from the MIT Visualizing Cultures unit “Globetrotters’ Japan: People, Foreigners on the Tourist Circuit in Meiji Japan,” by Alan Hockley, 2008. Design: Sebring. [hockley_Globetrotters_Japan_vn_menu_VC]

The visual narratives offer an alternate scholarly reading of the sources in several VC units. Gennifer Weisenfeld explored the extensive Shiseido Cosmetics Corporation archive to examine the development of cosmetics advertising in Japan from 1910 to the 1940s in her essay for the unit. John Dower then put together a set of visual narratives from the same sources that deal with women’s roles, industrialization, and the run-up to war. The Shiseido unit conjoins multiple authors in a seamless narrative structure.



Figure 47. “Mobilizing a Retail Workforce.”
 Visual narratives with menu on the left side from the MIT Visualizing Cultures unit “Selling Shiseido” by Gennifer Weisenfeld, 2009. Design: Sebring.
 [weisenfeld_Selling_Shiseido_vn_menu_VC]

Visual narratives also take the form of interactive animations known to media designers as “geegaws.” These specialized multimedia elements use interactivity to illuminate specific content, and though expensive, single-use designs add value to the digitality of the content. One of the most common builds undertaken both in the early days of new media and today in digital humanities labs centers on digitally assembling Japanese and Chinese scrolls (VC, as mentioned, animated the 30-foot “Black Ship Scroll” in 2002).

Other geegaws on the site include an animation of woodblock print making, map animations, and simple rollovers. The “interactives” in Lillian Li’s unit on the Beijing summer palace, *Yuanmingyuan*, reconnect the two image sets that document the buildings in their prime with geographic space, enabling them to be seen as whole for the first time since their destruction by British and French forces following the 2nd Opium War.



Figure 48. “20 Views of the European Palaces.”

An animated interactive visual narrative, from the MIT Visualizing Cultures unit, “The Garden of Perfect Brightness—II,” by Lillian M. Li, 2012. Design: Sebring, Andrew Burstein.

[li_Yuanmingyuan2_vn_VC]

Galleries: Author-Free Zones

The galleries grew out of the process I used for organizing image sets. Looking at each set digitally became a first step and critical tool for collating and observing the images. We decided that the digital galleries I made for my work would also be useful to the public, and added them to the VC site. Writing keywords for images proved to be a time consuming and variable task that we tried and abandoned in favor of spending our time on the content. Galleries offer a neutral and comparative view of the sources, even though these are not searchable databases.

In the digital medium, the three layouts enable readers to experience, first-hand, the visual sources generated as history was in the making. Access to these precious primary sources, no longer limited to those few specialists who could visit the vaults of archives and museums,

could bring readers into a new dimension of narrative, reading beneath the lines. The experience and roles of both reader and historian change, and the relationship between historian, primary sources, and historical representation is renegotiated.

Galleries minimally need to offer: (1) a way of viewing the full set of sources together in relationship to each other, and (2) the ability to enlarge and study the graphics in detail. The simpler and faster these functions are, the better. They mirror laying the images out on a table and moving them around to create narratives, thematic subsets, and separate featured images from those that can be left in the database. We used the printed thumbnails in just such a manner. The interplay of virtual and physical deepens understanding by connecting the body, the hands, and social interchange through discussions and shared viewing, to the digital product.

The extensive galleries produced for the “Selling Shiseido” unit mount multiple magazines chronologically so that viewers can scroll through a visual field that displays historical change over time. Again, simple is better. Patterns are better revealed by simple scrolling than multiple clicks on individual images could ever show.

In writing courseware based on the unit for the MOOC, “Visualizing JapanX,” all three components—essay, visual narratives, and galleries—offered educational experiences for students. The scholarly essay was the primary textbook for the course, which, through digital convergence, became a launchpad for creative thinking by students using all three content streams.

3.4 Open Environments and Controversial Images

The 2006 MIT Visualizing Cultures Controversy

On April 24, 2006, the Visualizing Cultures project appeared on the MIT home page as the daily Spotlight feature that “showcases the research, technology and education advances taking place at the Institute every day.”¹¹⁷ The feature, intended to promote the project, led to a controversy within MIT and beyond. It rapidly became international news as a fire storm ignited on the Internet globally, leading to the decision by the project directors to temporarily shut down the VC website. The incident underscores the power of images to bear witness, to offend, and in digital formats, to circulate easily and widely, out of context of the original publication.



Figure 49. The MIT website home page “Spotlight,” April 24, 2006. The graphic featured postcards from the unit “Asia Rising” and linked to the VC website. Later that day, objections to an image in another unit were emailed to the VC contact, project co-director, Shigeru Miyagawa, igniting a larger controversy. Spotlight graphic by Ellen Sebring. Source: Spotlight Archive/MIT website.

[mit_spotlight_VC_24April2006]

¹¹⁷ “About the Spotlight,” MIT website, accessed August 2016 (<http://spotlight.mit.edu/?ref=mithomepage>)

A decade later, the dissemination of extreme imagery on the Internet has become a horrifying and highly charged arena, with the circulation of images and videos of beheadings, police violence, and even murder on live broadcast television.

The “incident,” as those of us who were part of VC referred to it, has since become the subject of academic study. As recently as 2015, *positions*,¹¹⁸ a journal published by Duke University Press, devoted an issue to what has become known as the “MIT Visualizing Cultures Controversy.”

The April 24 Spotlight featured a benign set of Japanese postcards (see above), and linked users to the VC site. There the focus of the 2006 incident became a graphic 1894 wartime propaganda print depicting the execution of Chinese prisoners of war by Japanese soldiers, held by the Museum of Fine Arts, Boston. The image appeared in John Dower’s Visualizing Cultures unit, “Throwing Off Asia: Woodblock Prints of the Sino-Japanese War (1894-95).”



*Figure 50. “Illustration of the Decapitation of Violent Chinese Soldiers.”
Image and caption as they appeared in the Visualizing Cultures unit, “Throwing Off Asia:
Woodblock prints of the Sino-Japanese War (1894-95)” by John W. Dower. This woodblock
print by Utagawa Kokunimasa, October 1894 (detail) was circulated across the internet without
the surrounding texts or caption, fueling the Visualizing Cultures controversy in 2006.*

Image Source: Sharf Collection, Museum of Fine Arts, Boston

[toa3_2000_380_07_mfa]

¹¹⁸ Winnie Wong and Jing Wang, editors, “Reconsidering MIT Visualizing Cultures Controversy,” *positions*, (Durham: Duke University Press, February 2015).

The image by Utagawa Kokunimasa depicted violent and offensive acts discussed in the surrounding text about the adoption by the Japanese of Western imperialist stances towards other countries in Asia. Dower's caption read:

The long description on this particularly grisly scene contrasts the “civilized” behavior of the Japanese to the “barbarity” of the Chinese—and as an example of the latter tells how Chinese prisoners rebelled against their captors and were executed as a warning to other Chinese. This is an extraordinary declaration given the atrocious nature of the graphic. At the same time, it is perfectly in accord with the rhetoric of Western imperialists of the time, who similarly portrayed their brutal suppression of peoples in other lands as part of a “civilizing mission.”¹¹⁹

Strong objections to the publication of the image on an MIT website were launched from an initially unknown source, followed by MIT students represented by the Chinese Students and Scholars Association (CSSA). The image was circulated without the caption or essay text in an email campaign described by Peter Perdue as “a cyber-onslaught on the site from Chinese Internet users around the world.”¹²⁰ The primary contact on the Visualizing Cultures website, project co-director Shigeru Miyagawa, was deluged with emails even though he, a linguist, had nothing to do with the content. Many emails expressed extreme, racist anti-Japanese sentiments, and issued threats violent enough to warrant police protection. The situation was sensitive, emotional, and presented cross-cultural, cross-disciplinary communication problems for the professors, students, MIT administration, and VC team.

A meeting was organized on April 26, 2006 by the MIT administration to discuss student objections, particularly from the CSSA, with Visualizing Cultures directors Dower and Miyagawa, and other faculty. The emotional meeting was videotaped and until recently was available online. I transcribed a number of the student comments from the video, including the following comments:

“Rape of Nanking pictures are okay...This [problem image] is not a photo, this is a painting that glorifies the war.”

“You have not been clear in the text. You just describe them in the way the Japanese see the war...You should make clear from the very beginning that this is wrong...It is not history at all, it is misleading, it is propaganda...The pictures themselves convey a very strong point: they are glorifying the war, right? You

¹¹⁹ John W. Dower, “Throwing Off Asia: Woodblock prints of the Sino-Japanese War (1894-95)” unit on Visualizing Cultures, MIT

¹²⁰ Peter C. Perdue, “Reflections on the ‘Visualizing Cultures’ Incident,” *MIT Faculty Newsletter*, Vol. XVIII, No. 5, (Cambridge, MA: MIT, May/June 2006). <http://web.mit.edu/fnl/volume/185/perdue.html> Accessed October 2015.

are just describing those pictures themselves. You didn't say anything, so you are kind of endorsing what those pictures show.”

“...we are educated, but you are delivering propaganda to people all around the world.”

“The web is a really new medium...for me it is normal to see those kinds of things, but when you are reaching so many people, people will react quite differently...”

“...before you post anything on the web...there were 30 million Chinese people killed...this is not just Chinese culture, but is human...this kind of thing should be condemned.”

“...your reader is not just researchers they are just public people and think how they will accept your image. This thing on the website is hurting people...”

“I don't care if you are a famous professor. I want MIT to make an apology...”

Professor Dower, an internationally-esteemed historian with a Pulitzer Prize for his book on post-World War II Japan, responded:

“As academics...we thought we could put complex images online...What we're interested in as academics is how the wars come about. What is the propaganda that drives people?...I'm perplexed that we should censor the ...racist, sadistic images... I would be embarrassed to only show the pretty pictures and to censor these images...The whole thing was built on not censoring, but to show the nature of war...It's out there and has a life of it's own.”

Peter Perdue, a China historian and former long-time MIT professor currently teaching at Yale, participated at the meeting and commented:

“[it's] not trying to glorify Japanese supremacy or racism...Propaganda is used by everybody, by governments to inspire people to war.”

Perdue discussed the April 26 meeting in “Reflections on the ‘Visualizing Cultures’ Incident”¹²¹ for the MIT Faculty Newsletter, framing it as an issue of academic freedom.

At their best, the students' patriotism evoked the May 4th movement of 1919, but their arrogance and intolerance also reminded me of the Red Guards of 1966.

At this point I had had enough. I stood up and stated that, having taught Chinese history for 25 years at MIT, I could see nothing wrong with the presentation of graphic violence on the “Visualizing Cultures” website: all historians use images for teaching, and as John Dower had said, to present an image is not to endorse it. I proposed that the site be restored intact, with no apologies, but that an open online discussion forum be attached to the site to allow anyone to post comments. When I stated that this was a clear case of academic freedom, I was shouted down with a chorus of “No!”. Then I left the room. Statements issued by Chancellor Clay and Professors Dower and Miyagawa expressed sincere regret at the offense caused by the single image and noted that the website had been temporarily taken down in response to criticism. The statements also condemned hostile criticism from “outside the MIT community” and defended the academic freedom of the authors.

¹²¹ Ibid.

Perdue expressed himself directly to the MIT students from the People's Republic of China in an "Open Letter to Chinese Students at MIT," on April 28, 2006, ending with the following caution:

You have a great responsibility as leading participants in China's future. China faces huge challenges in its effort to become a wealthy, strong, democratic, and open nation. You should study not only technical subjects but also the crucial questions of social and historical change that will determine China's future. There are many outstanding faculty at MIT and other universities who will gladly support your goals. Please open your minds to critical awareness of these most difficult questions in a spirit of reasoned, open intellectual discourse, not one of narrow, self-centered indignation.¹²²

MIT Professor Jing Wang worked with the students and the CSSA, and wrote:

But is there such a thing as a singular "global" or "universal" audience for digitally delivered open content? What kind of room do we (or should we) allow technologically enabled audiences (of different ethnic cultures and nationalities) to partake in knowledge production? Do professors have the sole monopoly over knowledge production and dissemination in the age where knowledge is collectively produced?¹²³

In a global incident, much of the discussion has a language barrier, and I am unable to reference much of it that took place in Chinese.

Additionally, among the lessons of the "incident," is its historicization. Web-based documents disappear. For example, I no longer can find sources, including the video of the April 26, 2006 meeting at MIT, or the original letter from the CSSA to the MIT administration objecting to the site. MIT has maintained some legacy of the controversy, including the "Official CSSA Statement" following the meeting:

The "Visualizing Cultures" Controversy and its Implications
Official CSSA Statement (April 27, 2006)

Dear CSSA Members and Other Members of the Chinese Community
Worldwide,

Earlier this morning, the MIT Chinese Student and Scholar Association (CSSA) had an in-depth discussion with the MIT administration on the issue of the Visualizing Cultures website, specifically the "Throwing Off Asia" unit. This is a scholarly research project, and there is no art exhibition associated with it. Representatives from the President's Office, the MIT News Office, and the research group behind the website were all present. The meeting has resulted in a constructive agreement.

¹²² Peter C. Perdue, "Open Letter to Chinese Students at MIT," April 28, 2006. <http://www.xys.org/forum/db/1/74/148.html> Accessed October 2015.

¹²³ "Jing Wang on the MIT Controversy over "Visualizing Cultures," posted on H-Asia, May 2, 2006. [https://mitgs1.mit.edu/sites/default/files/Jing%20Wang%20on%20the%20MIT%20Controversy%20over%20Visualizing%20Cultures%20\(May%20202006\).pdf](https://mitgs1.mit.edu/sites/default/files/Jing%20Wang%20on%20the%20MIT%20Controversy%20over%20Visualizing%20Cultures%20(May%20202006).pdf) Accessed October 2015.

The research group recognized the need to contextualize these sensitive materials and pledged to continue a dialogue with CSSA and other groups to address this issue.

Professors Dower and Miyagawa have expressed deep regret over the emotional distress caused by some of the imagery and are genuinely sorry that the website has caused pain within the Chinese community.

The agreed resolution is as follows:

1. Official statements from both MIT and Professors Dower and Miyagawa, which will be posted as a link off the MIT home page shortly and permanently reside on the MIT News Office website, and distributed to the Chinese community worldwide.
2. Organize a public forum to facilitate a discussion on the use of sensitive imagery. The Committee on Campus Race Relations (CCRR) is currently organizing a panel discussion on visual imagery that is scheduled to take place in early May (date and location to be determined).
3. The Visualizing Cultures research team will address how it contextualizes sensitive content by providing appropriate language to prepare users for the graphic material depicted. The research team is looking to CSSA for feedback and future dialogue.

As stated previously, CSSA is strongly opposed to any irrational behavior. Any feedback from individuals on this issue is welcome.¹²⁴

Miyagawa, the main target of the cyber attacks, gave a number of lectures titled, “The Day the Internet Blew Up in My Face,”¹²⁵ recounting his experience of the incident. He objects to the apology being cited as an admission of wrongdoing, rather than regret over the hurt caused.

The incident was discussed by Louisa Lim in her 2013 book, *The People's Republic of Amnesia: Tiananmen Revisited*. She defended Dower’s text and saw the controversy as evidence of the conformity exacted by the examination system in China:

During a town hall meeting, the Chinese students called for an official apology, the permanent shutdown of the site, and the cancellation of related academic workshops. For some of the faculty, this episode threatened the core values of MIT’s mission.¹²⁶

Other positions were taken by academics like Professor Benjamin A. Elman of Princeton University. His paper, “Teaching Through the MIT ‘Visualizing Cultures Controversy’ in Spring 2006,” went so far as to question the narrative of Japan’s success and China’s failure to modernize in response to 19th century Western imperialism.

¹²⁴ The "Visualizing Cultures" Controversy and its Implications: Official CSSA Statement (April 27, 2006), MIT Foreign Languages & Literatures website. http://web.mit.edu/fnl/volume/185/cssa_statementpop.html Accessed October 2015.

¹²⁵ “The Day the Internet Blew Up in My Face,” article, UCLA Asia Institute, October 30, 2006 [[link](#)]

¹²⁶ Louisa Lim, *The People's Republic of Amnesia: Tiananmen Revisited*, (Oxford: Oxford University Press, 2014), 146.

What the MIT Visualizing Cultures Controversy in part represented was a public rejection of the Meiji Japanese meta-narrative for the whole of East Asian history that began in 1895 and was then read into the past and future. The irony for Americans was that the contemporary agents of rejection of this very tired narrative were mainly PRC Chinese graduate students living in the halls of MIT and other leading American universities where that Japanese master narrative had been reproduced uncritically for several generations by American professors.¹²⁷

The site went live again, the only modification being the addition of strong warnings in multiple languages about potentially offensive content. Unlike what is written in the *positions* introduction that the current “version is substantially different from the web pages discussed in April 2006,” no text was altered in the essay. Dower was adamant that he stood by his text and would not alter it in any way.

The solution agreed upon within the Visualizing Cultures group was to add warnings throughout the site, in multiple languages, that mirror those used on television and in films. Even placed at the top of the pages, and next to the offending image, in a non-linear, web-based medium, warning texts can only offer partial protection to viewers. Authors, likewise, receive little protection across international borders when reasoned protest can escalate into vicious cyber bullying.

Balancing open discussion and offensive imagery presents difficulties for academics who want to show controversial historical images in the digital environment. Visual imagery has life of its own that bears witness, as we now know from the current events caught on tape, beyond verbal or written explanation.

Problems for a “Spineless” Book floating across the Web

On the web, free-floating images cause a loss of context for the author whose content is bound in a spineless virtual “book.” It is not easy to look at images of war. Troubling and cruel human interactions leave behind depictions, including propaganda and atrocities, that communicate with visceral force despite the passage of time. In addition, the context provided by the publishing framework and author’s voice can easily disappear when images are shared digitally. Visual impact takes over. Old emotions become new. That images can rekindle emotions from bygone times and distant places shows their power as icons of historical memory.

¹²⁷ Benjamin A. Elman, “Teaching Through the MIT ‘Visualizing Cultures Controversy’ in Spring 2006.” <http://www.princeton.edu/~elman/documents/Teaching%20Through%20the%20MIT%20Visualizing%20Cultures%20Controversy.pdf> Accessed October 2015.

However, strong emotional reactions tend to overshadow cognitive understanding and halt further inquiry. Readers shut down—and then demand that the website shut down. Images sweep rapidly across borders and cultures. Authors no longer have orderly pages bound by the protective covers of a book to frame the presentation of difficult topics.

VC author, Allen Hockley, commented on the controversy in our 2013 interview:

When you put difficult images on the web you lose all control. You could have a picture that is horrific and and show it with many pages of explanation as well as caveats all over the place, but once the image is there it can be downloaded and emailed by anyone....If you've done your duty and put up a difficult image and warned people of it, explained it in an academic way, and made it useful, when someone else uses it for their own purposes it becomes their responsibility. That is the person who is spreading harm on the web by reconfiguring it. I wasn't very involved in the visualizing cultures controversy, but I thought a lot about it.¹²⁸

I told him about my work with Hiroshima atomic bomb survivor drawings, my emotional responses to them, and design questions in posting them as explicit documents, significant yet horrific, on the web. Hockley responded:

We read more critically than we see critically. Vision is such a powerful all-consuming sense experience, and we don't have the split-second where we pause and say wait a minute: what am I seeing and why am I reacting this way? We just tend to react.¹²⁹

Yet, presenting the full visual record (or as much as has been collected) is good history, as is discussion of what is missing from the visual record and why. Contrasting positions represented within the database convey the tensions and counterbalances in play.

The challenges of the uncensored use of images in digital platforms such as the web include:

- (1) the lasting power of visual images to offend;
- (2) visceral and emotional reactions to visual images that overwhelm rational cognitive processes;
- (3) digital images removed from the original publishing platform and circulated on the web without captions and explanations;
- (4) a lack of balance because only partial views of historical interactions are recorded and survive;
- (5) the unresolved complexity of historical events in the raw visual record, without the author's omniscient voice.

¹²⁸ Allen Hockley, interviewed by Ellen Sebring, June 18, 2013.

¹²⁹ Ibid.

To summarize, digital image-driven historiography faces the possibility of igniting passionate responses that bring past transgressions into the present. Historical resentments and hatred fueled by propaganda imagery, and documentary evidence, such as wartime photographs, ignite strong reactions today, as they did when they were made. Visual images function differently than text. Watching violence is different from reading about violence. In the digital environment, text doesn't protect the author or the reader from the effect of explicit images. Explicit images race past good intentions and measured argument.

Seeing versus Reading History's Extremes

My case study on the Boxer Uprising comes with a rich palette of visual media generated during the turn of the century boom in mass communication. The visual record of the Boxer Uprising also comes with the full spectrum of tragedy implicit in war and breakdown. The horrors of war when represented visually jump off the page. Can a visual historiography adequately contextualize graphics that leap past commentary? When we are not taking sides, as makers of the images at the time did in being participants and bystanders in unfolding events, it is difficult to find the heroes and villains of narrative storytelling, nor the safety of objectivity sought in historical writing.

Observing images and sets of images that concentrate themes through association is not buffered by translation to text and the author's voice. The experience of visual reconstructions of past events may not be within an author's purview. Words are written in the present shaped by the author in every detail.

The historical visual record has nothing to do with the present-day author's voice. It can only be arranged and annotated by today's scholars. The visual record itself remains intact, though transformed when transferred to the digital medium—a great equalizer. The task of historians is to re-contextualize the visual record for audiences of a different time who know little of the environment in which these images were made and circulated.

Passage of time—the century between then and now—does little to mitigate the power of images to offend in scenes that are unsavory, brutal, or cruel in portraying battle, including its prelude and aftermath. A visual historiography might not be able to be complete in showing all and everything or the unvarnished record.

3.5 Interviews with Scholars

Overview

This section introduces interviews I conducted for this research with scholars who participated in the Visualizing Cultures project at MIT between 2002 and 2015. The interviewees came from a variety of disciplines, including social/cultural history, art history and visual culture studies, Chinese literature studies, and museum curation. They discussed image-driven scholarship, impact of the digital medium on history, research methodologies, and the ways they used images in their work. My questionnaire asked how digital images change education, research, publishing, and the practice of history, and explored the differences between image and text.

Note: The questionnaire and full interviews appear in the Appendix, with a chart summarizing the responses.

List of Interviews

Christopher Capozzola
Associate Professor of History
Massachusetts Institute of Technology

John A. Crespi
Luce Associate Professor of Chinese, Director of Asian Studies
Colgate University

John W. Dower
Ford International Professor of History, Emeritus & Director of Visualizing Cultures
Massachusetts Institute of Technology

Christopher Gerteis
Senior Lecturer in the History of Contemporary Japan
SOAS, University of London

Allen Hockley
Associate Professor of Art History
Dartmouth College

Justin Jesty
Assistant Professor, Asian Languages & Literature
University of Washington

Lillian M. Li
Sara Lawrence Lightfoot Professor Emerita of History
Swarthmore College

Peter C. Perdue
Professor of Chinese History
Yale University

James T. Ulak
Senior Curator, Freer Gallery of Art and the Arthur M. Sackler Gallery

Smithsonian Institution

Jeffrey Wasserstrom
Chancellor's Professor of History
University of California, Irvine

Gennifer Weisenfeld
Professor of Art History and Visual Studies
Duke University

Discussion and Excerpts

The methodologies of the participants varied. As might be expected, art historians used visual images differently than social cultural historians, were more comfortable with putting images at the center of their research, and had a vocabulary for working with images. All respondents believed that the digital medium has increased access and interactions with images. For traditional historians, however, images were largely outside of their training and practice. Interdisciplinary collaboration within the academy, and with designers, artists, and software developers, remained rare. Most adhered to their training and traditional publication models. The interviews showed how little theoretical and intellectual input from visual practitioners and new media history was considered despite the digital humanities labs created by universities to assist scholars. While Christopher Capozzola (MIT, Associate Professor of History) believed that “We need to be putting resources in this direction because great ideas are there,” he feared that expensive digital projects would consume scarce research funds with little positive impact on the field:

Collaborative digital history projects are expensive—both in time and money. And given the constraints on the humanities in particular and universities in general, I think we need to think carefully about the contributions that they are making to teaching and learning and scholarship—and be sure to think critically about evaluating their impact, figuring out what would be good metrics for knowing how they are changing students’ thinking and writing and looking skills. And make sure that we are creating projects that will be sustainable in the longer term as technological forms evolve. We need to be putting resources in this direction because great ideas are there, but I would start to worry if I felt that the money for these undertakings was crowding out those aspects of teaching and learning that are “old-fashioned” but which (again, after evaluation) we know work.¹³⁰

The tug of war between old and new practices was significant for historians whose work builds on each others’ findings and publications, making standardized approaches essential, and leaving innovative digital applications as sidebars. Peter Perdue (Yale University,

¹³⁰ Christopher Capozzola, Interview by Ellen Sebring, June 6, 2013. (see Appendix for full text)

Professor of History, Asia, China) discussed the challenges images present in citations and other methodologies historian use.

But still, the visual image is not the same as a text, it doesn't speak for itself. A text doesn't either. You have to interpret the text too, but you can cite a text as you are writing about the text. They are in the same medium. Citing a picture is not the same. Now with digital methods it is much easier to insert images as a citation or link so that you can go back and forth very quickly between the picture and text, so that is quite different from the way it used to be. There is a little more integration between the two media than there used to be.¹³¹

The interviewees largely advocated increased interdisciplinary collaboration. Professor Capozzola singled out collaboration as “the most novel way of doing historical scholarship” in his work with VC.

Historians are not trained to work collaboratively—we are trained to do individual work, and our professional success depends on putting forth a very individual vision. But this is a project where no one person has all the skills needed to do the job. So for me, the collaborative aspect of Visualizing Cultures was the most novel way of doing historical scholarship.¹³²

Almost all expressed the importance of digitization in making vast numbers of visual sources accessible, and the ability to publish unlimited numbers of images. John Crespi (Colgate University, Professor of Chinese) saw a major advantage in the digital platform as being able to “display images alongside the text” rather than describing them:

...I'd never worked primarily with images before. I found it quite liberating knowing that I would have wide latitude to display images alongside the text. I think it was refreshing to get away from describing words with words, which I'd been doing previously with literary research.¹³³

Crespi also valued the expansive reach of digital publication in which primary sources could be communicated to a wide audience, notably classrooms where students could study them first hand. In his interview, he referred to the, “Great freedom to show rather than tell when dealing with the primary texts. I was also able to reach an almost unlimited audience.” When discussing the relationship between text and image he felt that written interpretations were necessary to dispel preconceptions triggered when viewing images.

As noted above, visual sources rely less on translation; on the other hand, you have to decide how much interpretation to provide so that your audience is able to understand the context of the images, that is, to help them set aside

¹³¹ Peter C. Perdue, Interview by Ellen Sebring, June 10, 2013 (full text in Appendix)

¹³² Capozzola (June 6, 2013)

¹³³ John Crespi, Interview by Ellen Sebring, August 1, 2013. (see Appendix for full text)

preconceived notions that they would otherwise use in interpretation. But at the same time, you need to let the images speak for themselves.¹³⁴

Crespi noted another effect of image-driven scholarship in the digital platform—discussed in this thesis in the case study on “Civilization & Barbarism (section 5.3)—that visual sources suggested research directions. He described that in the “excavation”¹³⁵ of images, he had to research “specific historical figures, events.”

I was compelled to really learn about history myself, as so many of the cartoons refer to very specific historical figures, events, and even everyday items. To discuss them accurately required a lot of detailed historical information...¹³⁶

Most of the participants commented on the ability in the digital medium to study images in unprecedented detail and comparatively, as described by Allen Hockley (Dartmouth College, Associate Professor of Art History):

Digital allows you to see things differently especially if we get very high resolution tif files. We can zoom in and see details that we never could've seen with the naked eye or we would see them and not notice them. The fact that we can blow images up forces us to see things that normally we would see but our eye might pass over.¹³⁷

Hockley's assertion of an ability to “see details that we never could've seen with the naked eye” affirms that the digital medium offers a unique view worthy of additional research and development. He contrasted the virtual with the materiality of physical objects, discussed their sensory qualities, and pointed out that physical artifacts conveyed archaic technologies through the mechanics of viewing. Hockley valued the somatic qualities of archival sources of all types.

Digital images are doing interesting things, but depending on the kind of objects you're working with you cannot ignore their material existence and the somatic or body experience they give. Think of stereoscope viewers. You pick up a stereographic card. You put it into the viewer and hold it up to your face, look at it, and adjust it. A series of motions are involved in looking at an image. If you look at the cards carefully you see the grime of 100 years of people's fingers in the corner where they held the card. You see the wear on the card where they inserted it into the stereoscope viewer. These are material qualities of images that are important.¹³⁸

¹³⁴ Ibid.

¹³⁵ Thomas, “The Evidence of Sight,” 159.

¹³⁶ Ibid.

¹³⁷ Allen Hockley, Interview by Ellen Sebring, June 18, 2013 (see Appendix for full text)

¹³⁸ Ibid.

Certain phases of creating VC units imparted materiality to digital images. The following photograph shows Professor Capozzola at the MIT History Department during one of our work sessions on the unit “Photography & Power in the Colonial Philippines: Dean Worcester’s Ethnographic Images of Filipinos (1898-1913).” We spread printed images from his essay draft across a large table to study the visual relationships and reorganize the narrative flow. This “cut and paste” approach freed us the small size of the computer screen, supported shared looking, and enabled tactile contact with the images.



Figure 51. Collaborating with MIT Professor Christopher Capozzola, 2012 on the VC unit “Photography & Power in the Colonial Philippines: Dean Worcester’s Ethnographic Images of Filipinos (1898-1913),” MIT History Department, 2012. Photo: Sebring. [Capozzola_PhilippinesUnit_0208]

The specialized approach and vocabulary art historians and curators had for image analysis was not evident in the historians’ responses. Historians tended to consider visual and documents sources interchangeably, as elements that contributed to an understanding of events, time and place, chronology, and analysis, rather than as the central objects of study.

Justin Jesty (University of Washington, Assistant Professor, Asian Languages & Literature) acknowledged the possibility of new questions emerging from access to large image sets: “with digital publication you can realistically open questions that involve entire archives or classes of image, rather than selecting a handful of representatives to be included in a book.” As in many of the other interviews, Jesty downplayed the methodological differences of working

with visual and textual sources, and wrote that classifications of materials made a more cogent set of distinctions.

I don't think there is a coherent distinction to be made between visual and written sources. Within visual sources, you can have cartoons, graffiti, photographs, films, prints, painting, written accounts of visible phenomena, and possibly all material culture. Each has material and institutional considerations that far outweigh their commonality as being visual. Within written sources, things like court records, tabloid articles, personal letters, hardly constitute a coherent class of items.¹³⁹

Like Crespi, Jesty emphasized the need for texts and captions to contextualize images, and further, to make historical argument.

It's almost impossible to use that material without some attendant account of where it has come from and when. It's also of little value to the audience to simply present primary documents (images or otherwise) without some account of why they're important or what the point of looking at them is.¹⁴⁰

In this statement, Jesty accurately pointed out the need for explanation to make visual databases meaningful. At the same time, his comments reflected the general bias towards text that underlies the training of the historians. For those, like myself, with a visual arts background, images have the primary impact and text remains a secondary clarifying element.

Lillian Li (Swarthmore College, Sara Lawrence Lightfoot Professor Emerita of History) wrote that she was more comfortable with text sources than images, but found methodological similarities despite the different way images communicate, and underscored her remarks with expressive punctuations:

Texts *appear* to be more straight-forward with the intention of the writer more apparent. Of course appearances are deceiving or mutable – historians would be out of work if they did not argue about intentions, meanings, contradictions, etc. (2) Images are “in your face” literally and can get your attention immediately. However, the intention of the artist/author demands more interpretation...¹⁴¹

Yet even as he emphasized the importance of traditional research methodologies, Jesty saw the digital platform as a “leap” forward in making new scholarship possible, effectively saying that even as things change, they should continue to conform to established protocols and professional standards. He agreed that the digital medium will significantly impact the practice of history:

¹³⁹ Justin Jesty, Interview by Ellen Sebring, October 3, 2014 (full text in Appendix)

¹⁴⁰ Ibid.

¹⁴¹ Lillian Li, Interview by Ellen Sebring, October 7, 2014 (full text in Appendix)

Yes, by making more things more available. I think a rough parallel might be the effect of photography in the late 19th century. (Arguably) photography made art history and physical anthropology possible as disciplines by making the visual record more available and portable. Digitization makes a similar leap.¹⁴²

James Ulak (Freer Gallery of Art and Arthur M. Sackler Gallery, Smithsonian Institution, Senior Curator of Japanese Art) represented a different perspective from many of the academics. As a curator, his work—designing exhibitions and building collections of visual objects—is based first in the visual, and second in the text that describes it. He described the inexact, yet sophisticated interactions with visual sources that culminate in exhibitions. For me, he is describing visual thinking.

A strong visual creation has a fairly immediate impact. It imprints on the brain and you keep going back to it. It's not an exact science. It could be the softness of the rendering. It could be a striking and unusual subject. It's a combination of fascinating subject matter and skill in rendering. You know it when you see it.¹⁴³

Among the most innovative comments came from Jeffrey Wasserstrom (University of California Irvine, Chancellor's Professor of History) who found a parallel between his work with VC and his research in Chinese history. In my own work, I found similar parallels in the Chinese *nianhua* (woodblock prints) representing the Boxer Uprising, that conflated events, texts, and scenes in the frame so as to create an internal visual narrative. Wasserstrom wrote:

I keep coming back to the question of whether there's more of a flow in Chinese materials (and maybe other Asian ones) between words and images and what to make of that; what I mean is the frequency with which Chinese paintings have poems on them and those poems are written in a calligraphic style that is itself an art form. It's not a "western" vs. "eastern" thing as there were illustrated manuscripts in the west and political cartoons combine words and images, but there just seems some sort of difference there worth teasing out, and working with VC in various capacities has brought that home in new ways.¹⁴⁴

Wasserstrom's idea suggested that intangible yet distinct qualities can emerge in both medium and culture of origin. He dared to be speculative, noticing "a flow in Chinese materials...between words and images" and wondering "what to make of that."

The new forms of expression that the digital enables will not necessarily be found in history's methodologies and academic constraints, but in the mysteries of the work itself. The digital image, positioned between art history and history, between the book and the exhibition,

¹⁴² Ibid.

¹⁴³ James T. Ulak, Interview by Ellen Sebring, July 15, 2014 (full text in Appendix)

¹⁴⁴ Jeffrey Wasserstrom, Interview by Ellen Sebring, September 16, 2014 (full text in Appendix)

between the scholar and designer, will only become a unifying genre of cultural and historical import when informed by thinkers who have pondered its nature, and creators who have worked with it. Wasserstrom was not alone in validating VC's value in giving scholars the opportunity to experience working with images. Peter Perdue affirmed that meaningful historical research was being done with digital images, "It's not a philosophical question, because in principle, yes, we have already done this with Visualizing Cultures."¹⁴⁵

¹⁴⁵ Perdue (June 10, 2013)

3.6 Beyond Visualizing Cultures

Design in the Humanities: Crossing the Visual-Verbal Divide

The research here into visual narrative and visual historiography is in large part an exploration of the new balance between image, author, and reader. It poses shifts in reading and writing in the digital medium that go beyond the software and traditional roles that readers and writers adhere to.

The journey from the physical sources imbued with the unique presence and stamp of historical time, to digital reproduction in which all objects, places, and times are flattened, rendered equal, and infinitely reproducible, is one where the tether between these incarnations is both tenuous and yet vital. As new media designer and painter, Ben Davis, put it, “When the power goes out, you can still play the flute.” A digital copy references, enhances, and gains its power from the viewer’s understanding that it was born of a unique physical primary source. Accessibility goes both ways: the value of the infinite copy in widespread use and the inaccessible unique object is an interdependency.

One of the goals in writing about image-driven scholarship is to build a bridge between academic scholarship and visual lexicons that allows a visual vocabulary to retain the power of intellectual argument without translation into verbiage.

Image-driven narratives that supplant semantic text are, by nature, interdisciplinary, making them difficult to position within academia’s highly specialized, isolated disciplines. In university departments, design generally falls within the areas of art and commercial art, or, as with the MIT Media Lab, new media and art-and-technology practice, the results of which are often product based.

Within the intellectual currency of the humanities, crediting visual design with a voice that carries the weight of intellectual argument is uncommon and without a standardized format. While design amplifies the author’s intent, design itself is not recognized as an active voice with conscious intent. Because the measure of a successful design is often the extent to which it disappears behind the message it promotes, the thought behind design, and the multitude of choices made along the way, is summed up as “beautiful” (or other adjectives) and then dismissed.

Increasingly user interface designs are moving away from narrative/graphical metaphors in favor of intuitive interactions in which navigation is largely invisible and requires minimal learning from users. These are referred to as natural user interfaces (NUI). The NUI facilitates increasingly complex interactions. Touch screens are a good example. Users touch objects on the screen to “open” them, and swipe or pinch the screen to move through material. The relationship restores physicality to the machine interaction that corresponds with a move towards visual immersion in which little is explained, but rather seen and experienced. Visual narrative design places users in a visual world, where they recognize valuable information that they may not necessarily know how to explain in words. This research is based on the intrinsic connection between design and perception. The premise is that the perception-based reading of visual media requires a new design model to fully support it as an acknowledged, overt form of reading. Chapter 4 of this thesis discusses an interface and software design for visual narrative in detail.

Theorists including Keith Jenkins, David J. Staley, and Raphael Samuel are broadening the definition of history to not only include non-traditional sources, but to embrace vastly different perceptions and presentations of the past, such as sense memory.

In a parallel shift, when the Visualizing Cultures project began in the early 2000s, ephemeral sources—for example, the fragile flyers that promoted protest rallies in Japan—were not considered serious subjects of art or historical research. By the time of Visualizing Cultures’ second Yale conference in 2013, graduate students were widely embracing historical ephemera and visual media as rich new resources and subjects for doctoral theses. Accessibility through digitization has released the potential of the visual record for detailed and heretofore unseen analysis that will reveal the past in a new light.

Interdisciplinary Collaborative Authorship

The impetus for the research in this thesis grew out of the interdisciplinary collaborations with historians on the Visualizing Cultures project, observing the successes and pitfalls of highly specialized scholars trained in the humanities and social sciences attempting to work in a visual/digital domain. The limitations of Visualizing Cultures, which replicates units in a fixed format (albeit one that we designed), fueled a desire to better understand the research

process in order to formulate a “next step” in digital visual content development. The questions included:

1. What happens theoretically and practically when content is visual, digital, and online?
2. What is the future for image-driven scholarship and representation?
3. Are we changing the way we communicate information as new technologies make the visual pervasively accessible?

If media changes the message, isn't the discipline of history a powerful way to explore our digital future? When embracing new communication technologies, each generation believes itself to be on the cusp of new knowledge. Looking back at the visual media of the past and the ways previous generations portrayed themselves informs and tempers the glitz of “new” media.

The interdisciplinary and collaborative nature of authoring that developed within the Visualizing Cultures model emerged from the combined expertise of the participants and will inform authorship within future models of visual representations. On the one hand, artists and designers use artistic understanding and visual knowledge to reveal images to the readers by putting them in their “best light” with aesthetic skill. On the other hand, historians looking at images understand the themes therein based on their knowledge of history. Most authors are awkward with the demands of the visual data that are outside their areas of expertise.

Lev Manovich discussed collaborative authorship in a 2002 article:

New media culture brings with it a number of new models of authorship which all involve different forms of collaboration. Of course, collaborative authorship is not unique to new media: think of medieval cathedrals, traditional painting studios which consisted from a master and assistants, music orchestras, or contemporary film productions which, like medieval cathedrals, involve thousands of people collaborating over a substantial period of time. In fact, if we think about this historically, we will see collaborative authorship represents a norm rather than exception.¹⁴⁶

How far historians will progress in developing visuality remains to be seen. If history departments, beyond art history, begin to acknowledge image-driven texts as accepted academic scholarship, the training and tools will need to be developed to facilitate visual work. Analysis of the structure of visual narrative, such as the units menu interface, shows that visual authoring is more than placing a series of images within a written essay. It is a state of mind fostered by

¹⁴⁶ Lev Manovich, *Who is the Author? Sampling / Remixing / Open Source*, from “Models of Authorship in New Media,” 2002. <http://manovich.net/index.php/projects/models-of-authorship-in-new-media> Accessed October 2015.

interactions with the medial assets that create knowledge of history through the senses, derived from and experienced through primary source artifacts.

The various media in which the historical images were made—woodblock prints, photographs, postcards, cartoons, paintings, amateur drawings, and so forth—are unique vignettes of their time, place and mode of production. Observing the counterpoint between the signature graphics and, even more so, the visual databases for the units reveals an identifiable historical time-stamp generated by the media and subject matter. An analogy comes from classical music, in which aural imprints are so personal and period-specific that musicians compete in parlor games to identify composers from as little as a single chord of their compositions.

As online content proliferates, the Internet that was originally designed for text communication between scientists is increasingly visual. The Visualizing Cultures interface looks more like current c. 2013 video entertainment pages where content is visually represented in flexible grid matrixes.

Chapter 4: Modeling the Visual Narrative Field

4.1 Chapter Overview

This chapter turns to results and practical applications of my conclusion that, based on theoretical research and experiments in the Boxer Uprising case study, visual narrative lies in a grammar of relationships within a unified image field. I postulate what I call the “Visual Narrative Field” (VNF) model as the basis for a software tool that could be developed to support authoring and reading image-based digital historiographies.

The VNF model presents multiple intersecting narrative paths through a mutable dataset of images. Colligating diverse genres of visual sources in a single media stream characterizes the historiographic approach. Aby Warburg’s *Mnemosyne Atlas*, discussed earlier in section “2.6 Precedents,” similarly conveyed meaning through visual association by placing images in a unified visual field. Unified in the VNF, images from various times and places redefine historical time as a complex suspension within digital time that conflates events in comparative views.

The interactive model supports a dynamic range of perspectives including close up views, juxtapositions, thematic series, and large data pattern recognition. It offers multiple text-image approaches that exist on a spectrum from primarily reading to primarily looking. The model recognizes a shift cognitive mode as readers move across the spectrum spanning reading and looking. Designing to accommodate and encourage this shift in perception gives observation-based visual narrative a place alongside already familiar textual exposition.

The chapter also examines at the practicalities of disseminating new softwares, narrative formats, and historiographic models, and speculates on the changes machine intelligence can make by adding quantized visualization to qualitative research with images.

Summary of Research Outcomes

- (1) Visual narrative is based on relationships between images as the colligated elements of a data set, also known as network relations;
- (2) the digital framework that supports such an object-oriented visual narrative mode takes the form of a networked field;
- (3) multiple story lines converge in a recombinant data field;

(4) the visual data field maintains a state of unresolved complexity, free of the linearity and resolution implicit in textual grammar;

(5) a software design is proposed for authoring and reading visual narrative, called the Visual Narrative Field (VNF) model;

(6) the model recognizes and supports the cognitive modes generally associated with “reading” (intellect/reasoning) and “looking” (sensory/observation);

(7) “vertical integration” creates fluid movement between cognitive modes, giving readers cues to shift perception between reading (following) and looking (exploring);

(8) as a scalable historiographic model, the VNF enables historians to research and author using the visual record to represent the past.

4.2 Defining Visual Narrative within a Networked Field

Postulating the Visual Narrative Field (VNF) Model

My research into digital images, narrativity, and historiography, combined with experiments in the case study, lead to the conclusion that visual narrative lies in the image relationships within a networked field. A field-based metaphor supports the non-linear expression of visual images that moves naturally in multiple directions.



Figure 52. Three approaches, “Visual Narrative Field” (VNF) model.

The VNF model unifies three narrative approaches, and supports their associated cognitive modes: (1) essay (a linear image-driven text); (2) visual narrative (thematic image sequences); (3) visual data field (image database). VNF model and graphic, Sebring, 2011.

[model_levels]

The networked field supports a “visual narrative authoring mode” in which authors manipulate image relationships as grammatical elements. In the same way that a book contains stories, a proposed “Visual Narrative Field” (VNF) model becomes a framework—effectively, a software design—in which the visual narrative authoring mode can unfold.

Images appear in three layout styles: (1) image-driven essays (image-to-text narrative), (2) visual narratives (image-to-image narrative), and (3) database (networked grids). Thus, images become interactive, connective portals linking these diverse narrative approaches.

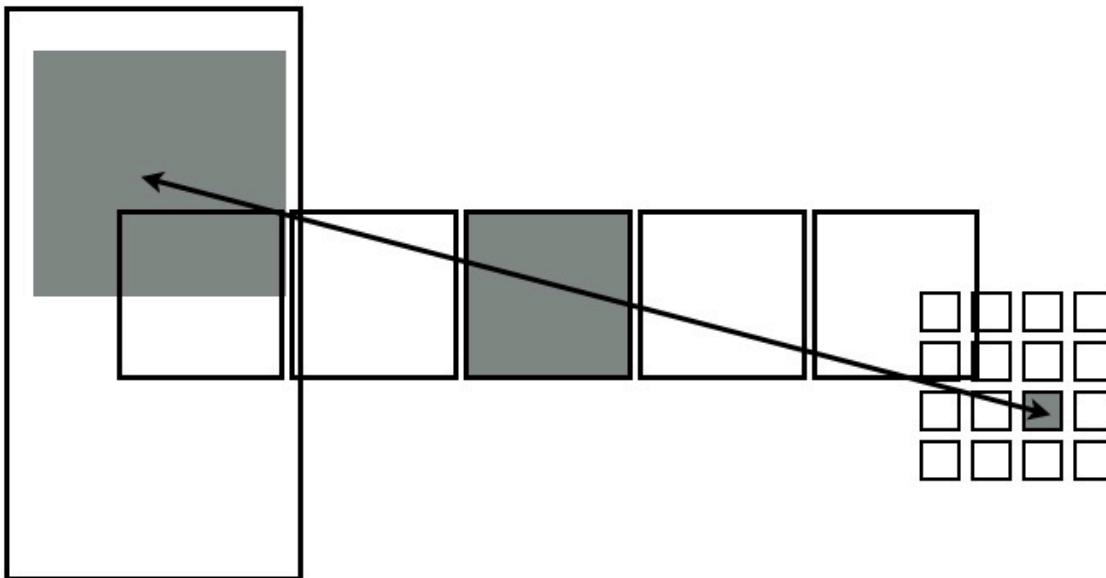


Figure 53. Diagram of vertical integration between three levels, VNF model. One picture as a portal connects different formats, left to right: essay, visual narrative, and database. Vertical Integration illustration, Sebring, 2015.
[vertical_integration]

Rather than eliminate the highly effective attributes of written texts, narrative expands to incorporate an equally powerful language of relational images that becomes especially dynamic in the digital medium. The VNF model unifies images and texts within a narrative system.

Readers move seamlessly between the three layouts in a vertically integrated, three-dimensional model. The motion between these approaches, with the appropriate shifts in cognitive perception modes, creates the depth needed for complex argument using images. Different layout styles trigger different types of cognitive reception, enabling the optical to gain an equal position to the intellectual cognition of text. As images appear in a range of image and text interactions and variety of relationships within a model, narratives range from micro—visual relationships inside individual images—to macro views such as large blow ups and database patterns.

As a mutable, navigable digital format, the VNF radically redefines narrative within a sensory language of images, made possible by the digital medium, thus supporting visual narratives that do not fit within established publishing formats.

The digital reproduction of images—in unlimited quantities, sizes, color, and detail—unleashes their narrative potential as relational objects. An object-oriented syntax fulfills the

goal of elevating images to an equal level with written text in communicating intellectual content and argument through the optical, observational senses.

In the debut issue (July 2015) of the *International Journal of Digital Art History*, Lev Manovich refers to “connections between elements (i.e., network relations.)”¹⁴⁷ The phrase “network relations” describes the shifting relationships between objects within a data field, and lies at the core of my proposed visual narrative mode.

The migration of collections online has been met by the digital humanities with emerging fields such as digital art history, and spatial history. Director of the Stanford University Spatial History Project, Richard White, describes an additive approach to digital history that maintains history’s narrative tradition.

Most so-called “turns” in history emphasize their revolutionary intent. I think that what we are doing is different, but we are not announcing the end of history as you know it or the extinction of the text or the narrative. Historians will continue to write books. Historians will continue to tell stories.¹⁴⁸

The VNF model appears similarly conservative as a digital interface that features linear texts, but it functions in ways purely digital, consolidating narrative configurations that range far from the properties of text. While the digital humanities frequently explore the potential of quantization in research, the VNF model responds to the more subtle implications of digital reproduction for expanding qualitative research to include the visual record. Image recognition algorithms link both approaches by quantizing sensory perception, attempting machine vision and pattern recognition.

White’s description of visualization in spatial history also applies to images in visual narrative:

...visualization and spatial history are not about producing illustrations or maps to communicate things that you have discovered by other means. It is a means of doing research; it generates questions that might otherwise go unasked, it reveals historical relations that might otherwise go unnoticed, and it undermines, or substantiates, stories upon which we build our own versions of the past.¹⁴⁹

¹⁴⁷ Lev Manovich, “Data Science and Digital Art History,” *International Journal for Digital Art History*, Issue 1, (Munich: Graphentis Verlag e.K., June, 2015), 15. http://www.dah-journal.org/issue_01.html Accessed October 2015.

¹⁴⁸ Richard White, “What is Spatial History?,” Stanford University Spatial History Project, February 1, 2010. <http://web.stanford.edu/group/spatialhistory/media/images/publication/what%20is%20spatial%20history%20pub%20020110.pdf> Accessed October 2015.

¹⁴⁹ Ibid.

Digitized, the visual record becomes a collection of optical data that reveals “historical relations that might otherwise go unnoticed.” The VNF model provides a means for discovering and communicating them.

Integration of Two Cognitive Modes: Reading and Looking

In the VNF model, readers shift cognitive modes, moving from a rational, linear “reading” stance when reading texts to an observational, nonlinear “looking” stance when viewing images. The VNF interface signals readers to consciously adapt learning styles, moving between sensory/perceptual cognition and rational/intellectual cognition. Only by making this perceptual shift transparent to both authors and readers can visual narrative gain equal footing with textual narrative. The model supports images in making intellectual argument in their native form, enabling visual information to expand freely within a design that facilitates the deep looking required for spatial, tactile, emotional, and sensory input to be recognized as knowledge. Readers are encouraged to slow down, process, and reflect on their perceptions.

READING MODE



Figure 54. “Reading Mode.”

Reader moves between two complementary reception modes: image and text, with resulting shifts between perceptual modes. Sebring, 2015.

[reading_mode]

Psychologist Rudolf Arnheim, a pioneering researcher of visual thinking, saw a cognitive “tug-of-war” between the intellect and perception in the dynamic balance of stable and interacting forces.

Generalization, however, is a mainstay of cognition...It creates generalized concepts; and without these concepts there can be no fruitful cognition. Such operations, based on standardized mental contents, are the domain of the intellect. There exists, then, a permanent tug-of-war between two basic tendencies in cognition, namely, that of seeing every given situation as a unified whole of interacting forces and that of constituting a world of stable entities whose properties can be known and recognized over time.¹⁵⁰

Arnheim explains the role of pattern recognition in how we decode optical information and come to understand the complex language of images.

Visual perception is pattern perception; it organizes and structures the shapes offered by the optical projections in the eye. These organized shapes, not sets of conventional ideographs, yield the visual concepts that make pictures readable. They are the keys that give us access to the rich complexity of the image.¹⁵¹

“Text is cheap,” MIT historian Christopher Capozzola commented while we were working together on his Visualizing Cultures unit, “Photography & Power in the Colonial Philippines” in 2014. He was referring to the ease and speed with which words could be assembled, cut, or rewritten. While essential to the VNF, text also moves aside to allow images to speak. Indeed, it may prove over time that the primacy of text will be challenged by an overwhelming onslaught of imagery, as we snap cell phone pictures to share information instead of writing it down. A deluge of digital images creates the problem of spectatorship or passive looking according to Capozzola.

The danger in a very controlled visual narrative is that it would encourage those who encounter it to do so passively. We are accustomed in the world around us to be spectators or consumers of the visual. But reading, researching, are things that are more intellectually engaged and active, and so there has to be a way for visual history projects to make it possible—even necessary—for users to be thinking their way through the site.¹⁵²

The VNF design addresses the problem of passive spectatorship by supporting the reader’s shift from “following” an argument when reading text, to “leading” their own exploration of visual materials. Giving users control over the visuals leads to an immersive state, deep engagement, and contemplation. Having looked to their heart’s content (embodied

¹⁵⁰ Arnheim, *New Essays on the Psychology of Art*, 18.

¹⁵¹ *Ibid.*, 112.

¹⁵² Christopher Capozzola, from interview, *Historian Commentary on Visual Record in Digital History*, by Ellen Sebring, June 6, 2013. [see Appendix for full text]

reference intended), users emerge from immersive looking, and return to reading the text.

Interactive narrative does not imply multiple authors or endings, but the freedom to investigate content by readers who retain navigational control.

Patterns in Complexity

Asked, in an interview with Japan’s broadcasting company NHK, to sum up history in a single word, John Dower answered “complexity,” and then added, “pattens in.”¹⁵³

*Figure 55. “Patterns in Complexity.”
Historian John Dower described history as “patterns,” and added “in complexity.”
[patterns_2012]*

The image shows the handwritten text 'patterns in COMPLEXITY'. The words 'patterns in' are written in a cursive, lowercase script. The word 'COMPLEXITY' is written in a bold, uppercase, sans-serif font, appearing much larger and more prominent than the words above it.

Digitization creates new opportunities for historical representations modeled on Dower’s idea of history as “patterns in complexity.” In the VNF model, the image database sustains a state of unresolved complexity even as it narrativizes the visual record. History can be shared through the direct perception of visual sources without the need for resolution embedded in the grammar of written text. The need for linear resolution disappears in a field of images with recombinant narrative pathways. Dower’s concept mirrors the polymorphic narrative streams that can be created by reassembling visual objects, which I described in a 2012 paper.

Unresolved tensions are embedded in the visual mosaic of primary sources—the varied and often contradictory depictions that survive in the wake of historical events—and interweave into a fabric that suggests a new model of visual narrativity. In the new medium of digitized visual sources, the historical visual record can be seen for the first time in its full complexity, reinventing the idea of “patterns in complexity” for the digital era.¹⁵⁴

Dower’s opening text in the unit “Black Ships & Samurai” describes the shock of Commodore Perry’s arrival on the shores of Japan, while the Japanese woodblock print, “American warship,” communicates it non-verbally. Dower’s text gives information and impressions based on his expertise, while the woodblock print offers a direct gaze into the past.

¹⁵³ Recounted in a 2011 conversation with Professor Dower at MIT.

¹⁵⁴ Ellen Sebring, “World on the Head of a Pin: Visualizing Micro and Macro Points of View in China’s Boxer War of 1900,” *Transcultural Tendencies | Transmedial Transactions*, Volume 20 Numbers 2 & 3, (Bristol, UK: Intellect, Ltd., 2012), 229-237.

On July 8, 1853, residents of Uraga on the outskirts of Edo, the sprawling capital of feudal Japan, beheld an astonishing sight. Four foreign warships had entered their harbor under a cloud of black smoke, not a sail visible among them. They were, startled observers quickly learned, two coal-burning steamships towing two sloops under the command of a dour and imperious American. Commodore Matthew Calbraith Perry had arrived to force the long-secluded country to open its doors to the outside world.¹⁵⁵



Figure 56. "American warship," Japanese woodblock print, c. 1854. From the MIT Visualizing Cultures website. Image Source: Nagasaki Prefecture. [06_065_AmericanWarship]

The sophisticated and well-established textual approach explains and contextualizes the image if it is to be treated as an illustration. But the image blossoms as a narrative object in the digital medium. Comparison with other images of steamships in the database deepens its meaning. Looking back in time shows the junks that excelled at navigating Japan's coastal waters. Looking ahead just ten years, shows the first Japanese-built steamer, manned by samurai. Clearly, Japan's decision about the Westerners and their technology was conveyed not in the fearful "monster" print, but in the annotated architectural drawings.

¹⁵⁵ John W. Dower, "Black Ships & Samurai," 2 units on MIT Visualizing Cultures, (Cambridge, MA: MIT OpenCourseWare, 2011). Chapter 1. http://ocw.mit.edu/ans7870/21f/21f.027/black_ships_and_samurai/bss_essay01.html Accessed October 2015.



Figure 57. “Complete Picture of a Steamship, Scenery of Uraga from the Sea.” Woodblock print by Sadahide, 1863. A Japanese-built paddle-wheel steamer and Japanese crew armed with samurai swords, just ten years after the first Commodore Perry mission. The site of Perry's landing, Uraga, appears in the distant landscape. From Visualizing Cultures unit, “Yokohama Boomtown,” by John Dower, 2008. Image Source: Arthur M. Sackler Gallery, Smithsonian Institution [[link](#)] [Y0070_TOA_Japanese_steamer]

The database exposes nuances that diffuse the dominance of the few iconic, often reproduced images. While the “monster ship” image stands out as a riveting iconic image, not all Japanese portrayed the iron-clad steamers as demons, instead making realistic drawings, fully annotated, that attest to the quick absorption of this foreign technology. One approach points to the past with references to *Tengu* (demons) and fears of the outside world, while the other looks to the future, and the choices Japan would make in response to the technologically superior West.



Figure 58. "Black Ships & Samurai" database sample. The collected images show both dramatic and informational Japanese depictions of Western ships and crews. MIT Visualizing Cultures website, 2010.

[bss_gallery_ships]

Images as snapshots from a moment in time provide not only intangible insights into emotional responses, but also tangible details. Japanese drawings of flags and gravestones show attempts at writing English in imperfect transcriptions of phonetic sounds and an unfamiliar alphabet.

Looking back and forth between Dower's text and the "monster ship" image, readers can observe an internal shift in perception as they focus on written word and then image. The VNF model builds perceptual centers that alternately favor either text or image. Visual perception is supported as an immersive cognitive mode. Visuals achieve a freedom not possible in printed books where large spreads are broken up by the spine and page turns. Digital images respond to touch, making up for what was lost in translation to pixels through tactile responses to the hand. Readers can move through the images, looking at their own pace. Visual juxtapositions encompass a complex historiographic discourse, including the broader political tale of the opening of Japan, and personal responses that are emotional, curious, and culturally informative.

Post-Modern Narrative and Database

Manovich's 2002 book, *The Language of New Media*, famously casts narrative and databases as "natural enemies." The database subverts monolithic, linear narrative with a web of possibilities. However, narrative isn't going away just because a new medium develops. Instead, these "natural enemies" together expand narrative form in a blend of linear and non-linear systems, or in Arnheim's language, stable, generalized concepts balanced against unified interacting forces. Content in the digital medium separates from form, Manovich writes, becoming accessible through multiple interfaces, and narrative can be, "... the sum of multiple trajectories through a database."

With new media, the content of the work and the interface are separated. It is therefore possible to create different interfaces to the same material....The "user" of a narrative is traversing a database, following links between its records as established by the database's creator. An interactive narrative...can then be understood as the sum of multiple trajectories through a database.¹⁵⁶

Narrativity derived from fragments fulfills a post-modern sensibility that sought to undermine the traditional narrative art of history. Combining flexible databases and interfaces of unlimited structural design suddenly makes an anti-narrative movement, like post-modernism, prescient and even practical. With the database, historical narrative can be non-verbal, and convey purely sensory traces of the past that undermine the top-down hierarchy of the written word. Multi-tasking digital behaviors with constant lures to "link away" reflect post-modern fragmentation. Narrative interruption, often mid-sentence, weaves back to completion having

¹⁵⁶ Lev Manovich, *The Language of New Media*, (Cambridge, MA: The MIT Press, 2002), 227.

picked up a layer of incidental impressions. Narrative, then, is received within Nicholas Negroponte's description of "being digital," connected to a plethora of content and stimulation in a blend of high/low, relevant/incidental inputs.

N. Katherine Hayles repositions Manovich's "natural enemies" as symbiotic partners in her 2012 book, *How We Think: Digital Media and Contemporary Technogenesis*, arguing that the database doesn't undermine narrative, but rather depends on narrative interpretation to become meaningful.

Because database can construct relational juxtapositions but is helpless to interpret or explain them, it needs narrative to make its results meaningful. Narrative, for its part, needs database in the computationally intensive culture of the new millennium to enhance its cultural authority and test the generality of its insights.¹⁵⁷

I would add that if the definition of narrative is broadened to include visual syntax, these "relational juxtapositions" can occur between database elements, with the images themselves becoming narrative interpretations.

The explosion of data in the 21st century stretches the limits of narrative, Hayles contends. Closed, linear structures collapse when trying to accommodate the constant flow of information that is so easily absorbed by databases. Hayles suggests a "proliferation of narratives" that transform in response to incoming data.

...the expansion of database is a powerful force constantly spawning new narratives. The flip side of narrative's inability to tell *the* story is the proliferation of narratives as they transform to accommodate new data and mutate to probe what lies beyond the exponentially expanding infosphere.¹⁵⁸

Narratives no longer dominate with single explanations, but cross-pollinate as multiple story lines that intersect in a morphing, living network. Narrative and database blend the "selectivity" of narrative with the "inclusivity" of the database.¹⁵⁹ A polymorphic narrative system places recombinant relational objects in multiple intersecting pathways within the database.

¹⁵⁷ N. Katherine Hayles, *How We Think: Digital Media and Contemporary Technogenesis*, (Chicago: The University of Chicago Press, 2012), 176.

¹⁵⁸ *Ibid.*, 183.

¹⁵⁹ *Ibid.*, 182.

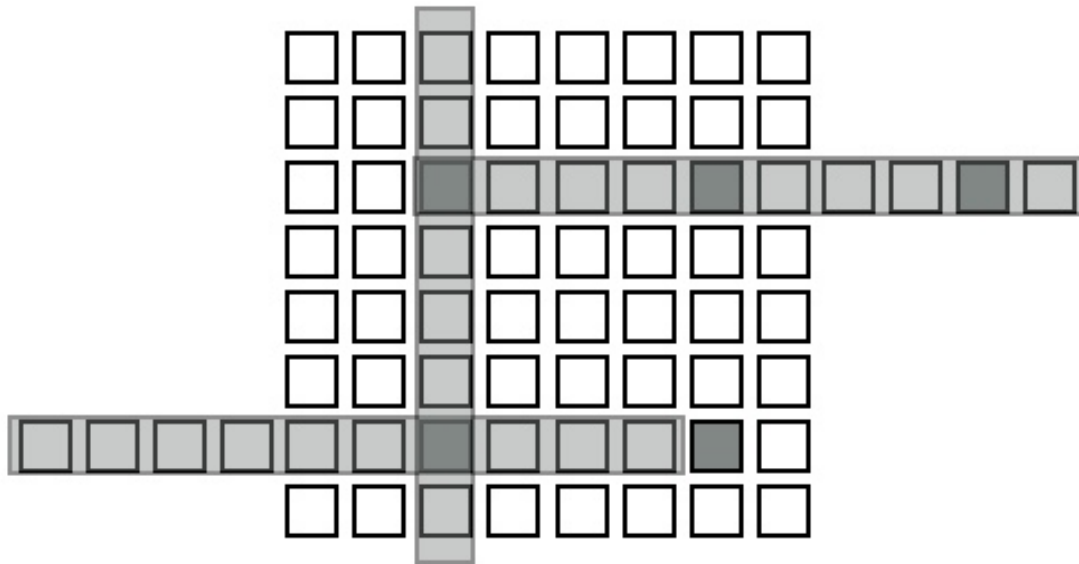


Figure 59. Intersecting visual narrative pathways.

Relational juxtapositions create polymorphic narrative pathways in an object-oriented (visual image) database. Sebring, 2015.

[relational_narrative_database]

A Digital Landslide: Trends and Need for Tools

Library Study on Image Use by Historians

“If we build it, they will come” did not prove to be the case according to a ten year study on use of images by historians. The response to digitization signals the need for new tools, collaboration, and education to change the long-standing practices of academics.

A 2013 study, “Trends in Image Use by Historians and the Implications for Librarians and Archivists,” by Valerie Harris and Peter Hepburn, investigated the impact of the digitized visual record on historical practice and publishing.

Historians are an important user group of special collections; but, before the digital era, they made limited use of images in their work. Because images have become abundantly available online and some historians have called for greater use of these largely unexplored primary sources in historical research, this study asks how such collections, particularly those of images digitized from libraries’ archival holdings, were used by historians in the decade from 2000 through 2009.¹⁶⁰

The research focused on the use of images and image citations in academic journals during a ten year period, starting in 2000, including both print and digital formats. Despite the

¹⁶⁰ Valerie Harris and Peter Hepburn, “Trends in Image Use by Historians and the Implications for Librarians and Archivists,” *College & Research Libraries*, volume 74 no. 3, (Chicago, IL: Association of College and Research Libraries, May 2013), p 278 <http://crl.acrl.org/content/74/3/272.abstract> Accessed October 2015.

large increase in digitized visual sources from both official institutions and informal web sharing services, no increase in image use followed, and in fact, usage moderately declined.

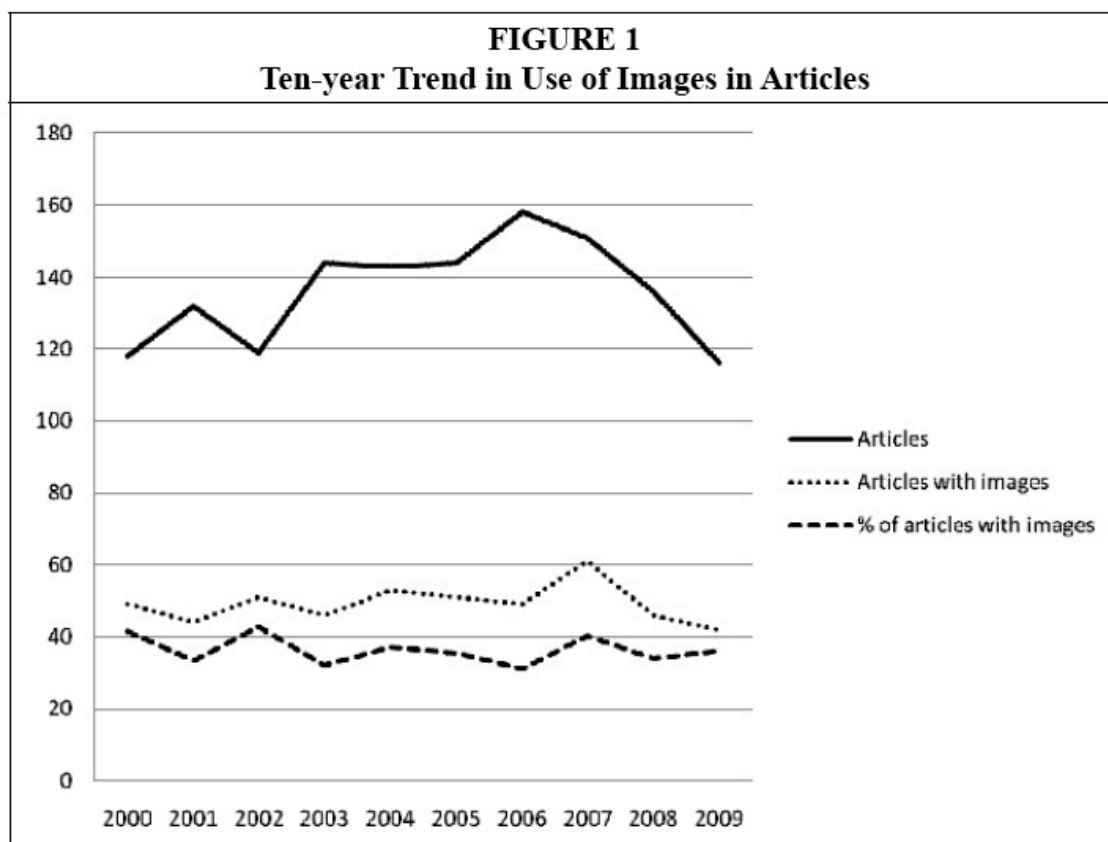


Figure 60. "Ten-year Trend in Use of Images in Articles," 2000-2009.
A chart from article, "Trends in Image Use by Historians and the Implications for Librarians and Archivists," by Valerie Harris and Peter Hepburn, College & Research Libraries, May 2013, p 278.

[Harris_Hepburn_Libraries_Research_table278_2013]

Having invested heavily in digitizing their collections, institutions are asking how these resources can be used in historical research and new knowledge creation. The findings in this 2013 study included:

- (1) Historians weren't finding images relevant to their research;
- (2) Historians preferred small image sets to large databases, and asked that their personal sets compiled for teaching be digitized;
- (3) Historians preferred traditional methods of information-seeking, primarily "citation-chasing" to exploring digital archives;
- (4) Historians trusted the reliability of metadata from institutional archives over public sharing sites;
- (5) A generation gap exists, with younger scholars and students more willing to use online research;

(6) Hard copy versions of images are still most often used.

The study made recommendations for archives, but concluded that, “In the end, historians either will or will not raise the status of images in their writing and research.”¹⁶¹

Recommendations included:

- (1) Collaborate with scholars to better understand their needs;
- (2) Make image digitization a core library practice to standardize records;
- (3) Learn from those trained in the use of images, such as art historians;
- (4) Use pedagogy to raise awareness of visual literacy.

Collaboration and Visual Literacy

The collaborative structure of *Visualizing Cultures* did much to educate and facilitate scholars in the use of primary source images. Collaboration meant crossing the intangible terrain between the visual language of designers and the word-centric language of scholars. My research seeks to offer historians and scholars entree to the visual resources newly available in a medium superbly suited to showing them, that is, the digital medium. By postulating a tool that automates the design process, and articulating the theory and practice of working with visual sources, I hope that digital images will become important content for historians, to continue the work *Visualizing Cultures* began.

Authoring with data objects, a widespread practice figuring in the rapid ascent of the massive genre of interactive digital games, continues to elude academic scholarship.

In his article, “Visual Literacy,” Michael Lesy goes so far as to argue that scholars need to practice the visual arts to understand their potential for historical research and narrative.

Historians, trained to read and write—and only to read and write—from an early age avoid photo archives the way people who do not know how to swim avoid the water.¹⁶²

In my collaborations I found that historians’ facility with images varied widely, but improved with instruction and practice. Over time, they began to recognize and value visual messages in reshaping their thinking. Capozzola wrote:

¹⁶¹ Ibid., 278.

¹⁶² Michael Lesy, “Visual Literacy,” *The Journal of American History*, (Bloomington, IN: The Organization of American Historians, June 2007), 146.

What was new in collaboration was having multiple sets of eyes on these visual images, which makes you realize the range of ways that people can see an image and made me emphasize the ambiguity of the images I was presenting.¹⁶³

In emphasizing “the ambiguity of the images,” Capozzola steps back from the complete control text offers, instead recognizing the object on which narrative pivots as an autonomous element separate from the author’s control. Interpretive layers spiral away from the author, who sets the stage for the image as the actor. “Ambiguity” puts knowledge in Arnheim’s perceptual realm of pattern recognition, as opposed to the stability of generalized concepts.

Rather than becoming photographers themselves, as Lesy suggests, humanities scholars and social scientists can take time to respond to visual images. Stepping back to receive and contemplate, rather than jumping in with easy narration, in my experience at VC, helped make historians aware of visual impact. Stopping to look and compare, along with questioning their hypotheses, led to visual story-telling, and in the end, altered historical conclusions. The process favors data-driven approaches over the experimental scientific method.

Theorists and technologists often diverge, the former treating change over-analytically, and the latter, experimentally, creating applications with little reflection. Visual narrative unifies two powerful oppositions, establishing a beachhead for sensory, optical thinking alongside the cognitive, rational thinking that has long dominated intellectual discourse.

Massive Online “Image Dumps”

Image collections coming online are heralded by headlines emphasizing dramatic numbers such as, “The British Library Puts 1,000,000 Images into the Public Domain, Making Them Free to Reuse & Remix,”¹⁶⁴ and “Download for Free 2.6 Million Images from Books Published Over Last 500 Years on Flickr.”¹⁶⁵ In these massive online databases, metadata and search appear less developed than in the internal institutional collections curated by archivists. In a visual turn, web databases have taken the form of endless pages of unlabeled thumbnails.

¹⁶³ Capozzola, from interview by Ellen Sebring, June 6, 2013.

¹⁶⁴ “The British Library Puts 1,000,000 Images into the Public Domain, Making Them Free to Reuse & Remix,” Open Culture website, December 13, 2013 <http://www.openculture.com/2013/12/british-library-puts-1000000-images-into-public-domain.html> Accessed October 2015.

¹⁶⁵ “Download for Free 2.6 Million Images from Books Published Over Last 500 Years on Flickr,” Open Culture website, August 30, 2014 <http://www.openculture.com/2014/08/new-flickr-archive-makes-available-2-6-million-images-from-books.html> Accessed October 2015.

The comments section of the latter post pinpointed the difficulty of managing massive open access:

I can appreciate their desire to archive these graphics for posterity, but who has the patience to click or tap through over 26,000 pages of pictures?¹⁶⁶

The Open Culture post titled, “The Metropolitan Museum of Art Puts 400,000 High-Res Images Online & Makes Them Free to Use,”¹⁶⁷ on May 19, 2014, generated a comments section that argued its merits. The move to give content away comes at the cost of eliminating previously accessible scholarly resources in favor of “reuse and remix” by the general public. One user commented on the problems that arise when databases are reorganized, which, in this case, actually cut access to previously accessible images.

I don’t see anyone saying what they have done is not valuable, other than the issue of whether they have removed a large number of images that were previously available, as seems to be the case.

Put this another way, if you saw your public library suddenly advertising ‘borrow thousands of films for free’ but when you went in a lot of the ones they used to have were missing, and you could only borrow them if you came from one sector of society, and when you did get them home you could only really watch them on your small screen TV and not your widescreen, how happy would you be?¹⁶⁸

During Visualizing Cultures’ collaborations with museums, approaches to images going digital and online varied dramatically over time. In the early 2000s, institutions like the MFA and Peabody-Essex Museum (PEM) closely guarded their visual assets as was traditional, creating a high bar for releasing digital photographs or scans. Yale University’s Beinecke Rare Book & Manuscript Library supported Visualizing Cultures projects with well-annotated, high resolution scans as a way of growing their online collection. The Arthur M. Sackler and Freer Galleries at the Smithsonian Institution targeted public education with their database, which was more visual, but more difficult to search than most. Archives such as the *Bibliothèque nationale de France* have responded to the rise of visual culture studies by creating museum-quality, highly usable digital libraries of ephemera such as illustrated newspapers. The Shiseido Collection in Osaka, an extensive collection carefully curated by the cosmetics giant, made their digitized magazines, and design materials available to VC following in-person negotiations. On

¹⁶⁶ Ibid.

¹⁶⁷ “The Metropolitan Museum of Art Puts 400,000 High-Res Images Online & Makes Them Free to Use,” Open Culture website, May 19, 2014 <http://www.openculture.com/2014/05/the-met-puts-400000-high-res-images-online.html> Accessed October 2015.

¹⁶⁸ Ibid.

the other side, the *Biblioteca Nacional de Portugal* displayed tantalizingly tiny thumbnails that showed promise, but despite frequent visits to view physical assets, never released digital images to the project. The system was built around the classical method of scholars requesting archival materials to view in the library, with only their notes to take away.

Many early visual databases, written by programmers were highly structured and searchable by keywords and, all important, string search. We could troll large search results with reasonably-sized thumbnails to cull data sets. This often depended on receiving private backend URLs, as public access was slower and more restricted. For scholars, research depends on access to manageable and comprehensive sources.

Simple parameters, like size, basic metadata, and load time determine whether work with images is possible. Thumbnails that are partial views, too slow, too small or too large impede work. High resolution enlargements are needed for historical work. Museums were nervous that high resolution images would appear in print illegally. The MFA worried over metadata, wondering whether to release images with partial information to make them available while the daunting task of creating metadata continued.

Visualizing Cultures' one effort to write metadata was quickly overwhelming, and we chose to remain focused on content creation. Instead, we published unannotated image galleries that enabled users to see all the images from a unit in a grid. An ideal balance between the textual and visual continues to elude new database approaches. Flickr, a leader in visual database sharing, shifted its interface towards visual search with uneven results. Automated image recognition sorts by color, the implications of which remain unclear. The MFA database offers a cautionary tale in that entire sets that we worked with extensively in the past, such as the Jean S. and Frederic A. Sharf Collection, are now nearly hidden in the current design that filters sources in favor of curated tours, presumably to appeal to more casual users.

The bottom line is that scholars working with images need to see everything in fast, sortable displays. Simple database search protocols work the best. Themed, curated sources by should be separated from collections with options for advanced searches by artist, date, location, medium, collection, and so forth.

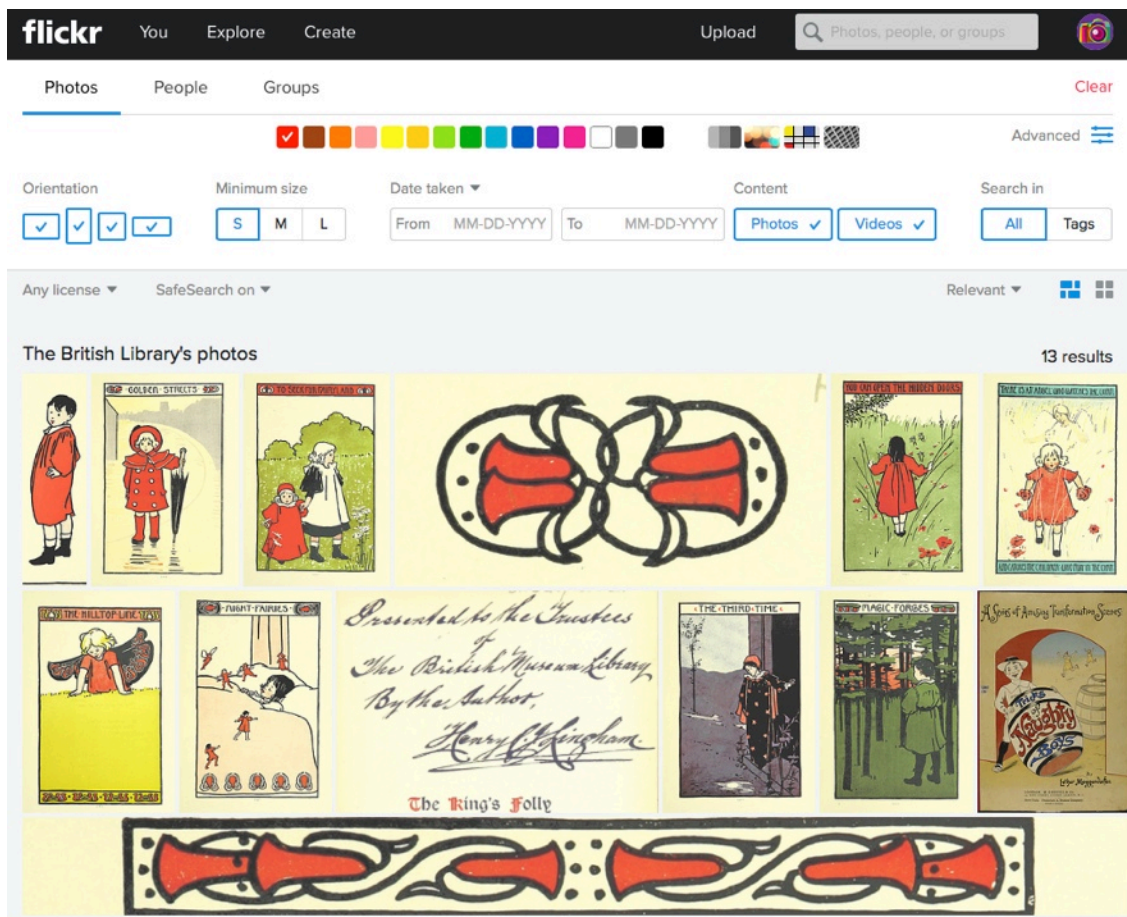


Figure 61. British Library images on Flickr.
 Image recognition can sort images by color, here, for the color red. August 2015.
 Screenshot: Sebring.
 [2015_Aug_British_Library_red]

Interface and Narrative

The Rise of Interface

Interface design becomes inextricably linked to narrative structure in digital software. The Graphical User Interface (GUI) provides the face for computer applications, enabling users to navigate and interact. Technology needs design in order to present content. Whether conceived as virtual desktops, books, or landscapes, design metaphors narratively impact whatever content is presented.

The term “interface,” usually associated with the rise of the computer, also denotes any system of knowledge organization, including books.¹⁶⁹ Compare the multi-volumed *Encyclopedia Britannica*, in production since 1768, with a beacon of digital interface

¹⁶⁹ Charles van den Heuvel and W. Boyd Rayward, “Facing Interfaces: Paul Otlet’s Visualizations of Data Integration,” *Journal of the American Society for Information Science and Technology*, Volume 62, Issue 12, (Wiley Online Library, John Wiley & Sons, Inc., December 2011), 2313–2326. <http://onlinelibrary.wiley.com/doi/10.1002/asi.21607/abstract> Accessed October 2015.

transparency introduced some 200 years later, the Atari video game, *Pong*.¹⁷⁰ As ontological systems, each exemplifies its medium.



Figure 62. Contrasting interfaces: book and computer.
Left: 1958 edition of the Encyclopedia Britannica; right, screenshot of “Pong,” the early arcade video game introduced by Atari in 1972. Graphic: Sebring.
[1958_EncBrit_1972_Pong]

The 2010, a 32-volume edition would be the last print version of *Britannica*, which moved online to compete with born-digital encyclopedias like Wikipedia. Wikipedia’s “wiki”-style website supports collaborative authorship and editing. Information flows to the site at all hours from all parts of the world. Unlike the carefully researched print encyclopedia displayed as a gold-standard reference in homes, Wikipedia changes overnight, with content disputes noted by warnings.

Pong effectively launched the computer game industry. Developed in 1972 as a training exercise, the addition of sound effects made its “table tennis” interface irresistibly playable. The commercial success of the 1975 home version first demonstrated the profitability of games.

The shift from print to screen in these examples resulted, on the one side, in the decline of an enduring model, and on the other, the unanticipated launch of a new industry. The interfaces reflected a shift from word to image, stasis to movement, reception to participation, and, finally, from study to play. The field of history depends on high standards of credibility supported by the static, closed system of print books like the *Encyclopedia Britannica*. It is not surprising that images remain sidelined as they flicker and move on screens. An interactive, open interface elicits play in the minds of users, as with *Pong*.

¹⁷⁰ *Pong*, designed by Atari engineer Allan Alcorn, introduced in 1972 by Atari Incorporated, United States.

Closed and Open Content Delivery Systems

Despite the slow rate of change in academia, consumers and industry together forge change. Consumers embrace timeless narrative forms in new mixes of genre, content, delivery, and environments. They easily tolerate contradictions, for example, sharing impersonally and broadly, while at the same time carefully honing their personal brand through social media.

In 1980, the introduction of the Sony Walkman in the United States provided a seminal image of a private world in motion, music and literature on stage for audiences of one-among-many. The interface between content and user became immersive, portable, and omnipresent, anticipating today's smart phones.

This early “private-public” model foreshadowed audience-media bonds of growing complexity. The digital medium blends closed and open systems: combining direction (closed) and choice (open), story (closed) and exploration (open), analysis (closed) and data (open). Such friction compels users to stay engaged, unconsciously seeking resolution. Studies of narrative show that lack of resolution intensifies the addictive identification with stories. It is not so much the ending that readers care about, but the urge towards resolution.



Figure 63. “There’s a Revolution in the Streets.”
Sony Walkman ad, 1980. McCann-Erickson Agency, NY. Collection of the author.
[Sony_Walkman_ad]

Now, we not only “listen,” but “see” with our personal devices. In a major exhibition on the work of Katsushika Hokusai at the MFA¹⁷¹, “Under the Wave Off Kanagawa”¹⁷² (c. 1830), appeared almost lost within the series, “Thirty-Six Views of Mount Fuji,” looking smaller and paler than many reproductions of the famous woodblock print widely known as simply, “The Great Wave.”

Viewers crowded in with their camera phones. Looking at *the* print meant looking through multiple glowing screen versions of it. Contemplating a work of art means collecting it for later viewing or simply capturing it with one’s personal mechanical eye.



Figure 64. Photographing Hokusai’s famous print.
 “Under the Wave Off Kanagawa,” c. 1830, from “Thirty-Six Views of Mount Fuji,” Hokusai
 exhibition, Museum of Fine Arts, Boston, 2015. Photo: Sebring.
 [2015_Hokusai]

Enlivened by personal photography, museums inspire play through content memes. Contemplation becomes interaction as viewers engage in photographic social experiences. The urge to collect, once the privilege of the wealthy, compels all viewers.

¹⁷¹ “Hokusai,” exhibition, Museum of Fine Arts, Boston, April 5, 2015 – August 9, 2015 [\[link\]](#)

¹⁷² Katsushika Hokusai, “Under the Wave off Kanagawa,” (Great Wave), from “Thirty-Six Views of Mount Fuji,” Japanese, 1830–31, woodblock print, William Sturgis Bigelow Collection, Museum of Fine Arts, Boston. [\[link\]](#)

Digital interfaces blur the boundaries between reception and action, redefining the relationship between audiences and content. Increasingly accessible and portable, images are becoming a new visual language, shared among friends, family, and professionally. An image like “The Great Wave” circulates in multiple contexts, understood in relationship to duplicates of itself and other images.

Fragments, Grids, and Quantization

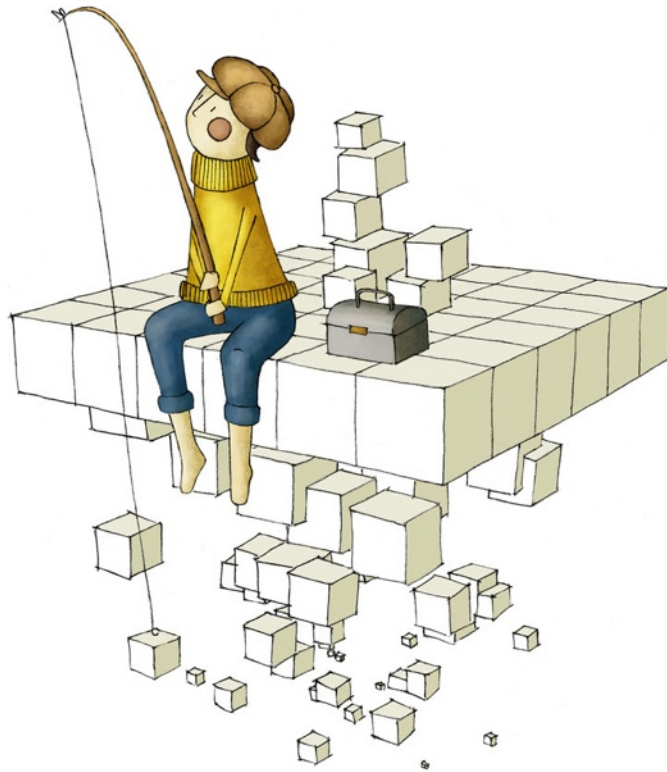
Like a broken mirror, images from the past can be seen as fragments that collectively represent a time period. Rearranging these fragments digitally enables us to see coherent pictures of the past. While the field of history depends on written narrative for qualitative analysis, digital forms introduce the possibility of quantizing narrative by mechanizing the arrangements of sources as fragmented objects. Composing with such data-objects evokes the model used in parametric thinking. Parameters of music and architecture—volume, pitch, timbre, and so forth—are codified to generate designs through algorithmic programming. The approach focuses on process rather than the end result, opening windows on the stages of the creative process itself.

Parametric thinking introduces the shift in the mindset between the search for a specific static and defined formal solution, and the design of the specific stages and factors used to achieve it. It is the use of algorithms and advanced computational techniques not for the sake of drawing shapes, but creating formal possibilities.”¹⁷³

Exposing formative stages through visualization opens new creative directions based on machine intelligence.

¹⁷³ Parametric Design and Generative Modeling, website, 2015. <http://www.parametriccamp.com/en/what-is-parametric-design/> Accessed October, 2015. <http://www.parametriccamp.com/en/what-is-parametric-design/> Accessed October 2015.

Figure 65. "Parametric Fishing." Illustration by Etringita. *Parametric Design and Generative Modeling*, website, 2015. [ParametricCamp]



Quantizing the gestures of sensory perception takes visual narrativity in new directions. The process of working with image sets on the Visualizing Cultures project became, over time, so predictable that I was able to map it algorithmically as a series of steps (presented later in this chapter). Machine applications may be able to similarly sort visual objects for meaning.

The exhibition, "Unfinished Stories: Snapshots from the Peter J. Cohen Collection," at the Museum of Fine Arts, Boston mirrors Visualizing Cultures' use of thematic pathways to narrativize image collections. Indeed, that a decade after Visualizing Cultures' founding, discarded amateur photos have been mounted as a museum exhibition speaks to the growing ubiquity of personal photography claiming a broader share in art and visual culture through the web and digital media. By contrast, the exhibition celebrates the uniqueness of the physical, singular, and timeworn photos made with consumer Brownie box cameras and other "instant" cameras of the day. Poor framing and other mistakes that invoke the presence of the photographer lend poignance to the anonymous, discarded scenes.

An avid collector, Cohen rescued more than 50,000 lost, discarded, or disowned personal photographs, culled from flea markets, antique shops, galleries, eBay, and private dealers. As he sifted and sorted through his finds, Cohen discovered mesmerizing, often humorous, shots removed from their original context:

People at Play, Photographers' Shadows, Double Exposure, Couples, Oddities,
and Hula Madness.¹⁷⁴

The relational grammar of visual tropes in thematic grids elevates the tiny snapshots to rival prized iconic photographs in reflecting a culture and time. As with the “Hokusai” exhibition on display at the same time in a different part of the Museum, the exhibit inspires the interactive camera eye. For example, I mimicked the theme, “Photographer’s Shadow” (below, right) by capturing my own shadow when photographing the albums on display (below, left). Such memes are common with museum visitors because of the ease and limitlessness of digital snapshots.



Figure 66. Mimicking the “Photographer’s Shadow” theme.

In my photograph on the left I added my camera’s shadow to continue the theme in the grid on the right. “Unfinished Stories: Snapshots from the Peter J. Cohen Collection,” exhibition, Museum of Fine Arts, Boston, July 11, 2015 – February 21, 2016. Photos: Sebring, 2015.

[mfa_45516_Unfinished_Stories_2015_Phottographers_Shadow]

¹⁷⁴ from exhibition description, “Unfinished Stories: Snapshots from the Peter J. Cohen Collection,” July 11, 2015 – February 21, 2016, Mary Stamas Gallery. (Boston, MA: Museum of Fine Arts website, 2015), accessed October 2015. <http://www.mfa.org/exhibitions/unfinished-stories> Accessed October 2015. <http://www.mfa.org/exhibitions/unfinished-stories> Accessed October 2015.

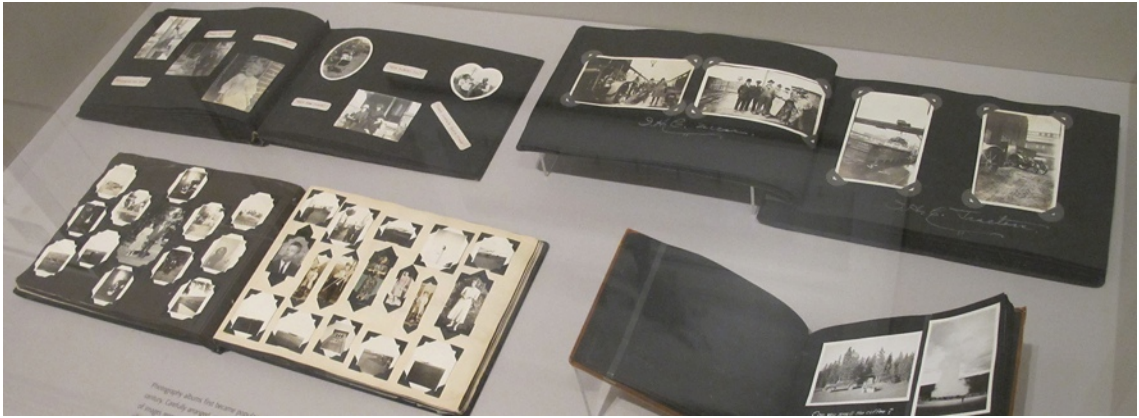


Figure 67. Albums, “Unfinished Stories” exhibition.
From “Unfinished Stories: Snapshots from the Peter J. Cohen Collection,” exhibition, Museum of Fine Arts, Boston, July 11, 2015 – February 21, 2016. Photo: Sebring, 2015.
[mfa_4549_Unfinished_Stories_2015_albums]

The albums in the exhibition can also be seen as examples of relational visual narratives. While previous generations mounted and annotated their photographs in books to preserve and present for family and friends, current generations share photos on social media, unconsciously building a virtual repository. The personal/public dichotomy pervades photo sharing that reaches far beyond acquaintances into a global cache of photographs, with rights owned by sharing services such as Facebook, Twitter, and Instagram.

“Unfinished Stories” highlights the attributes of tactile media, made historically important by contrast with digital snapshots that never make it to print. Bygone point-and-shoot cameras—Polaroids, Kodaks, the Instamatic and Brownie—time-stamp the exposures. Displayed in their original sizes, the photographs were small and difficult to see. One patron wished for a magnifying glass, like the kind supplied when looking at Rajasthani miniatures, for example, to get a better view. With digitization, we can look longer, closer, and comparatively. Conversely, none of the tactile cues—camera-specific shapes, edges, sizes, printing processes, creases, and wear-and-tear—mark digital images literally untouched by the passage of time.

Re-envisioning history through database aesthetics reflects the computational period, and further, privileges the still image. Manovich identifies the photograph rather than the temporally linear cinema as the medium most suitable to computational aesthetics: “the medium of visual recording—photography—privileges catalogs, taxonomies, and lists.”¹⁷⁵

¹⁷⁵ Manovich, *The Language of New Media*, 234.

Fragments and multiples often take the form of grids similar to image databases. The grid as a narrative device permeates artistic creation and packaging. Among many examples, the “Hokusai” exhibit featured a small, portable set called the “The Dutch Picture Lens: Eight Views of Edo.”¹⁷⁶ Juxtaposing image stills to build a broader landscape creates an understanding of Edo (now Tokyo) through multiple views. No written description or single image could achieve a similar effect of comparative knowledge of the various parts of the city.



Figure 68. Hokusai, “The Dutch Picture Lens: Eight Views of Edo.” c. 1802. Woodblock print series, on display at the “Hokusai” exhibition, Museum of Fine Arts, Boston, 2015. Photo: Sebring, 2015.

[mfa_4590_Hokusai_8ViewsEdo_1802]

¹⁷⁶ Hokusai, “The Dutch Picture Lens: Eight Views of Edo,” woodblock print, Museum of Fine Arts, Boston. <http://www.mfa.org/collections> Accessed October 2015. [[link](#)]

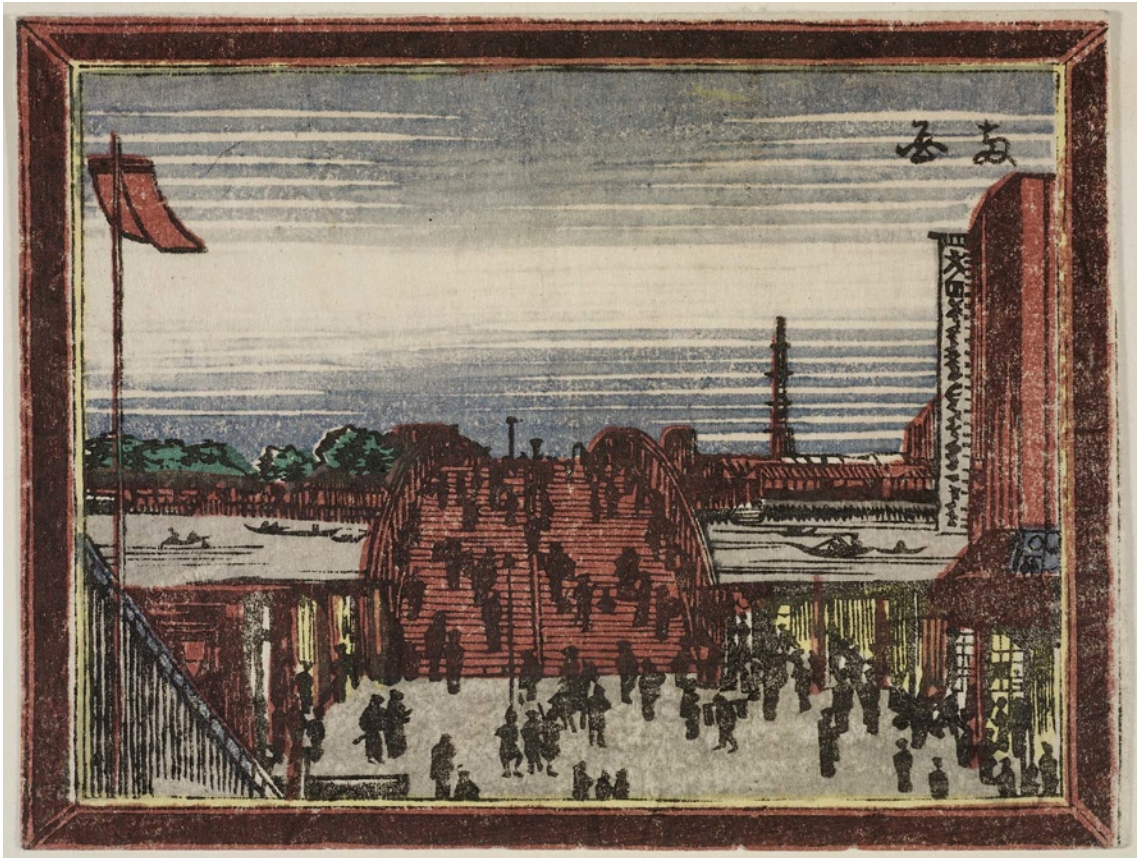


Figure 69. Hokusai, “Ryōgoku” scene.
Enlarged image from series, “The Dutch Picture Lens: Eight Views of Edo” c. 1802.
Image source: Museum of Fine Arts, Boston, 2015. [[link](#)]
[mfa_SC155053_Hokusai_8ViewsEdo_1802_Ryogoko]

To transform the c. 1802 work into contemporary media, one need only imagine the ability to zoom in and study the scenes at a higher resolution than the originals that are small at 3-3/8 by 4-1/2 inches. Enlarging the second picture, bottom row, “Ryōgoku,” (above) we see details of a district famous in today’s Tokyo for sumo.

Though Manovich puts database and narrative in opposition, objects nevertheless become narrative through relationships. The database and the “Visual Narrative Field” differ only in that the narrativity hidden in the connections within the database becomes visible in the VNF by expanding the data-field model to include multiple configurations of the same data. These narrative forms, visual narrative and essay, reposition the data in author-able and readable modes that introduce temporal linearity within the interactive model.

Like consumer media consumption that absorbs contrasting levels of complexity, the VNF model reconciles linear and non-linear data paths for image-objects. Computational approaches favor quantitative analysis, with outputs in the form of graphs, charts, and other data

visualizations. Qualitative analysis, however, remains the focus of images used for historical representation.

Interactivity and Reception: Leaning In/Leaning Back

The digital medium makes possible the integration of multiple reception modes. The VNF data field model invites viewers to alternate between the linear story lines and interactive immersion in sources. One mode without the other limits the reader's ability to observe and absorb sensory information from the past: instead of immersing in visual sources, text takes over; or conversely, immersion in databases without the author's guidance leaves viewers confused and unenlightened.

Video games require constant interactivity, while movies ask viewers to sit back and receive content. In the VNF, a balance between interactivity and reception enables narrative to unfold with interactive options available at any time.

Historian and filmmaker Ken Burns commented in an August 23, 2015 interview that "all real meaning accrues from duration."¹⁷⁷ Duration is achieved through curation. Story-telling or in Burns' words, "curation," puts raw data into a form that generates the sustained interest needed to achieve meaning.

We live in a world in which we are being buried in an avalanche of information that comes from this near-constant present moment.... We are desperate for meaning. We are desperate for curation. So, when somebody stops and says, "Here's eleven and a half hours of the most important event in American history, you might go 'uh huh'—but they watched back then and they watch now...and I think it's because all of that information comes to us unregulated, unmediated and we do want that curation. We want someone to say, "Let me tell you about that."¹⁷⁸

Burns achieves duration by making multi-episode documentary films. In this 25th anniversary year of his blockbuster 1990 series, "The Civil War," fascination continues with its ground-breaking style that crafted the visual record into popular history.

In the end, all real meaning accrues from duration. The work that you care about the most, the relationships you care about the most have benefitted from your sustained attention, and that is true for every human being.¹⁷⁹

A field-based model of visual narrative blends curation and exploration. The VNF model builds duration by facilitating the forward/back gestures of looking, metaphorically

¹⁷⁷ Ken Burns, interview on *Face the Nation*, CBS News, broadcast August 23, 2015. <http://www.cbsnews.com/videos/full-interview-ken-burns-august-23/> Accessed October 2015.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

“leaning back” to comfortably watch or read linear content, and “leaning in” to engage interactively in excavation and observation.

The model differs from a Burns-style film by embedding the narrative within a curated database, supporting the gestures of deep looking at a user’s own pace. The linear narrative, provided by an expert in the field, coexists with multiple visual narratives, and non-linear glimpses of the visual data that personalize contact with the past.

4.3 The Visual Narrative Field (VNF) Model

The Three Parts of the Visual Narrative Field Model

A Proposed Software

The proposed VNF software nests narrative pathways within a sortable database. The VNF model takes the traditional and image-based forms established in the Visualizing Cultures project deeper into the digital domain. The model vertically integrates three narrative modes: image-driven essays, visual narratives, and database, repairing the fission between linear/expository, and non-linear/exploratory approaches. By touching an image, readers can see it in each of the three formats, moving between narrative styles. The model encourages shifts in perceptual cognition to match the type of layout being observed.



Figure 70. The three parts of the Visual Narrative Field model. Essay, visual narratives, and database blend different ways of seeing images. Sebring, 2011.

[level1c]

The VNF model depends on a visual syntax of networked relationships. Narrative unfolds in a variety of image-to-image-to-text designs. Images, as the portals, transcend the subservient role of illustrations to textual argument, to become the primary connective tissue of the interface.

The model offers a toolkit for composing with images according to principles of visual narrative, the characteristics of which are described below. It also makes visual narrative compositions available as digital publications within its standardized, scalable format.

Comparison lies at the heart of the approach, comparing textual to visual narrative, with the accompanying comparison between intellectual and sensory perception. Without comparison, visual perception races past intellectual reasoning straight into the unconscious. To bring sensory input into the conscious mind, motion between contrasting narrative modes helps readers become more aware of their physiological responses to the content structure.

As in any field of study, skill at understanding non-verbal input improves with practice. For many academic humanities scholars trained primarily in writing, visual narrative will be a new vocabulary. Readers and authors should, like artists and designers, become increasingly visually astute. The field of digital humanities promised to close the gap between the intellectual humanist—a thinker who reasons—and the artist/technologist—a designer who makes things, in response to new technology. The rising tide of visual content should force that difficult gap to begin to close.

Vertical Integration

Authoring with images embedded in the visual data field means choreographing multiple image interactions. The process restores an innate visual lexicon that was lost when images were frozen and reproduced on printed pages surrounded by text. Because image relationships are constantly shuffled and resorted, the data field sustains a state of unresolved complexity. Movement across a spectrum of image-to-image and image-to-text relationships adds the dimension of depth, taking the model from a two-dimensional to a three-dimensional form.

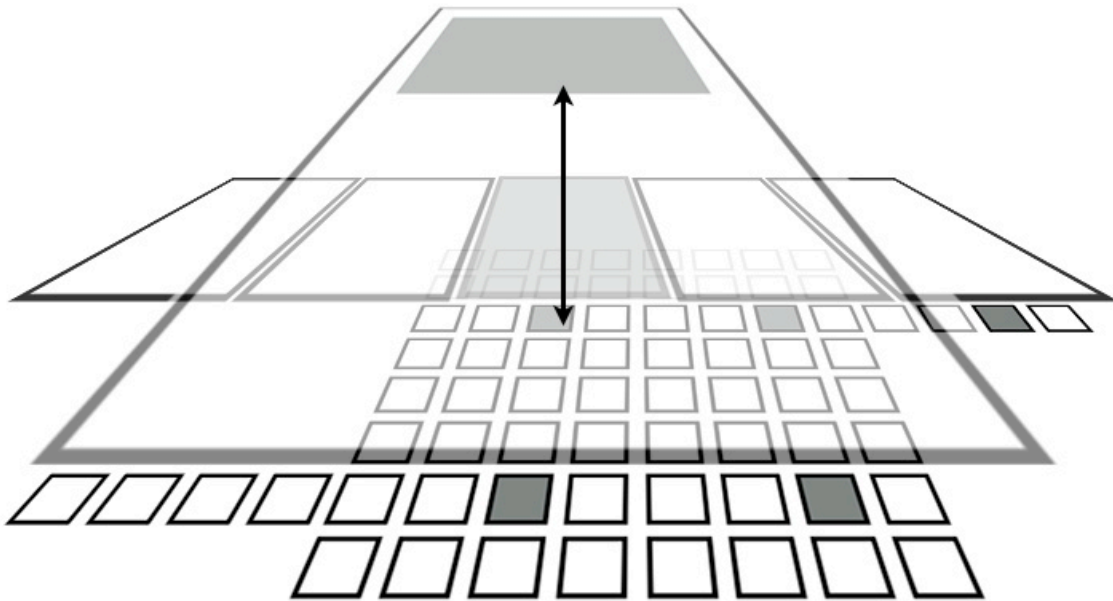


Figure 71. Vertical integration in the VNF model.

Images become portals between the three layers of the VNF model, connecting essay, visual narratives, and database. Vertical integration adds the dimension of depth to the model, further digitalizing the interface, and changing its historical perspective.

Visual Narrative Field model, designed by Sebring, 2011.

[vertical_integration_depth]

The dimension of depth encompasses micro and macro views. Readers move at will through the three levels of the VNF model, mirroring the gestures of looking: scanning, looking again, and looking closer. Optical engagement brings meaning to an otherwise indifferent database, and repositions authoring from isolated case-making within a multi-voiced, interactive metaverse. The dimension of depth evokes a sense of slipping through time in a visual-object system that connects past and present.

Top Level: Image-Driven Essay

Layouts in the VNF model range from purely textual to purely visual. The “top level” or typical entry point for readers, the essay, consists of an image-driven text in a fixed layout. In the “middle level” known as the visual narratives, images dominate in authored, immersive sequences. At the “foundation level” the database gives readers access to the full set of images, the same sources that authors see, to explore and form their own conclusions.

The essay interweaves textual and visual argument as “image-driven scholarship,” in which images drive both form and content. Images determine form by functioning as narrative elements in an essay that “shows” as well as “tells.” Images determine content as the origin of the topic and analysis.

IMAGE-DRIVEN SCHOLARSHIP

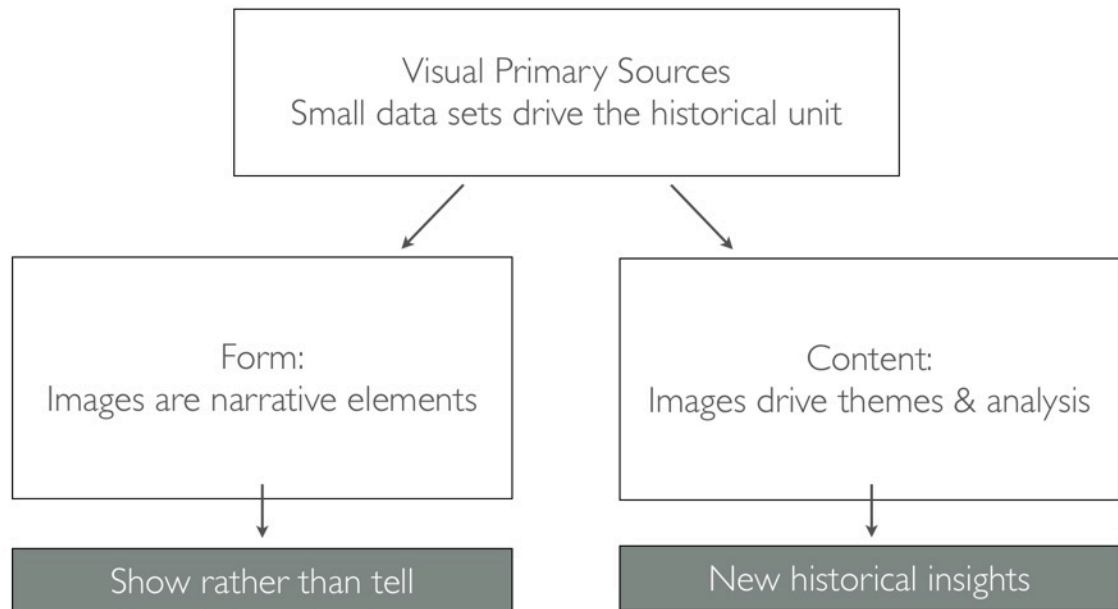


Figure 72. Image-Driven Scholarship.
Sebring, 2015.

[image_driven_scholarship]

Image-driven scholarship begins with assembling a database of images that unites diverse sources and genres in the digital medium. The overall visual imprint of a historical event can then be observed. Themes and patterns offer digitally-born historical insights that add to historical argument as we know it, but also changing the timbre of historical representation itself. Peter Burke describes the intangible knowledge visuals bring to history:

The uses of images by historians cannot and should not be limited to ‘evidence’ in the strict sense of the term...Paintings, statues, prints and so on allow us, posterity, to share the non-verbal experiences or knowledge of past cultures...In short, images allow us to ‘imagine’ the past more vividly.¹⁸⁰

Graphical Toolkit

The essay uses a small number of graphical templates for the visual text, derived from my work on Visualizing Cultures. Each set of images needs a unique treatment to become truly communicative as narrative elements. Scholars generally need conceptual and practical training

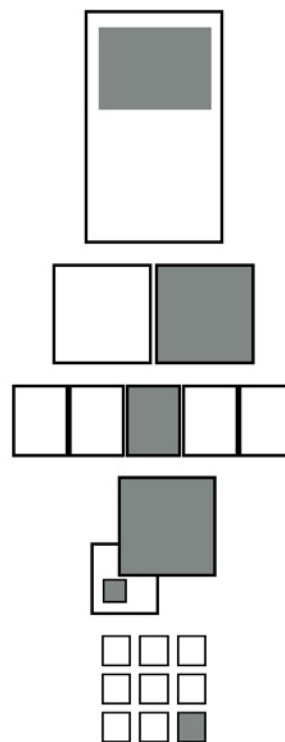
¹⁸⁰ Burke, *Eyewitnessing: The Uses of Images as Historical Evidence*, 13.

in the use of images narratively. But, the graphical layouts can be narrowed down to a small set of automated presets in the software that will help scholars work with images. Presets make it possible for authors to compose with images, view, and edit the results. This kind of intuitive and heuristic composition is needed when working with the intangible qualities of visuals. Parameters such as color, genre, subject, time period, and more figure in to the effective layouts. Visual narrative depends on these factors, borrowed from the realm of design, to transcend basic sequencing and illustration.

The essay toolkit uses five basic templates. These configurations enable authors to contextualize images by showing them in relationship to other images, in full, and in detail. Printing of the essay by readers is likely, and the layout simulates interactive relationships in a still, non-interactive version. Layout options available as presets in the software include:

- (1) full screen image
- (2) juxtaposition (2 or more images)
- (3) series (row)
- (4) detail magnification
- (5) grids.

*Figure 73. Layout options, as presets, VNF model.
Tools for composing visual narratives.
Visual Narrative Field Model.
Sebring, 2011.
[essay_image_presets]*



The historiographic insights that come from composing with images in the essay are described in the Boxer Uprising case study (Chapter 5). The following examples are taken from my work on Visualizing Cultures.

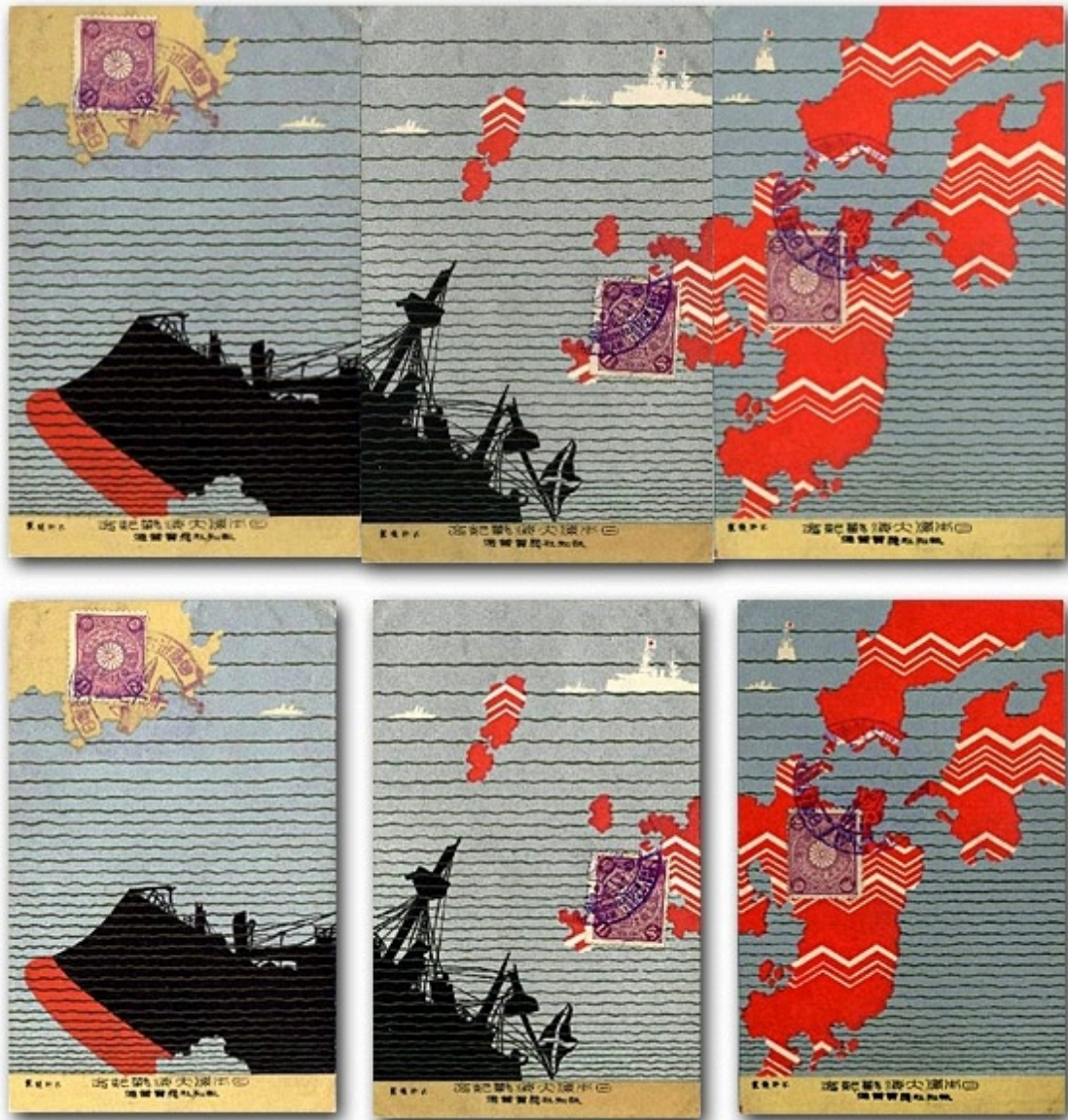


Figure 74. Print and postcard triptych from “Asia Rising.”
A woodblock print (top) juxtaposed with a postcard triptych (bottom) shows the recycling of images through a change in genre—from print to postcard—of mass communication as Japan visualized its war with Russia in 1906. “Commemorating the Great Naval Battle of Japan Sea,” 1906, image from “Asia Rising” by John W. Dower; Visualizing Cultures, 2010. Design: Sebring. [\[link\]](#)

[vc_postcards_asia_rising]

Wang Zimei
 "The May Fourth Period"
 A panel from the
 "Illustrated Record of
 Lu Xun's Struggles"
 (detail highlighted in red)
 November 1936 [ms32_034]

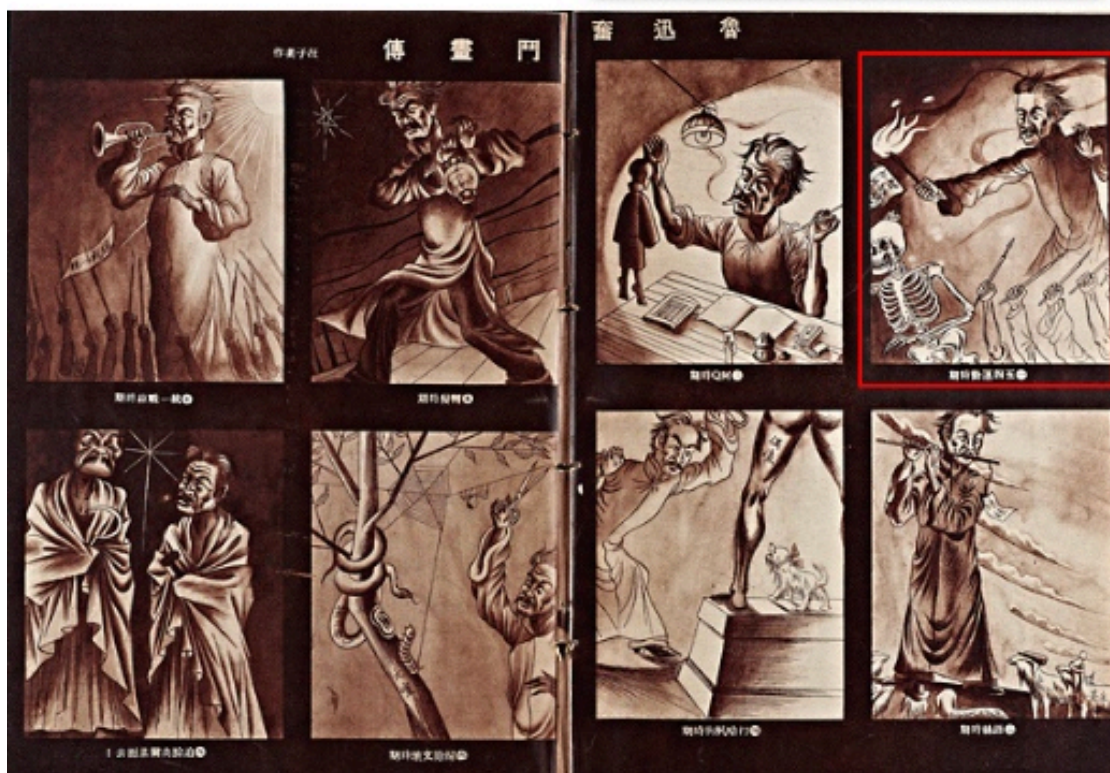


Figure 75. Magnification.

Details next to full images means that the entire image can be shown while also drawing attention of one part as a narrative element.

"China's Modern Sketch," by John Crespi, *Visualizing Cultures*, 2011. Design: Sebring. [[link](#)]
 [modern_sketch_vc]

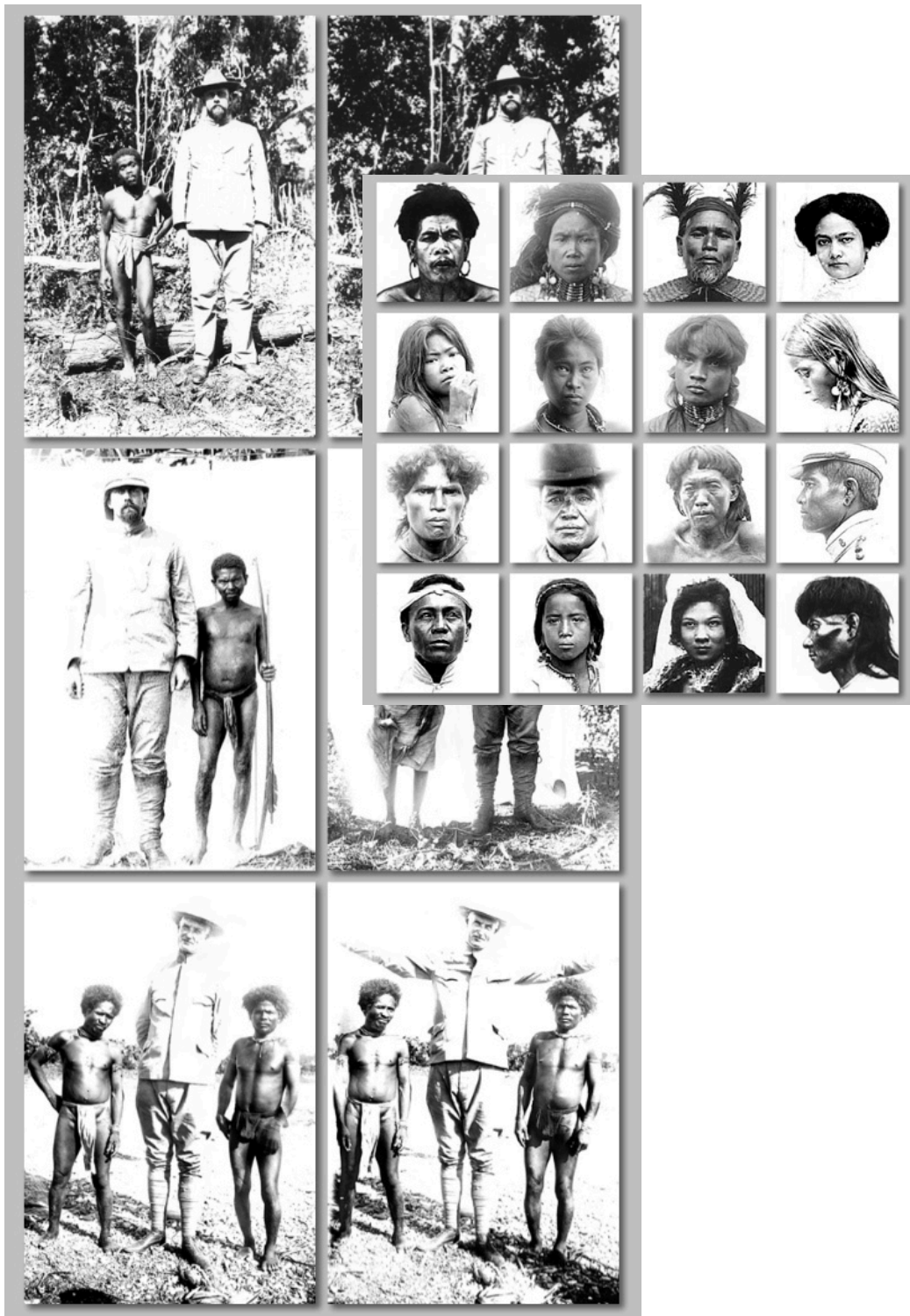


Figure 76. "Yardstick Photos," Dean Worcester photographs. Two layouts showing Filipinos colonized by the U.S.: faces of a diverse population (above right), and "yardstick" photos (left), that exaggerate height differences by placing tall Western men next to shorter Filipinos of the Negrito tribe. From the unit, "Photography & Power in the Colonial Philippines II: Dean Worcester's Photographic Record of the Philippines (1898–1913)," by Christopher Capozzola, *Visualizing Cultures*, 2012. Design: Sebring. [ph2_opening_grid] [ph2_yardstick]

Images can become a visual shorthand, communicating complex ideas at a glance. For example, a grid of English-language illustrated periodicals with Boxer Uprising images on their covers gives readers a visual imprint of the magazines in circulation that coexisted and cross-pollinated. A list of magazine titles would not have the same associative connections.

English-Language Illustrated Periodicals Featuring Boxer Uprising Images, 1900



Figure 77. Periodicals Featuring Boxer Uprising Images, 1900. Example of a grid in an essay layout. Presentation, Sebring, 2011. [PicturePathways_VC]

The covers show what the press covered during the Boxer crisis. The range of topics would inform any detailed history of the Boxer Uprising today: gunboat diplomacy; the portrayal of China as backward and barbaric, a dragon raging out of control; the expedition of international Allied forces fighting their way to Beijing; punishments and torture; Indian colonial troops under British commanders; missionaries as the advance team for business and political imperialism; the “Great Game” rivalries between world powers; and the devastation of war brought on by imperialist aggression.

Middle Level: Visual Narratives

What Makes an Image Sequence Narrative

The visually immersive section of the model features image sequences with brief annotations, I called “visual narratives” during work on Visualizing Cultures. Digital animations and maps also fall into this category. What makes an image sequence narrative? Among the many images thrust at us daily, some capture our sustained attention. For example, an article on Japanese travel posters caught my eye, but why this and not others?



Figure 78. Japan Mail Steamship Co. Travel Posters, early 20th century. Images from article, “The Captivating Art of Vintage Japanese Steamship Posters,” Steph Aromdee, *Branding in Asia*, May 31, 2015 [[link](#)] [Vintage-Japanese-Travel-posters]

The high quality design was appealing, with rich colors, evocative lighting, and attractive subjects that evoked the romance of steamship tourism in a variety of vignettes. I compared “scrolling” with “clicking” through the images. Clicking through single images isolated them, while scrolling linked the images like a sentence. Scrolling back and forth comparing details, the seams between the pictures contributed to their collective narrativity, letting them be seen in relationship to each other. The images mythologized Japan’s traditional culture, and conflated it with cosmopolitanism. The steamship industry promoted leisure and globetrotting culture for an affluent class dressed in both kimono and suits.

In three posters, nearly identical women portray different candidates for steamship travel. My initial impression that they were evidence of women’s roles changed on closer examination. They presented the possibility of steam travel and addressed the desires and concerns that the affluent target audience might have. The first woman sits in the bow of an anchor, like the moon or a swing. The globe at her elbow, she looks at the viewer with a small

smile, as if travel promises romantic possibilities. The second woman is preoccupied with driving the steamship, binoculars at the ready like a sea captain's spy glass. Her implacable expression and pose suggests that it is exciting and empowering while at the same time safe and acceptable for a woman to travel alone "under her own steam." The third woman bows under the arm of a uniformed man, the caption or husband, gazing in the direction he points. Her wedding ring prominent, the scene targets married women.



Figure 79. Female passengers in steamship travel advertisements.

Japanese steamship posters suggest different women who might travel. Japan Mail Steamship Co. Travel Posters, early 20th century. [\[link\]](#)

[Japanese-Travel-posters_women]

As if we too picked up binoculars, we become both spectators on the past, and inadvertent consumers of the images. Visual impact doesn't diminish with time, and we respond to advertising techniques just as the early 20th century public did. Any one of the posters could be called a successful visual narrative within the goal of conjuring fantasies of a beautiful Japan and luxury travel in potential customers. But in sequence, they suggest historical themes, and open a window on the moment, some of its dreams, and conflicts. With the addition of scholarly content, such as dates, production details, and additional texts and images, the posters could become a visual narrative. The series works because the images interrelate thematically and graphically, appear in high quality, and are large enough to see in detail. Visual narratives should be memorable, and stick in your mind. In my experience, people react to visual narratives with wonder and curiosity in a way that differs from viewing the posters in a non-narrative state. That tells me that their placement together, along with other cues, creates

narrativity comparable to what a well-written text achieves. They draw viewers in and create a desire to know more, as part of a “narrative complex.”

Changing Dominance of Author and Reader in Visual Narrative

The roles of author and reader vary depending on whether text or image dominates the narrative. In the essay layer, the author dominates a narrative that unfolds primarily through written text. Although the premise is image-driven, the author’s text presents the story and argument, and contextualizes the sequence of images. Narrative emerges through text-to-image relationships.

In the visual narrative layer, images dominate as the narrative unfolds in image-to-image relationships. The author assembles and annotates visual sequences, radically changing the type of history that readers experience.

Readers shift perceptual modes between these formats, “following” the narrative in the essay, and “leading” their own exploration in the visual narratives. In the former, readers move linearly through the text, and in the latter they move interactively through the images. The viability of readers’ approach to the visual narratives is consistent with studies that track reading habits particular to computer screens: readers first look at pictures; second, read captions; and lastly, read texts.

Visual artifacts capture a raw slice of the past without the benefit of hindsight and historical analysis. Once the author’s voice enters, the reader gives up the primacy of contact with the past and allows the author to guide and intercede with the benefit of greater knowledge. The images no longer belong to the readers, but to the author who uses them with intent. If, influenced by digital media, history as a discipline can recognize multiple ways of conveying the past on a scholarly level, readers will be able to know the past in multi-dimensional ways.

An analogy might be the art exhibit and catalog. The catalog prefaces and memorializes the exhibit, but cannot replace viewing it. The direct link between viewer and source carries intangible knowledge absorbed by viewers at their own pace. The digital platform restores the interactive qualities of roaming through an exhibit.

Authors can use the covert qualities of visual narrative once they learn to recognize them. Narrative emerges on three simultaneous fronts: written texts, images, and captions. Like stepping stones across a river, image-to-image connections elevate pictures to narrative

pathways. Captions are the bridge between looking and reading, providing essential metadata, transcriptions, translations, and descriptive texts to further link the images as an independent narrative stream.

Historians often question image-driven scholarship as serious research, an attitude that makes sense given how images are accessed and reproduced in the print medium. However, digitization radically increases the accessibility of large sets of images which can be treated comparatively. Likewise, sharing research through visual arguments becomes possible digitally. Visual data sets describe a history not seen before and historical representations reflect the past differently, both theoretically and in the way it is presented.

Once visual narrativity is better understood and tools for its composition are developed, authors can effectively blend multiple streams of narrative, both written and visual, to compose works of history that enable readers to explore the visual environment as well as follow the explicit written research.

Picture Pathways

Links between images, as in the three steamship posters above, lead in unforeseen directions. My paper, “Picture Pathways as Threads through Time: from Opium to Boxers, China 1838-1900,”¹⁸¹ traces visual pathways as a research methodology.

I assembled images related to missionaries chronologically to form a pathway that connected the clergy in China from the First Opium War in 1839 through the Boxer crisis in 1900. The penetration of Christian missionaries into the interior of China disrupted rural society, and as pressures mounted from foreign interference at the end of the century, missionaries and their Chinese converts became the primary targets of Boxer violence. The theme of missionaries, and their role as vanguards of commercial and political incursions into foreign lands, emerged as a visible through-line. The visual sources offered tangible evidence chains.

Christian missionaries in China was only one of many image pathways showing cross-sections of activity that visibly represent cause and effect. Too long to fit on a page, picture pathways can only be seen in detail in the digital medium.

¹⁸¹ Ellen Sebring, “Picture Pathways as Threads through Time: from Opium to Boxers, China 1838-1900,” *Making Reality Really Real*, Consciousness Reframed 11, (Trondheim, Norway: TEKS Publishing, 2010), 179-180.



Figure 80. Picture pathways as timeline of missionaries in China.
 Visual timeline of images related to missionaries in China from 1850s through 1900.
 Presentation, Sebring, 2011.
 [PicturePathways_VC_timeline]

Foundation Level: Database

Small Data Sets and Image Quadrants

The database is the foundation for image-driven scholarship. Work begins with collecting visual primary sources. In contrast to the landslide of digital collections, small data sets give researchers a manageable visual field. I collected close to 2500 images from the Boxer Uprising, and created keywords to sort them into subsets. Studying these subsets enabled me to pull out the themes in the imagery and work in detail on these topics.

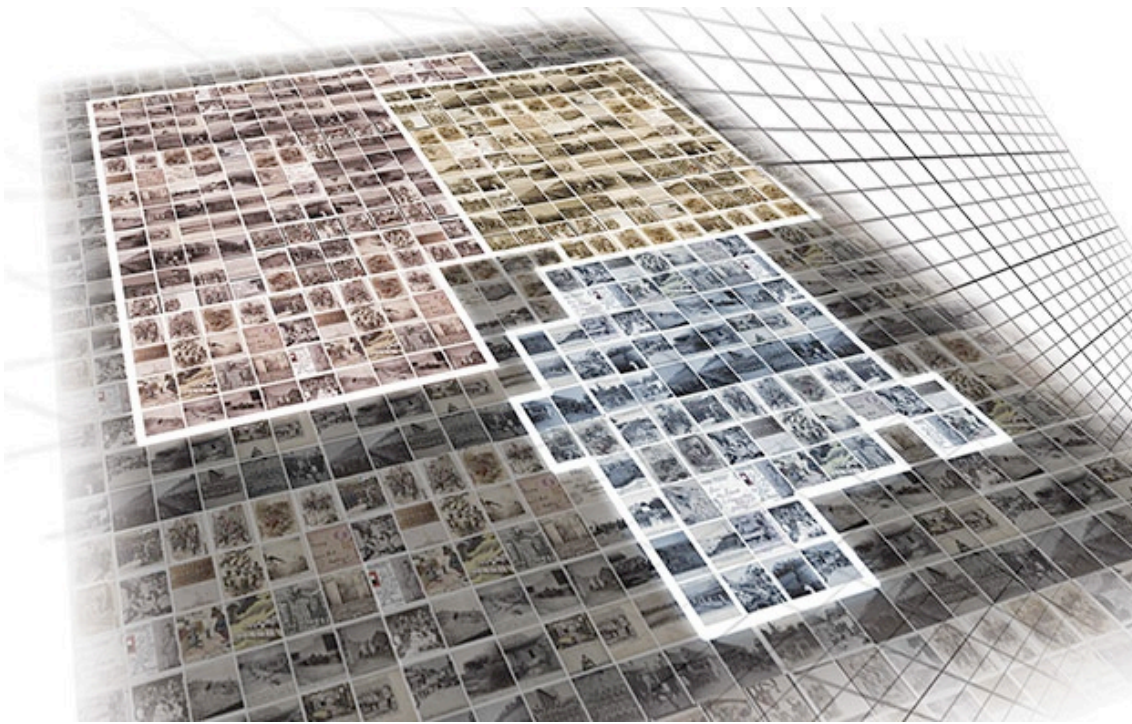


Figure 81. Quadrants within the database level of the VNF model.
 Sebring, 2011.
 [fig4_map1_grid]

The database in thumbnail form can be observed as visible “quadrants.” Subsets of images sorted by media types and subjects show emphases in the historical record that speak to practical infrastructures such as technology and logistics, communications and public and private record, and to the political and cultural uses of images. The Boxer Uprising visual record, for instance, has a disproportionately large number of images of execution scenes. James Hevia researches the uses of photography as an imperial tool for coercion and power. His book, *English Lessons: The Pedagogy of Imperialism in Nineteenth-Century China*, examines the visual record as a body of work on the Boxer Uprising.

In the chapters that follow, these two sides of imperial pedagogy, the violence of arms and the violence of language, are explored. Guns not only force compliance, they also persuade. Words and images do not simply persuade, they also coerce.¹⁸²

English Lessons uses comparative image analysis, drawing on images from many different archives, to investigate the origination, distribution, reception, and multiple purposes of the public executions staged for the camera during the occupation of China:

As far as can be ascertained, it was apparently also the first time a “Chinese” form of execution was sanctioned by the allies....In an unprecedented fashion

¹⁸² James Hevia, *English Lessons: The Pedagogy of Imperialism in Nineteenth-Century China*, (Durham, NC: Duke University Press, 2003), 4.

that quite literally deterritorialized Qing political authority, the executions established a perfectly equal exchange, one that made Qing officials wholly accountable for their actions in Euroamerican terms. And it did so in a framework that demonstrated the capacity of the judges to decode an indigenous form of punishment and turn it back against the natives.¹⁸³

The digital visual record reveals complex interactions between cultures—China, the international Allied forces, and colonial countries (current and potential); image makers—political, military, missionary, civilian, and commercial; and publication formats and their target audiences. The database juxtaposes execution scenes: black-and-white drawings in illustrated newspapers, and the grisly photographs that circulated in popular media like postcards.

Figure 82. “China’s Terrible Atonement for the Boxer Atrocities...”

Headline on cover photograph, Leslie’s Weekly, New York, May 18, 1901 reads:

“China’s Terrible Atonement for the Boxer Atrocities. The beheading of Chi Hsin, a Boxer leader—scene after his execution in Peking.—in the background, to the right, another victim, Hsu-Cheng-Yi, is being prepared for his fate.—Drawn for “Leslie’s Weekly” by Sydney Adamson, Its Special Artist with the United States Troops in China.”

[leslies_1900_v92_2_001]



¹⁸³ Ibid., 227.



Figure 83. Beheading in street, photograph, 1900.

Photograph with caption from Wellcome Library: "A Chinese prisoner, possibly a Boxer, being beheaded in front of a crowd of Chinese. European officials watch over the procedure." 1900.

Source: Wellcome Library, London.

[1900_beheading_wlc]

The database in the VNF model would enable readers to unpack image-driven texts like Hevia's to see all the images together, free of the text. The relationships in the data astonish, as viewers ponder the difference between a photograph, watercolor, and reproduction in a printed magazine when rendering violent scenes, and the ease with which beheaded bodies travelled on postcards dashed off to friends and families far from the theater of war.

In a digital platform, Hevia's assertions can be questioned by readers who can look for themselves. In complement with his well-researched text, the database interactions function like so many sentences on their own. Needless to say, the ability to sort for simple chronology—or for themes, authors, media types, origin, and so forth—make digital archives, unlike physical archives, essential for readers to fully experience image-driven scholarship.

The Semantic Web and Shared Data Sets

If authors cull small data sets from larger collections, then each author holds their image sets like “data islands.” Digitality implicitly connects these islands worldwide. With the promise of a semantic web that trolls the Internet for data based on preferences, image recognition, and search terms, small data sets have malleable borders, as I wrote in a 2012 paper:

Like all geographical borders, the borders of a visual image data field are always changing. Beyond any circumscribed data set there are many more images with the potential to join the field. The semantic web should support linking regional data sets, for example, between various digital archives and historians working on similar topics.¹⁸⁴

In my research, I frequented digital collections with similar interests, including “Visual Cultures in East Asia” (VCEA),¹⁸⁵ by the Lyons Institute of East Asian Studies, France, and University of Bristol, England. Their digital library provides image sources from early twentieth century China. As language boundaries are crossed using Google translate for transnational studies, data sets and collections become regions or “regional” in a collective map.



*Figure 84. Connected data sets in the VNF model.
The “Visual Image Data Field” as an island in a data world connected by searches, collections,
and the semantic web. Sebring, 2011.*

[vnf_islands]

¹⁸⁴ Ellen Sebring, “Around Me: Granularity through Triangulation and Similar Scenes,” *Technoetic Telos: Art, Myth and Media* Part 2, Volume 30, Number 3, (Bristol, UK: Intellect, Ltd, 2012), 69-78.

¹⁸⁵ Visual Cultures in East Asia (VCEA) http://www.vcea.net/index_en.php Accessed October 2015.

With nations participating from around the world as part of the 8-nation alliance, the Boxer Uprising visual record is vast, showing up in many languages, media and countries including China, Japan, Russia, British Colonial India, Europe and the United States. Rather than collect a single massive database, connecting regional data sets, especially if they can be located on a collective map, would unify the research and richly enhance visual breadth.¹⁸⁶

Finally, “smart” data sets should, in the future, be self-reflexive, and support scholars with infrastructures that search for and sort similar images, keep track of pathways through the database by other users, and assemble suggested results, juxtapositions, series, and quadrants, in response to author queries.

A structure with multidimensional connections in a fluid environment that self-reflexively responds to its own usage supports the future language of visual sources. The intuitive gestures and curiosity that drive visual knowledge should similarly drive development of this organic architecture.¹⁸⁷

VCID: an MIT Experiment in Interoperable Databases

Visualizing Cultures made an early experiment in interoperable databases, called “VCID,” an acronym for “Visualizing Cultures Image Database.”¹⁸⁸ Produced in collaboration with MIT’s Information Systems & Technology (IS&T), “hooks” connected data objects to non-local databases. Visualizing Cultures prepared the metadata for four units and their respective databases—“Black Ships & Samurai” and “Throwing Off Asia,” which use the MFA, Boston; “Yokohama Boomtown,” which uses the Collection of the Arthur M. Sackler Gallery, Smithsonian Institution; and “Ground Zero 1945,” which uses the Hiroshima Memorial Peace Museum database. The tool could reach into multiple partner databases, and search results were displayed with no need to cull the information locally.

The difficulty became the vast changes databases underwent as institutions changed their approaches, abandoning the coding that supported VCID, which functioned well until 2013. VCID and Visualizing Cultures’ local “galleries” recognize the need to see images in various versions for effective image-driven scholarship. These include thumbnails, medium size images with textual information (tombstone and description), and extremely detailed, large blow up images.

¹⁸⁶ Sebring, 2012.

¹⁸⁷ Ibid.

¹⁸⁸ Visualizing Culture Image Database (VCID), 2005-2013, developed with MIT IS&T. http://blackshipsandsamurai.com/vcid_demo/demo02.html Accessed October 2015.

Figure 85. Visualizing Cultures Image Database (VCID), 2005. The VCID database was developed by MIT Visualizing Cultures in 2005. The software used hooks to display images from non-local databases, including Museum of Fine Arts, Boston; Arthur M. Sackler Gallery, Smithsonian Institution, Washington DC; and Hiroshima Memorial Peace Museum in Japan. [vcid_demo_2005]

MIT VISUALIZING CULTURES IMAGE DATABASE

SEARCH GO

UNITS

Black Ships & Samurai

Yokohama Boomtown!

Tour

Keyword

Title

Medium

View All

Ground Zero 1945

Throwing Off Asia

The screenshot displays a web interface for the MIT Visualizing Cultures Image Database. On the left is a navigation sidebar with a search bar and various menu options. The main content area shows a grid of image thumbnails, each with a title and a red button labeled 'Yokohama Boomtown!'. The images include historical maps, harbor views, and depictions of ships.

Image Title	ID
Complete Picture of the Newly Opened Port of Yokohama,	Y0044
Complete Detailed View of Yokohama Honch_ and the Miyoazaki Quarter,	Y0054
A Detailed Picture of the Great Harbor of Yokohama,	Y0055
Kanagawa, Noge, and Yokohama,	Y0056
American Steamship: Length Forty Ken, Width Six Ken,	Y0062
Picture of Western Traders at Yokohama Transporting Merchandise,	Y0064
Picture of a Great Ship from America: In the Distance, Exact Copies of Great Ships of the Five Nations,	Y0068
Picture of the Interior of an American Steamship,	Y0069
Complete Picture of a Steamship Scenery of Uruga from the Sea,	Y0070
New Invention: Picture of the Interior Works of a German Battleship,	Y0072

Figure 86. Description View, VCID. Thumbnails (above), metadata and description (right), and large blowups (below) were available for four Visualizing Cultures units: Black Ships & Samurai, Yokohama Boomtown, Ground Zero 1945, and Throwing Off Asia. [vcid_demo01b_2005]

MIT VISUALIZING CULTURES IMAGE DATABASE

SEARCH GO


Previous | Next | Thumbnails | Enlarge

UNITS

- Black Ships & Samurai
- Yokohama Boomtown!
- Tour
- Keyword
- Title
- Medium
- View All

Ground Zero 1945

Throwing Off Asia




Sadahide (1807-ca. 1878)
Complete Picture of the Newly Opened Port of Yokohama
 Winter, 1859-60
 Ink and color on paper
 Eight sheets joined and folded: 69.5 x 191.1 cm (27 3/8 x 75 1/4 in.)
 Arthur M. Sackler Gallery, Smithsonian Institution
 Y0044

A magnificent topographical view of the new town of Yokohama is presented by this large landscape map. Published within the year after Yokohama opened, the print represents an impressive technical achievement. Assembled from eight oversized sheets of paper, each separately printed in several colors, it is one of the largest prints ever published in the traditional Japanese technique of woodblock printing. A lengthy inscription by a writer who signed with the *nom de plume* Setsuryū Sanjin is printed in the upper left corner:

Once I wandered around the border area and asked where the trading firms were. No one knew where they were, nor was there a map to show the location. Therefore, I silently lamented. Now the opening of the port has been settled and the Five Nations [United States, Russia, France, Great Britain, Netherlands] have gathered here. If the conditions of the past had to be investigated to determine whether they had been profitable to our country, there would be no means to verify it. I could do nothing but regret this situation. Later, the publisher Hōzendō made a map of Yokohama. It was shown to me, and I saw the landscape, public buildings, Western-style houses, and urban buildings expanding in all directions. Now we see a map very clearly, so we can imagine the past phenomena of this area. A landscape painting is only for poets. Therefore, I encourage people to publish maps. If people want to see the scenery of this area, they can see them by means of this map, and they will still be able to see them one hundred years from now.

The artist, Sadahide, who signs with an artistic name, Gyokuransai Hashimoto of Edo, declares in his inscription: "I have painted this picture en route to the capital [Kyoto]: a true view of the outlook from Koyasu Village." From his vantage point, the artist looks toward the new town of Yokohama, on the southwest shore of the bay. The Tokaidō, the busy highway linking Edo and Kyoto, runs along the near shoreline. Toward the right, the road passes through Kanagawa, the post town that was specified by the treaties of 1858 as the site for foreign commerce and residence. Sadahide, perhaps with the use of a telescope, depicted in detail the large ocean-going Western ships, Japanese coastal trading vessels, and the smaller ferries and fishing boats that filled the harbor of Yokohama and Edo Bay, which extends toward the right in this print. British horticulturalist, Robert Fortune, upon reaching Yokohama at the end of October 1860,

Previous | Next | Thumbnails | Reduce



Sadahide (1807-ca. 1878)
Complete Picture of the Newly Opened Port of Yokohama
 Winter, 1859-60
 Ink and color on paper
 Eight sheets joined and folded: 69.5 x 191.1 cm (27 3/8 x 75 1/4 in.)
 Arthur M. Sackler Gallery, Smithsonian Institution
 Y0044

© Massachusetts Institute of Technology 2005 Visualizing Cultures

Figure 87. Large Blow Ups View, VCID. [vcid_demo02_2005]

4.4 Characteristics of the Visual Narrative Field

Attributes of a Visual Data Field

In visual language the images lead and the author follows in an investigative, intuitive manner. While written text is at once evocative, efficient, and precise, images communicate with a non-verbal vocabulary closer to the preverbal subconscious.

Fuzzy rather than exact, descriptors of the visual narrative field include:

- (1) Texture, derived from unifying diverse types of media in the digital platform;
- (2) Subjective, personal points of view, often emotionally-charged visualizations;
- (3) Colliding, many different points of view;
- (4) Experiential, a sensory evocation of the historical moment;
- (5) Motion, a dynamic interplay between sources, interpretations, and ways of looking;
- (6) Depth, a virtual plunge through vertically-integrated layers;
- (7) Time, as visualized by layering the past.

The following descriptions of these characteristics draw on the Boxer Uprising case study for examples.

Texture

Links between the images collected in a visual data field form a map-like texture that conveys more than the sum of the parts. The texture transmits information about the players, plots, attitudes, and the latent information that would have been understood by creators, publishers, and audiences in 1900.

The visual record shows global fascination with the Boxer war in China. Stereographs and postcards sensationalized the struggle for Western audiences. Elaborate political cartoons debated foreign policy and the moral questions of imperial expansion. Consolidating the media and messages in a navigable whole reveals historical texture—such as themes of identity, fascination and fear of the “other,” exoticism, and racisms—that indicate the broader world stage of 1900. The ways images circulate and are repurposed can be seen by comparing two versions of a Chinese *nianhua* (woodblock print) titled “The Great Battle at Yang Tsun.” The print depicts the trial of foreign officers by three prominent Chinese generals. When reproduced in the American illustrated newspaper, *Leslie’s Weekly*, the message shifted from celebrating a

Chinese victory to fear of the “yellow peril.” The Chinese characters were deleted and a caption added, “Picturing the trial of the officers of the Allied forces, who are represented as having been captured while on the march to Peking,” and the headlines, “Yellow Journalism as it is in the Yellow Empire: Copies of cartoons circulated by the Boxer leaders to mislead and inflame their ignorant followers in the interior of China.”



Figure 88. "The Great Battle at Yang Tsun."

Media interactions create a complex texture that can be studied in the visual narrative field. A 1900 Chinese print (top) was cropped and reproduced as part of a series of prints in the American newspaper, Leslie's Weekly (bottom) under the headline, "Yellow Journalism as it is in the Yellow Empire: Copies of cartoons circulated by the Boxer leaders to mislead and inflame

their ignorant followers in the interior of China,” and caption, “Picturing the trial of the officers of the Allied forces, who are represented as having been captured while on the march to Peking.” Top: the original Chinese print, c. 1900, U.S. National Archives, with caption intact on the top:

楊村大戰 *The Battle at Yang Village*

宋董李三軍鎮守楊村，令五千拳民為前隊，西兵將倭軍作先行。相見之下，兩軍渾戰，各有損傷，拳民捉得西弁進見，請功行賞。

Song, Dong and Li's three armies were garrisoned at Yang village, and ordered five thousand boxers to form a front line. The western armies ordered Japanese troops to be the front line. After they met, the two armies engaged and each side sustained casualties. The boxers captured several western soldiers, brought them to their leaders and asked for rewards for these deeds.

Right: 董大將軍 The Great General Dong (translation by students of Professor Peter C. Perdue, Yale University). Graphic: Sebring, 2012, 189.

[texture1a]

“The Yellow Terror” heads another article in *Leslie's Weekly*. The phrase is attributed to the German Kaiser Wilhelm II in 1895 referring to fears in the West of being overwhelmed by Asia (originally referring Asian immigrants to Europe and the United States). Hence, foreign powers vying for commercial markets and territory viewed the subheading, “The Immensity of China,” as both alluring and frightening. On the facing page, “The Crisis in China: Native Characteristics,” features a less threatening, but no less stereotyped China as an exotic culture with the cliches of bound feet and punishments.



Figure 89. “The Yellow Terror.”

“Departure of war-ships from Hong-Kong for Taku, to bombard the Chinese forts.—The fleet includes the United States ‘Brooklyn’ and the English ‘Terrible’.” Article title: “The Immensity of China.” Leslie's Weekly, New York, 1900. Source: Widener Library, Harvard University.

[leslies_1900_v91_2_014]

¹⁸⁹ Sebring, “Around Me,” 230.

Depictions of soldiers in the 8-nation allied forces show Japan as a nation that straddled East and West, having adopted a Western-style expansionist policy. One headline proclaims Japan and the US to be “True brothers in arms.” A few years later, however, Japan would become the focus of “yellow peril” fears with its unexpected victory over goliath Russia in the Russo-Japanese War of 1904-05.

Finally, a two-page pictorial in *Leslie's Weekly* juxtaposes missionaries and military, with “A cavalry charge of the famous cowboy giants of the Sixth United States Cavalry...soon to strike fear in the hearts of the Chinese hordes.” On the same page, racist imagery comes full circle with a denigrating series lampooning African Americans caught stealing a watermelon by a white farmer with a rifle. Such links within and between the pages of media in circulation renders the complex texture of a “temporal slice” that can be read like a text.

Figure 90. Watermelon Incident; Sixth United States Cavalry.

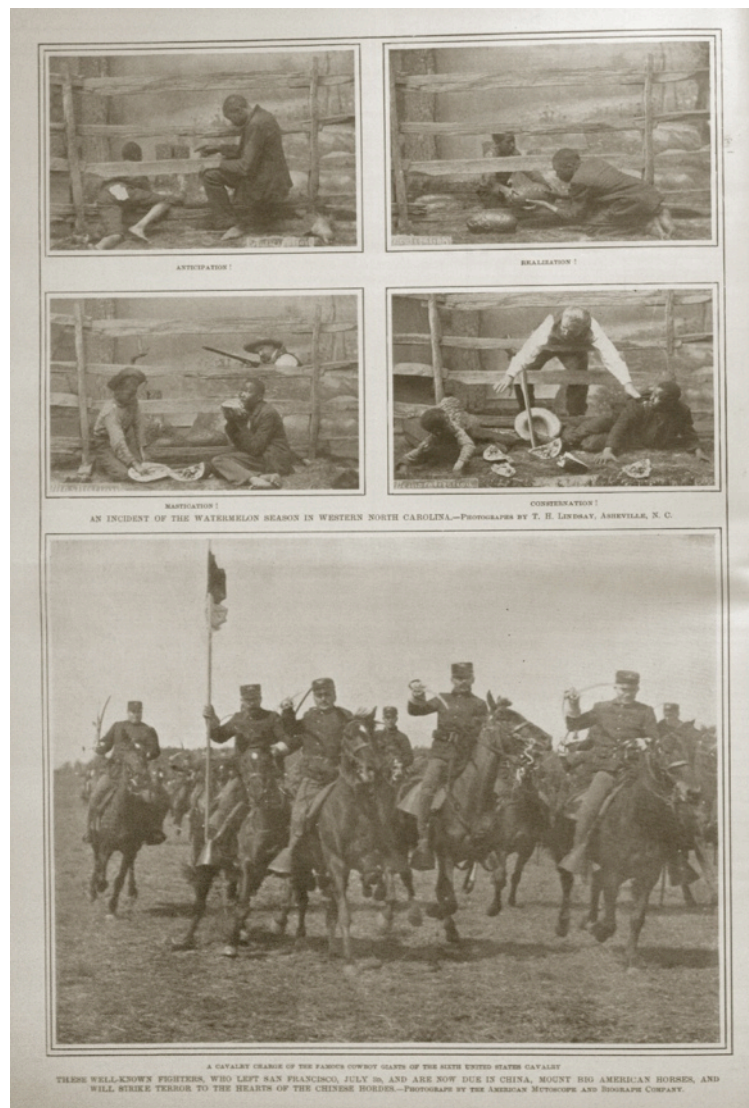
Tracing images to their original publication format gives information on social attitudes. Here, a racist photo series appears above a photograph of the “cowboy giants” of the Sixth US Cavalry.

Top: “An incident of the watermelon season in Western North Carolina.”
Bottom: “A cavalry charge of the famous cowboy giants of the Sixth United States Cavalry.

“These well-known fighters, who left San Francisco, July 3d, and are now due in China, mount big American horses, and will strike terror to the hearts of the Chinese hordes.”

Leslie's Weekly, New York, 1900. Source: Widener Library, Harvard University.

[leslies_1900_v90_2_025]



Subjectivity

Images from the historical record originate with the people who were there. They frequently knew only of their own experiences within the larger scene, capturing that view in their images. Historical images offer evidence of a story as it unfolds. They convey discrete moments in time and the narrow points-of-view of people who didn't know how things would turn out. Their raw and unresolved state is the strength of their narrative potential.

Between June 10–28, 1900, British commander Edward Seymour lead Allied troops north, traveling by rail, to aid the beleaguered diplomatic quarter in Beijing. Boxers and Qing troops attacked and sabotaged the tracks to force a retreat. The besieged foreigners and Seymour, whom they dubbed “See-no-more” when he failed to arrive, were within 20 miles of each other, but could only guess at the others' situation.

Subjectivity can be visualized as multiple points of isolated experience, moving from those closest to the main event, to those the farthest away—for example, from Beijing, to the embattled towns, to troops in the field, to Boxers and missionary outposts, to broader China, and to the world overseas.

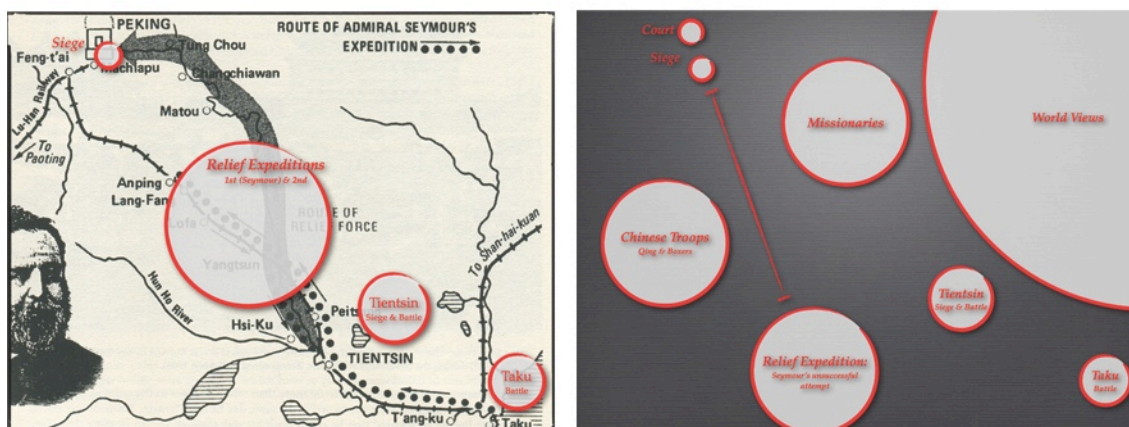


Figure 91. Subjective views of the Seymour relief expedition. Circles superimposed over a 1900 map of the Seymour relief expedition that failed within miles of Beijing, left, and, on the right, the global expanse of views on the war, mark the concurrent subjective points of view represented in the visual record. Left map (without overlays in red) from Larry Clinton Thompson, William Scott Ament and the Boxer Rebellion: Heroism, Hubris and the "Ideal Missionary," Jefferson, N.C.: McFarland & Co., 2009. Graphic by Sebring, 2012.¹⁹⁰

[pov1]

¹⁹⁰ Ibid., 229-237.

Student interpreter Lancelot Giles and American missionary Charles Killie both photographed their experiences during the 55-day siege in Beijing. Concurrent views create “parallax” and granularity beyond the single photo usually chosen as a representative illustration.

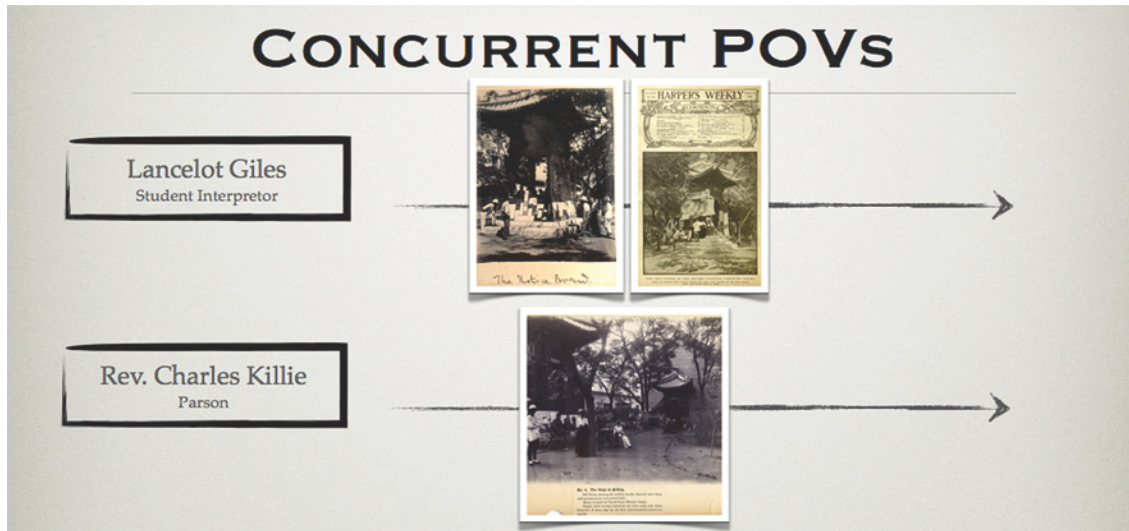


Figure 92. Concurrent POVs in the Siege of Beijing.

Photographs taken in the foreign legations during the siege in Beijing by Lancelot Giles, top left, “Notice Board,”; top right, similar photograph (uncredited) in Harper’s Weekly, New York, October 20, 1900); and Charles A. Killie, bottom, No. 4 from the album, The Siege in Beijing, 1900, Beinecke Rare Book and Manuscript Library, Yale University. Graphic: Sebring, 2012.¹⁹¹

[pov2]

Juxtaposing these visual records creates a parallax that allows us to look with peripheral vision at historical events. Juxtaposing concurrent points of view creates a nuanced subjective window, inviting both empathy—seeing the world through their eyes—and the judgements common to hindsight.

Colliding

Colliding, the third descriptor, underscores that genre, origins, and subjective points of view, collide in the visual narrative field. Images in collisions don’t bend or change, but engage in cross-talk that disrupts our theories about what people of the time knew, thought, and decided. Colliding views move from micro: “this is what I see” to macro “this is a constructed view,” for example, from a Western image of Chinese soldiers to a Chinese image of Western soldiers.

¹⁹¹ Ibid., 229-237.

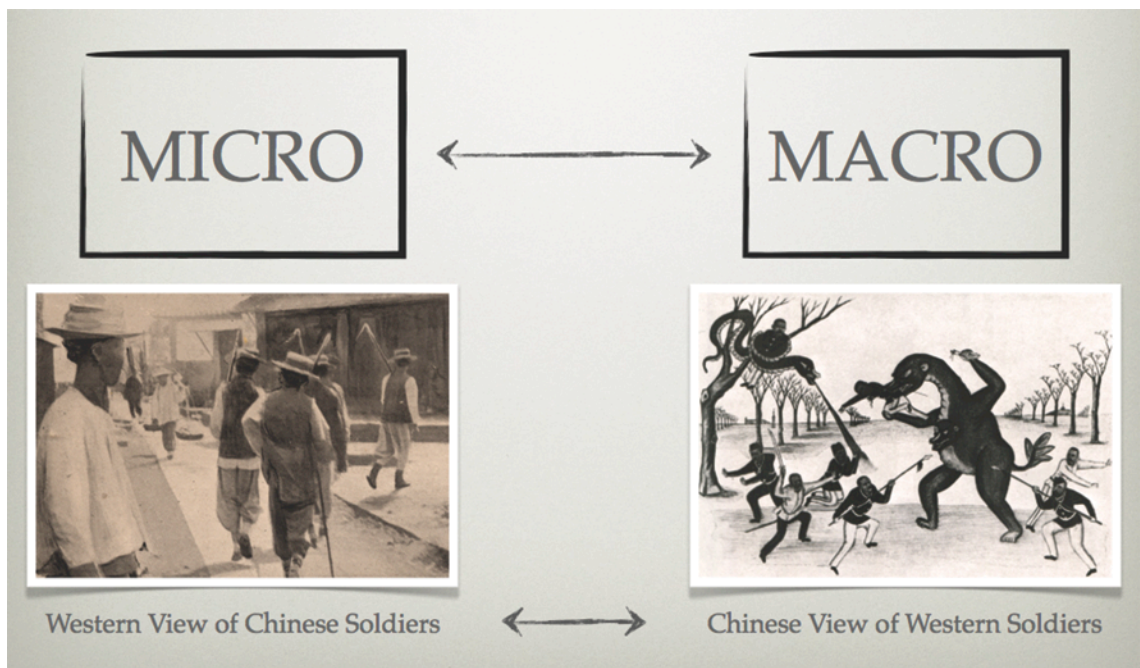


Figure 93. *Micro and Macro Views.*

A fluid motion between micro and macro views of the compiled visual record facilitates movement between multiple colliding points of view, in this case, how the other visualizes the “other.” Graphic by Sebring, 2012.¹⁹²

*Left photograph from Henry Savage Landor, *China and the Allies*, volume 2. New York: Charles Scribner's Sons, 1901. Right image, “A Boxer poster,” from Immanuel Chung-Yueh Hsü, *The Rise of Modern China*, New York and Oxford: Oxford University Press, 1995.*

[colliding]

Experiential

The experiential nature of the visual narrative field describes the sensory quality of primary sources unmediated by a historian’s text. Wading into the ocean of visual evidence requires patience, persistence, and an open mind. Processing the unspoken information of images to find coherence and, further, to communicate with others using the visual record, is the challenge of the evolving language of visual narrative. That historical images were created as physical media makes digitization yet another step in their journey as signifiers of events for viewers, back then, who were far away in distance, and viewers now, who are far away in time.

History feels more real when hot on the trail of sources left behind. Hevia describes visits to archives and the hunt for artifacts, inviting the reader to vicariously travel along. Tactile qualities like the “blood-red background” of an album connect disembodied illustrations to the “famous resort town of Brighton”¹⁹³ or archival boxes filled with related materials. Anticipation

¹⁹² Ibid., 229-237.

¹⁹³ Hevia, “The Photography Complex,” 97.

builds as “the find” rewards persistence in this exhaustive process. Hevia connects multiple archives in a complex narrative about photography and power. Giving readers digital access to the sources would allow them to emulate the experiences of historians as investigators.

Motion

Motion, as a larger principle, characterizes digital historiography. Movement that is uniquely possible in the digital medium takes place between perceptual modes, between text and image, and between the images themselves. The VNF model conflates the physical activities of researching in archives, reading texts, and viewing exhibitions in a single design that can only be realized digitally. Motion signifies the shift from static to dynamic images that, in a digital design, become recombinant objects under the hand and eye of the reader. Books are held and leafed through, the narrative skimming by under our fingers. Digital interfaces likewise respond to touch. But inert stills become evidentiary objects only within an interactive design where they can be studied from different angles, resized, and re-situated in various contexts.

Authors bring their expertise, research, and training to create meaning by crafting pathways through a permeable archival base. But narratives can be overturned by readers exploring the database, and information coming from the larger sphere of the Internet. A fluidity of interpretive analysis is required of historians that upends the relative stability of the book publishing era.

In his 2011 book, *Technologies of History*, Steve Anderson writes about the notion of remix—media that remains intact while repurposed in new work—as a movement towards “a staunch refusal of the stability of a single ‘history’, instead offering us a relation to the past that is always already open to continual revision and reinterpretation.”¹⁹⁴

The idea of remix hints at the potential for digital narrative to surpass static models of history. When primary sources are assembled within a single medium they congeal into what might be called a historical entity. We need to learn how to read and interact with this evidentiary piece the past. A living, unresolved mix of data and interpretation results in a nonlinear, complex discourse that transforms the notion of historical objectivity. Anderson describes this entity as “Total Archive”:

¹⁹⁴ Steve F. Anderson, *Technologies of History*, Interfaces: Studies in Visual Culture, (Hanover, NH: Dartmouth College Press, 2011), 122.

Well before the advent of the computer age, the analytical philosopher Arthur Danto described the “Ideal Chronicler” in 1965, using the term to designate a hypothetical model for the ultimate form of history writing. For Danto, the ultimate historian would be one who could produce a complete record of all historical events—including analyses of their significance from multiple perspectives—at the same moment they are happening. Although originally postulated in order to demonstrate the impossibility of an objectively perfect form of historiography, the values reflected in Danto’s ideal—comprehensiveness, multiple perspectives, and immediacy—resonate with those promised by the proliferation of today’s searchable databases and digital distribution networks.¹⁹⁵

Depth

One way to mine knowledge from a data-driven model is to pull back and view it as a circumscribed entity with a unique identity in flux over time.

If DNA provides the unique structural elements of identity, the connections between neurons are the expression of identity, according to neuroscientist Sebastian Seung. In his 2012 book, *Connectome: How the Brain's Wiring Makes Us Who We Are*, Seung claims that our identity comes less from our genome than from the brain’s connectome or map of neural connections. The connectome hosts the continuous flow of thoughts or neural activity with the same ecological interaction as a stream flowing through a stream bed. Over time, the connectome, like the stream bed, takes its shape from the connective flow of thoughts in the brain.

Historically, the conscious self is the one that has attracted the most attention. In the nineteenth century, the American psychologist William James wrote eloquently of the stream of consciousness, the continuous flow of thoughts through the mind. But James failed to note that every stream has a bed. Without this groove in the earth, the water would not know in which direction to flow. Since the connectome defines the pathways along which neural activity can flow, we might regard it as the streambed of consciousness. The metaphor is a powerful one. Over a long period of time, in the same way that the water of the stream slowly shapes the bed, neural activity changes the connectome. The two notions of the self—as both the fast-moving, ever-changing stream and the more stable but slowly transforming streambed—are thus inextricably linked.¹⁹⁶

The connectome metaphor applies to visual data fields in that the connections between images carve out an understanding of the visual data as a kind of “entity.” The connections between sources observed by authors and readers take a distinct shape over time that modulates subtly when new data or findings enter the field. The dimension of depth is key to creating a visual identity that shapes knowledge. Triangulation between images creates depth, not just as

¹⁹⁵ Ibid., 124.

¹⁹⁶ Sebastian Seung, *Connectome: How the Brain's Wiring Makes Us Who We Are*, (Boston, New York: Mariner Books, 2012), xix.

in “depth of knowledge,” but literally by adding the third dimension. Because of the ease with which two dimensions appear in print and on screens, the numerous links and connections that extend in multiple directions and dimensions are not represented.

A topsy-turvy game of images upsets the dominance of iconic images and redistributes meaning across a pictorial array. Meaning not only changes according to the juxtaposition of images, but also emerges from the cracks between similar scenes. Images in relationship to other images acquire a granularity that deepens meaning by adding different qualities—less narrative and quantifiable—of understanding.¹⁹⁷

Spatial-temporal disruptions emerge in the parsing of visual datasets. As quantization confronts the qualitative observation of images in, for example, neural networked image classification, machine sorting takes unexpected routes through the data. Like the connectome, repeated pathways etch a groove, introducing the third dimension into the data. Historical moments visualized by layers of related visuals give us a new view of historical time.

Time

Three-dimensional movement, dropping through historical narratives as in the VNF model, also suggests the fourth dimension: time. Four-dimensionalism posits that “an object's persistence through time is like its extension through space and an object that exists in time has temporal parts in the various subregions of the total region of time it occupies.”¹⁹⁸

Historical events as viewed in a visual image database, even when sorted by date of creation, appear as a jumble. Slowly, working through the visual narrative of individual images uncovers unexpected temporalities. Time becomes jumbled in the database where all the images of the historical event(s) collected are viewed together. The visual record gains a collective presence. Minimally, a double layer of time can be observed: the moment depicted in the graphic and the moment—general or the specific date—the graphic was created.

Temporalities such as simultaneity emerge. For example, Chinese New Year's prints conflate events within a single image, described by Boxer historian, Jane Elliott, as simultaneity.

In summary, it is clear that there was a Chinese folk art tradition adept at describing the drama of war, the confusion and consequences of close combat and a multitude of separate simultaneous engagements on the same battlefield.¹⁹⁹

¹⁹⁷ Sebring, (2012), 69-78.

¹⁹⁸ “Four-dimensionalism,” Wikipedia <https://en.wikipedia.org/wiki/Four-dimensionalism> Accessed October 2015.

¹⁹⁹ Jane E. Elliott, *Some Did It for Civilisation, Some Did It for Their Country: A Revised View of the Boxer War*, (Hong Kong: The Chinese University Press, 2002), 131.

A complex print titled, “The Battle at Yangcun,” depicts sensory as well as documentary aspects of battles. Simultaneity within a woodblock print evokes the emotion of battle, for example, its chaos.

In fact, during real battles, there is a complex simultaneity of action that is difficult if not impossible to illustrate... The Chinese woodblock prints, though highly stylised, all make a surprisingly modern statement about the impersonal power and chaotic destruction of the force of war. This may be to do with the fact that, in contrast to European war paintings or woodblock prints, the common soldier—whether Chinese or foreign—is present everywhere, often with his leaders in his ranks. There is a powerful artistic effect in the *nianhua* of guns exploding, bodies flying, buildings breaking open, soldiers being executed on the field of battle, ships sinking, men foundering in the water. All these elements give the nineteenth century Chinese woodcuts a “modern” look.²⁰⁰

Planning, process, and outcome appear together in a single print. Commanders and trials and punishments appear in the same scenes as battles. The prints communicate both the near and far ramifications that converge within the intensity of these politically-motivated actions directed from outside as much as in the man-to-man combat on the field.

The digital medium shifts the representation of time. All of the above descriptions of time as encountered in the visual record are part of a historical representation that is non-linear. The digital medium is also only as linear as the user interface design. In a fundamentally non-linear medium, the physical object becomes mathematized, ready for rebirth in a new form at any time.

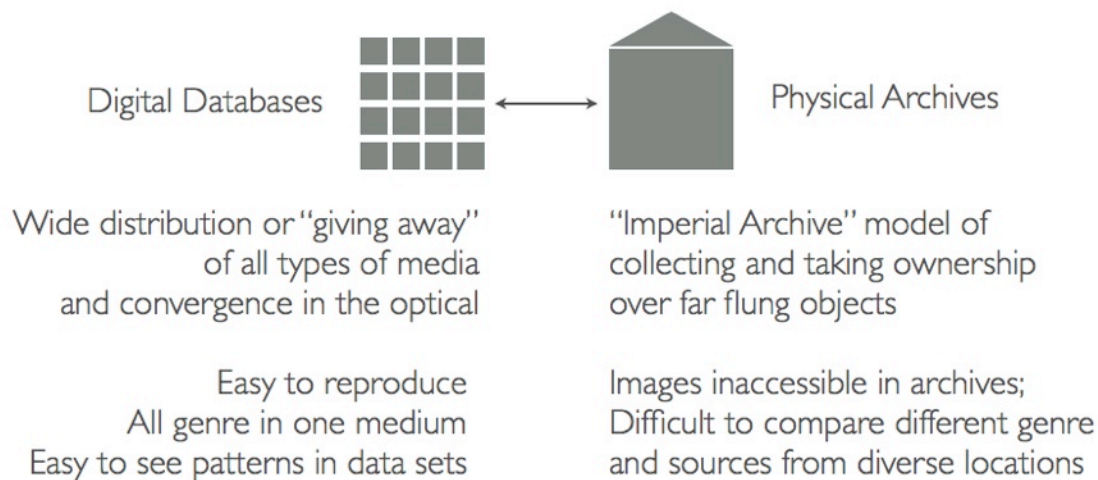
²⁰⁰ Ibid., 129-130.

4.5 The VNF as Historiography

From Archives to Networks

James Hevia casts “imperial archives, those vast epistemological networks for gathering, processing, cataloging, and filing information about other people and places”²⁰¹ as repositories for controlling cultures through information and media. He describes the photographic process as the “capacity to write with light,”²⁰² literally creating meaning through the exposure to light. The digitization of archives similarly brings objects to light, out of dark storage, into what will eventually be a single, linked virtual collection that undermines “imperial” control through connective architecture.

IMAGE ACCESSIBILITY



*Figure 94. Moving from Physical Archives to Digital Databases.
Image accessibility from archive to database. Sebring, 2015.*

[archive_to_database]

Reawakening the Imperial Archive

In his book, *The Imperial Archive*, Thomas Richards examines the origins of archives needed to house the ephemera from countries in the British Empire that were impossible to rule across vast geographical distances.

²⁰¹ Hevia, “The Photography Complex,” 96.

²⁰² *Ibid.*, 89.

From all over the globe the British collected information about the countries they were adding to their map....The administrative core of the Empire was built around knowledge-producing institutions like the British Museum, the Royal Geographical Society, the India Survey, and the universities...²⁰³

He describes a knowledge explosion at the turn of the twentieth century that foreshadowed our own information age. The impossibility of categorizing and making sense of the endless files and papers of the Empire and its peoples lead to a gradual acceptance of fragmented information over systematic knowledge.

The practical experience of trying to order all the incoming knowledge from the Empire had forced them to reconsider whether knowledge could ever in fact be unified. These people had found themselves in the midst of the first knowledge explosion. If today we call this the ‘information explosion,’ it was because by the century’s end many people had stopped using the word ‘knowledge,’ which always had something about it of a prospective unity emerging, and started using the word ‘information,’ with its contemporary overtones of scattered disjunct fragments of fact.²⁰⁴

The archive reawakens in digital form from its slumber in storage. A new affective immersion in collected objects promises to envelope historians and the public alike, linked and extended in spatial dimensions that yield unforeseen insights.

The radical shift towards Internet-based research both aids and disrupts the historian’s methods. In her essay, “Toiling in the Archives of Cyberspace,” Renée M. Sentilles compares archival and digital research, weighing the value of tactile contact with original sources against a connected flow of data.

Because Internet sites, no matter how well constructed, are not the same as working with tactile artifacts, deciphering handwritten records, or talking with a knowledgeable curator. Losing oneself in a pile of textbooks in the back of a library brings a measure of contemplation that easily surpasses impatiently surfing the Web.²⁰⁵

Lacking the connection to the Web will marginalize historians, she writes. And through the process of using Internet searches with its multitude of input, she questions the possibility of “mastery” over a subject, with all its hierarchical implications, especially privileged in fixed narratives. The constant stream of information will “change the traditional concept of what it

²⁰³ Thomas Richards, *The Imperial Archive: Knowledge and the Fantasy of Empire*, (London, New York: Verso, 1993), 3-4.

²⁰⁴ *Ibid.*, 5.

²⁰⁵ Renée M. Sentilles, “Toiling in the Archives of Cyberspace,” from *Archive Stories: Facts, Fictions, and the Writing of History*, Antoinette Burton, editor. (Durham: Duke University Press, 2006), Kindle Locations 2931-2933.

means to be a specialist in favor of something more ongoing, interactive, and flexible in its fallibility.”²⁰⁶

Other benefits Sentilles discusses include the speed and scope of research using simple keyword searches, and the increased visibility of cultures that lack textual records in the emergence of history “from the bottom up.”

Yet, Sentilles concludes that despite the benefits and inevitability of the digital environment, tactile connection to original sources remains a central motivation in the historian’s mission.

But however bizarre and interesting the materials I have found through my computer, they never send me on flights of imagination like paging through original newspapers and getting the dust of two centuries under my nails....And perhaps, however rational I have tried to keep my argument in this essay, it is that human response to tangible artifacts that I have seen time and again in my students as well as myself that convinces me that virtual archives will never serve as more than a place to begin and end the research journey; never as a place to dwell.²⁰⁷

The VNF as a Historiographic Model

As a historiographic model, the VNF revitalizes the visual record by undertaking to raise relational images to narrative status. Capozzola commented on the value of the visual record to both communicate history in a unique way, and as a tenuous link to those who left no written records.

When you are working with visual sources—particularly photographic or documentary film images—there is a path toward the historical imagination that’s different from immersing yourself in text....I think this is especially important in a site such as the Philippines, where the people that we write about very often left no written records, and the records about them are written by colonial officials. The distances of time and culture and power are very hard to overcome, and photographic archives (even if they are fraught in their own ways) have been crucial to me to understand the people I’m writing about.²⁰⁸

On a practical level, carving out a place for visual narrative disrupts a discipline defined by writing, or as Capozzola says, “The core of history is the narrative art.” Collaboration with visual specialists helps historians to understand what they’re not trained to see. Often the projects coming from digital humanities labs continue to overlook the more subtle informatics of visuals, like fine musical instruments played by amateurs. The approach taken in the VNF

²⁰⁶ Ibid., 142.

²⁰⁷ Ibid., 155.

²⁰⁸ Christopher Capozzola, from interview, *Historian Commentary on Visual Record in Digital History*, by Ellen Sebring, June 6, 2013. [see Appendix for full text]

model cordons off a space for looking at images, and offers a simple compositional vocabulary for scholars, that lets images shine with minimal intervention.

The model envisioned of the Boxer Uprising is a historical representation of these events visually. It is not a unilateral narrative, but a multi-voiced, interactive narrative space, that is, a “narrative field.”

4.6 Software and an Algorithm for Visual Narrative

Software Toolset

Visual narrative will become a legitimate historiographic form only when software supports its composition and distribution. As long as book metaphors dominate digital designs, native digital rhetoric will remain dormant. Microsoft's PowerPoint and Apple's Keynote presentation softwares come closest to supporting visual composition. Though the goal differs vastly from creating a historiographic text, these softwares show how images can be manipulated and shared effectively, widely, and easily. The VNF software model proposed here offers a similarly narrow set of gestures for authoring with visuals, based on a short list of image juxtapositions as visual grammar. The software supports narrative relationships that stimulate a range of perceptual and cognitive states, ranging from purely visual to purely textual.

AUTHORING MODE

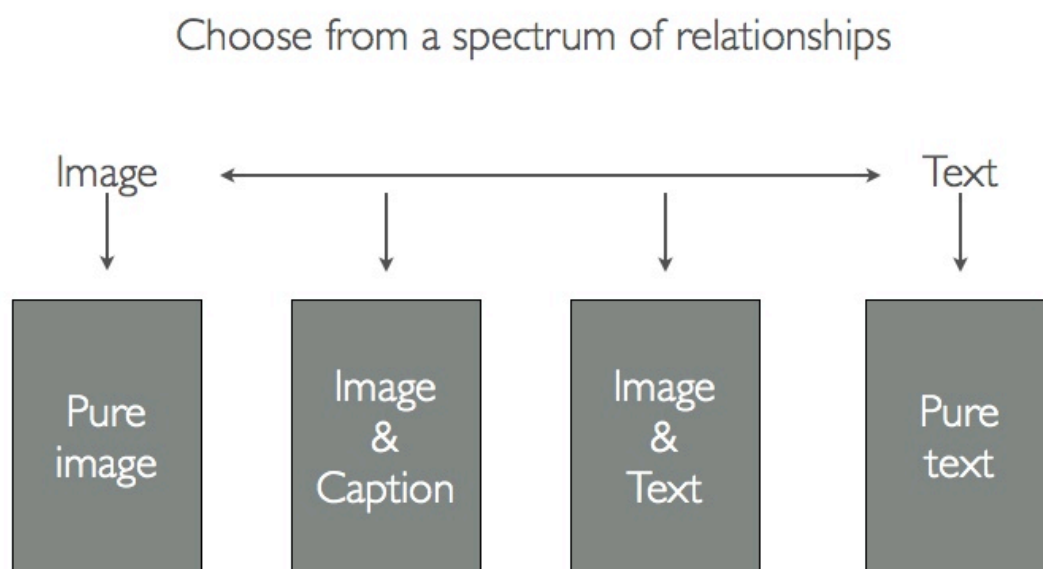


Figure 95. Authoring Mode.

Spectrum of visual authoring relationships ranging from pure text to pure image. Sebring, 2015.

[authoring_mode_spectrum]

Distraction and Concentration

Books remain the primary way we learn history, while museums exhibit historical artifacts. Somewhere between these two poles, the digital medium opens up a gray space for narrative design. The speed of visual perception means that visual narrative needs to slow readers down, and encourage them to look past first impressions, moving from spectatorship to considered looking. Walter Benjamin argues that media change the nature of perception itself.

During long periods of history, the mode of human sense perception changes with humanity's entire mode of existence. The manner in which human sense perception is organized, the medium in which it is accomplished, is determined not only by nature but by historical circumstances as well.²⁰⁹

“Distraction and concentration form polar opposites,” he writes. Audiences respond with distraction to 20th century media, photography and, even more so, film where, Benjamin writes, “No sooner has his eye grasped a scene than it is already changed...The spectator’s process of association in the view of these images is indeed interrupted by their constant, sudden change.”²¹⁰ The pull toward distraction has only increased in the digital media, where lack of concentration presents difficulties for visual narrative. Quick responses to imagery often lead to inaccurate snap judgements. Distraction on the web comes from endless choices. With the lure of clicking away at the speed of thought, the “spectator’s process of association” is one of irresistible instant gratification in which constant self-interruption follows the user’s associative train of thought through endless branches and pathways.

Moving away from superficial spectatorship poses a challenge for interface design. The urge to “click” can be harnessed to bring users closer to meaning, as explorers, rather than farther away. Blending directed, informative content with interactive data fields addresses the media-specific behaviors of audiences in digital space. Visual images lure users in, but the interface design that circumscribes an immersive visual/informational data field can focus users on a deeper exploration of content.

Thus, the software framework becomes part of the authored work, extending narrative beyond a linear essay to include interactive elements. Readers can sense whether they are

²⁰⁹ Walter Benjamin, “Work of Art in the Age of Mechanical Reproduction,” essay originally published 1936, *Illuminations*, (New York: Schocken Books, 1968, English translation), 238.

²¹⁰ *Ibid.*, 219.

exploring a purposeful design. The design process brings coherence to visual messages, and authors will need to think about creating coherent unity within the formats of the VNF model.

Mapping Gesture

The software design needs to move between the three fields with a natural, intuitive gesture. The software maps the gestures of readers that blend linear and non-linear behaviors, for example, to scan the content, read, sit back and think, question, lean in and look closer, zoom out, compare, search for patterns, contemplate and return to read.

The way thinking moves between observation and argument is reflected in a design that includes both rational cognition and sensory perception. Just as turning off the lights in the movie theater shuts out other stimuli and allows for immersion in the film, parts of the software are designed to foreground visual immersion. Currently, such research takes place behind the scenes, leading to a polished publication. The VNF model goes behind the scenes where observational activities become part of the publication accessible to readers.

Algorithmic Patterns in Gestural Authoring

User interface design considers user patterns, often beta testing new navigational structures. My own repetitive work with new image sets enabled me to see the patterns in how I made sense of them, which I described in a formula. Though not mathematical as such, an algorithm can be applied to any set of images to extract narrative, and suggest a method for mechanizing visual narrative threads. Visual narrative, in the main, emerges through image connectivity. The reader confronts an image embedded in text; enlarges the image; connects to a short series of related images; connects to a larger comparative visual data set; and finally, returns to reading. This sequence can be described in the following formula.

$$VN = t+i < iZM > i+i2 \times (10i+d) \times (100i+d) = i \Rightarrow i+t$$

Figure 96. Formula for visual narrative. A symbolic description of gestures in cognition of visual image sets.

Sebring, 2012.

[algorithm_vn]

The formula [VN = t+i < iZM > i+i2 x (10i+d) x (100i+d) = i => i+t] can be decoded as a sequence of reader actions upon confronting an image within a text to come to a greater understanding of it and its narrative meaning(s):

VN = t+i

Visual Narrative equals text plus image

Action described: Reader confronts both text and image

< iZM >

image zoom

Action described: Looks closer and zooms in on the image

i+i2

Image plus image2

Action described: Compares this image to a second image,

x (10i+d)

times 10 more images, adds depth

Action described: Compares more images by adding ten, which adds depth

x (100i+d)

times 100 images, adds depth

Action described: Compares a large set of images by adding one hundred, which adds more depth

= i

equals image

Action described: At this point the image has been seen and understood

=> i+t

returns to image plus text

Action described: The viewer returns to the text, having integrated and understood the image

I am arguing that visual narrative means seeing and understanding images by diving into relational image patterns and reemerging to the text. Reading plus looking involves an immersive dive that connects two-dimensional image sets through the added dimension of depth. The two-dimensional grid connects smaller image sets in patterns. The movement between image sets multiplies the types of connections, and adds depth to an otherwise two-dimensional form. An ideal software would enable the author to compose an immersive gestural narrative based on relational patterns in the grids within a three-dimensional cube.



Figure 97. "10x10."

Database grids become narrative when images are placed in purposeful juxtapositions. Sebring, 2012.

[10x10_grid]

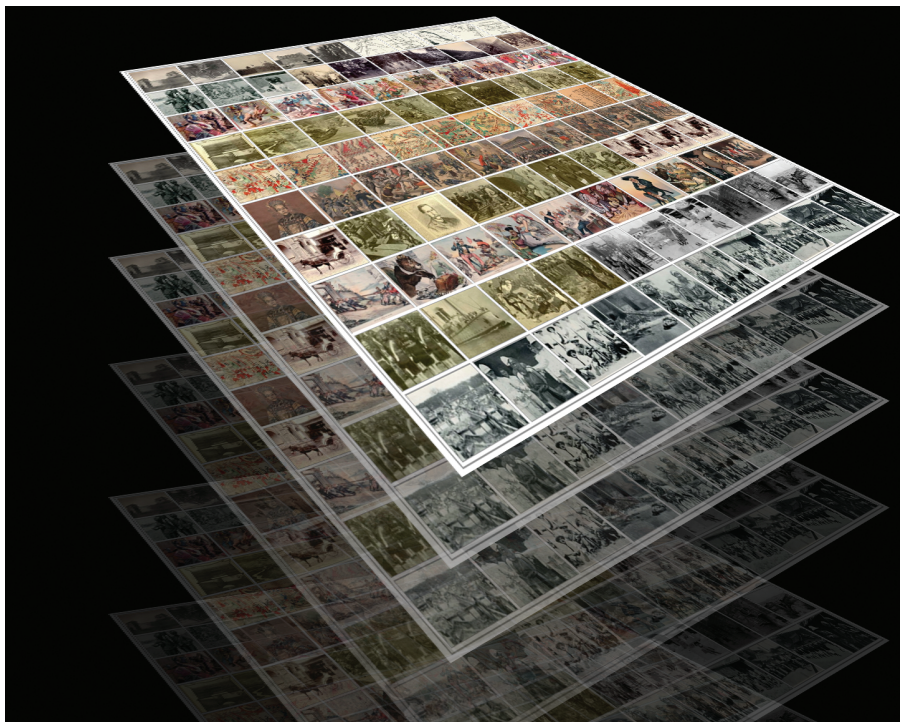


Figure 98. "10x10x10."

Database grids become immersive when linked in multiple layers. The addition of depth as a direction in the software model adds 3 and 4 dimensions to image linking. Sebring, 2012.

[10x10_grid_3d]

I used this formula to make an example of visual narrative from random images to see if visual narrative could be mechanized, creating a “Kumiho” (Korean nine-tail fox) fairy tale. Such experiments suggest hybrid historical representations, with narratives made by group and human-machine interactions.



x (10i+d)

Figure 99. “Kumiho.”

Visual narrative experiment based on algorithm using imagery from the search term Kumiho, a Korean nine-tail fox, fairy tale, Sebring, 2012.

[fox_man]

As narrative elements, images function like objects in a software design. Confronted with images, readers typically ponder, look closely, look away, and read again. Mapping such movement is key in creating reading modes that incorporate body gestures into mental processes. The bodily response to “reading” visual images that fire neurons throughout the nervous system can be addressed with gestural design.



Figure 100. Object-based visual narrative experiment based on algorithm. Presented at Plymouth University. Animation by Sebring, 2012.

[fox_man]

Heider and Simmel's Apparent Behavior Film (1944)

My experiment bore an incidental resemblance to a 1944 film by psychologists Fritz Heider and Marianne Simmel, "An Experimental Study of Apparent Behavior."²¹¹ Both choreograph interactions between abstract objects, and I unknowingly chose the same shapes as their 1-1/2 minute film: a larger triangle, smaller triangle, and a circle. My goal was simply to animate the short sequence described in the algorithm to see what the visualization would produce.

The Heider and Simmel film, on the other hand, is a sophisticated animation created by the psychologists in 1944. The film and test subject reactions have made it a famous experiment in human projections of story, emotion, and causality on to abstract relationships.

The film was shown to three test groups of female undergraduate students. One objective was to discover whether subjects attributed sentience to the geometrical objects in the film. All but one subject did so, and most viewers went further in their responses, describing the film as a story, with plot and emotions attributed to the geometrical protagonists.



Figure 101. Still frame from Fritz Heider and Marianne Simmel film. "An Experimental Study of Apparent Behavior," made for a psychology experiment, 1944.
[vn_over_grid3]

²¹¹ Fritz Heider and Marianne Simmel, "An Experimental Study of Apparent Behavior," film, 1944 <http://www.all-about-psychology.com/fritz-heider.html> Accessed October 2015.

Heider - Simmel Film	Visual Narrative
<i>Objects as narrative elements: geometrical shapes</i>	<i>Objects as narrative elements: historical pictures</i>
<i>Authored fixed sequence</i>	<i>Authored fixed sequence</i>
<i>Spatial, observational (no sound)</i>	<i>Spatial, observational (no sound)</i>
<i>Temporally fixed (1-1/2 minute)</i>	<i>Temporally open (user controls the speed and direction through the objects)</i>
<i>Fixed focal length</i>	<i>Interactive focal length (user zooms in and out)</i>
<i>Relational narrative (object interactions)</i>	<i>Relational narrative (object interactions)</i>
<i>Moving objects</i>	<i>Static objects (series)</i>
<i>Objects interact, becoming protagonists</i>	<i>Objects don't interact, but are part of a non-hierarchical series</i>
<i>Objects created for the film from standard geometry vocabulary</i>	<i>Objects exist as historical sources independently</i>
<i>Simple objects (triangle, circle)</i>	<i>Complex objects (pictures)</i>
<i>Anthropomorphized objects (viewers generally attribute sentience)</i>	<i>Neutral objects (viewers read objects in original function, as historical pictures)</i>
<i>Causality attributed to object interactions</i>	<i>Visual relationships comparative (immersive rather than causal)</i>
<i>Read as a story</i>	<i>Read as informational</i>
<i>Emotions assigned to objects by viewers</i>	<i>Emotions absorbed from objects by viewers</i>

Figure 102. Comparison of narrative object relationships. Fritz Heider and Marianne Simmel's film, "An Experimental Study of Apparent Behavior," 1944, and visual narrative. Chart by Sebring, 2014.

[chart_Heider-Simmel_vn]

The experiment demonstrated a predilection for ascribing narrativity, even more, finding causality in abstract interactions. The study in object-oriented relational narrativity

makes a useful comparison to the object relationships in visual narrative. First, similarities and differences can be listed (above). Comparing object-based observational narratives helps flush out the attributes of digital visual narrative. In the most glaring difference between the two examples, causality—that one action causes the next action—seen in the Heider-Simmel experiment (its most significant finding), does not occur in historical image-based visual narratives. Does a lack of causality undermine its narrativity? We can look to other examples that take a postmodern, fragmented and nonlinear approach increasingly supported by the technological changes in media.

A second critical difference surfaces in non-linear interactivity: viewers watch the Heider-Simmel film passively, but control their interactions with digital visual narrative, thus undermining causality.

The comparison yields the narrative characteristic unique to images as objects in relationship, as follows:

- (1) Emotions emanate from the objects rather than from relationships between objects;
- (2) Objects are complex with internal narratives (as in narremes);
- (3) Relationships between objects are not causal: each object stands alone and in relationship to the other objects;
- (4) Exposition is linear and fixed, but navigated at the reader's pace and chosen direction.

The conclusion is that image-based relational narrative is not causal, but rather a cumulative non-linear narrative that can be explored temporally and spatially by viewers who emerge with threads of stories that took place in the historical past.

Neither a single cartoon on a subject, nor a database full of them, achieves the expository meaning of the narrative sequence. The “story” as such may not depend on causal relationships between image objects, but rather the interweaving of an informational and emotional tapestry.

For example, a visual narrative sequence from the unit “China’s *Modern Sketch*,” called “Modern Girl/Modern Boy,”²¹² brings complexity to the subject that on the surface appears

²¹² John A. Crespi, “China’s *Modern Sketch*: The Golden Era of Cartoon Art, 1934-1937,” MIT Visualizing Cultures, (Cambridge, MA: MIT OpenCourseWare, 2011). Shown here, a visual narrative called “Modern Girl/Modern Boy,” from unit 2 http://ocw.mit.edu/ans7870/21f/21f.027/modern_sketch_02/ms_visnav02.html Accessed October 2015.

glamorous. As the graphics advance, a dark underbelly to the lifestyle of the attractive youth is depicted: they lean over a river of blood, enjoying their privilege at the cost of ignoring the suffering of others; the price they pay for a beautiful facade as they dance with a variety of unsavory masters.



Figure 103. “Modern Girl/Modern Boy,” a visual narrative.

The print format here makes reproduction of the visual narrative ineffective. This can be compared to the original version in “China’s Modern Sketch: The Golden Era of Cartoon Art, 1934-1937” (unit 2) by John A. Crespi, MIT Visualizing Cultures, 2011. [[Link to view original](#)]

[VC_modern_sketch_modern_girl_modern_boy]

Roy Ascott’s Telematics and Distributed Narrative

The concept of distributed narrative dates back to Roy Ascott’s seminal, early 1980s work, “La Plissure du Texte” (the pleating or folding of text), a title referring to Roland Barthes’ 1973, “Le Plaisir du Texte” (the pleasure of text). I participated from Cambridge, Massachusetts in a 2012 reprise of the work emanating globally from the 9th Shanghai Biennial exhibition based in China. Titled, “Journey to the West, a planetary fairytale,” participants took character roles in an unfolding drama of real-time online distributed authorship.

Ascott’s prescient work models non-hierarchical, shared authorship that conflates the roles of author and character. In his larger philosophical framework, the distance and identities of the perceiver and that which is perceived, disappears and merges in what Ascott describes as the “telematic embrace” of a post-digital world. A fabric of global interaction pervades our communication, and inescapably alters our consciousness towards making shared consciousness overtly visible.

The rubric “telematics” not only refers to the convergence of computers and telecommunications systems but qualifies a whole class of consciousness and culture in which new modalities of knowledge and the means of their distribution are being tested and extended. Telematics implies interaction, negotiation, and collaboration amongst human beings and intelligent machines. Telematic process involves ambiguity, uncertainty, and incompleteness; meaning is not given but negotiated, endlessly reconstituted and redefined; truth, always relative, does not lie in an absolute location but is embedded in

process, is telematically inscribed in the networking that is human behaviour at its most liberated.²¹³

Such porous narrative paradigms coincide with the mutable nature of visual syntax, especially as it enters and alters intellectual discourse through new media like the “world wide” web. The closed system of the “original” opens, disrupting old demarcations of identity, and meaning. As we confront and attempt to read large data collections, for example, shifting narratives make visible the underlying links between objects, actors, authors, and events.

Ascott founded the international consortium, The Planetary Collegium, for which this PhD research is being done, as a working model of telematic culture. He poses a fundamental question, asking how “images, ideas, text, and data” merge in the planetary mind:

How, then, are images, ideas, text, and data brought together, kept ready for our immediate engagement, regardless of their place or time of origin, by that vast world memory, computer memory, or set of submemories linked together by networks in a way that constitutes planetary memory, mind at large?²¹⁴

Designing Digital Forms and Content

Historian Joshua Brown wrote an article analyzing his own early adoption of digital forms, published on the website of the Roy Rosenzweig Center for History and New Media, an academic group known for research in digital history. Brown looks at the limitations of new media for wide distribution, and recalls the gradual increase in bandwidth that enabled more sophisticated content. Unfortunately, he found that older content falls rapidly out of usage, and that standardized digital forms have not emerged.

This fragmentation might be considered merely indicative of new media's postmodern sensibility, resisting the totalizing meta-narratives of previous modernist forms—but only if we ignore the immersive properties of digital media.²¹⁵

Of course, countless interfaces have been designed in the digital medium. Recently, software such as Scalar, developed at the University of Southern California, seeks to provide a standardized interactive program for interactive, non-linear, multimedia narrative that unfolds in nodal points.

²¹³ Roy Ascott, “Concerning Nets and Spurs: Meaning, Mind, and Telematic Diffusion (1985),” *Telematic Embrace: Visionary Theories of Art, Technology, and Consciousness*, (Berkeley, Los Angeles, London: University of California Press, 2003), 202.

²¹⁴ *Ibid.*, 202.

²¹⁵ Brown, “History and the Web,” <http://chnm.gmu.edu/essays-on-history-new-media/essays/?essayid=29> Accessed October 2015.

My own authority to propose a multimedia design comes from many years of involvement in professional new media development, beginning in 1984 with “Elastic Movies,” one of the first interactive videodisc projects, created by artists at MIT.

The first interactive project I ever worked on was a videodisc called “Elastic Movies,” with Gloria Davenport at the MIT Film/Video Section. Luc Courchesne and I collaborated on a piece called, “Thirst,” depicting a hallway (from MIT’s great basement labyrinth) with doors on either side. As you proceeded down the hall, sirens would beckon from the doorways, “Come this way” urging you to exit. At the very end of the hall there was a drink machine and only if you ignored the voices would your thirst be quenched. If you went out any of the doors, you were cast adrift on a boat trip.²¹⁶

My Masters degree from MIT, based at the Center for Advanced Visual Studies (CAVS), focused on the relationship of sound and image as compositional elements of non-verbal narrative. I learned about narrative filmmaking by directing a fiction film as part of the Directing Workshop for Women at the American Film Institute in Los Angeles.

I began working on a major interactive project, “Star Festival,” at MIT’s Laboratory for Advanced Technologies in the Humanities (LATH) operated by Janet Murray. A group of us at MIT founded a company, and I became president of Botticelli Interactive, developing interactive media beginning in 1995, when widespread use of the Internet was still nascent. The company focused on interactive storytelling with a major documentary project that became the basis for the first digital curriculum in the Boston Public Schools; interactive kiosks for museums winning the New York Festivals Silver Media for new media; and an interactive television prototype on creativity, commissioned by the Institute for Civil Society.

I brought knowledge of collaboration, the realities of new media possibilities versus distribution, and the vicissitudes of the dot-com period when I returned to MIT to begin the Visualizing Cultures project in 2002. For the next twelve years I worked at the crossroads of academic research, interdisciplinary collaboration, and publication. The proposed interface design of the VNF model is based on the foundation of my practice as a professional new media developer. Its historiographic design is supported by my work with John W. Dower and collaborating scholars at MIT Visualizing Cultures. Its theoretical foundation emerged in work with my advisors at Plymouth University, where Roy Ascott pushed for a model that connected users and objects directly.

²¹⁶ Ellen Sebring, from an interview by Joan Brigham for *Centerbook*, a history of the Center for Advanced Visual Studies, in development, 2008 - present.

Chapter 5: Case Study on the Boxer Uprising (c. 1900)

5.1 Chapter Overview

This chapter presents the database collected for the case study and three types of visual narratives that explore different approaches to the Boxer Uprising visual record. The visual media dictate the grammatical structure of the narratives and these experiments become part of a developing visual lexicon.

The case study looks for the cognitive dynamics of database immersion and patterns; visual association and motifs within a written essay; binary juxtaposition and comparative views; and finally, a narrative progression connected to spatial mapping.

The case study seeks to:

- (1) demonstrate that meaningful history can come from visual sources, and;
- (2) experiment with visual grammar to help conceptualize a digital historiographic model.

Questions on image-driven history include:

- (1) What does the database tell us about the Boxer Uprising?
- (2) In a heuristic approach, where do visual sources lead the historian?
- (3) Does an image-driven approach produce historical innovations?
- (4) Are these image-driven sequences viable historical representations?

Questions on the development of visual narrative and a historiographic model include:

- (1) What forms do visual narratives from diverse source media take?
- (2) What do they reveal about visual grammar?
- (3) What image-to-text grammar emerges in image-driven historiography?
- (4) How do they inform the design of a visual historiographic model?

5.2 Introduction

The Case Study as a Testbed for Visual Narrative

The case study examines a well-illustrated turn-of-the-20th-century conflict known as the Boxer Uprising to hypothesize a digital model for visual historiography. The case study observes and configures visual narrative, based on still images,²¹⁷ using the prodigious and underutilized Boxer-related visual record of 1899-1901. The qualities of visual historiography are revealed in the creation of historically meaningful and communicative visual narratives. The diverse media and national perspectives that collide within the visual record add a new historical view of these events in 1900.

The database I collected over a six year period gives a global perspective on the Boxer Uprising, with images originating in China and the eight foreign powers that mounted an allied invasion. Feeding a global appetite for exotic and sensationalized stories, the burgeoning communications industry covered the violence in a wide array of visual media. Many images were created at the far end of a telegraph wire by professional artists who had never seen China, commissioned by newspaper editors hoping to stoke public passions. The visual record must be carefully scrutinized using research methodologies and the tools of media literacy. An image-driven representation of the Boxer Uprising requires the skills of both scholars and media specialists to create history that is both visual and digital. Once again, the goal here is not to use visual sources to uncover historical perspectives that are then written up, but rather to use visual sources as grammatical elements that communicate history to viewers directly in tandem with a supporting use of texts.

The Story of the Boxer Uprising, c. 1900

The events in Northern China in 1900 commonly called the Boxer Rebellion didn't represent a rebellion in the usual sense as actions against the state, but were peasant risings that came to target foreign incursions into China. Joseph Esherick writes, "The appellation is truly a misnomer, for the Boxers never rebelled against the Manchu rulers of China and their Qing

²¹⁷ Other media include c. 1900 reconstructions of Boxer attacks and Allied naval bombardments reenacted in films by the Thomas Edison company, available on the Library of Congress website: <http://www.loc.gov/item/00694156>. A film of "Bombardment of Taku forts, by the Allied fleets," miniature recreation of the Boxer Rebellion battle that occurred June 17, 1900. From Edison films catalog, Library of Congress, c. 1900.

dynasty....Despite this purely political and opportunist origin of the term, the "Boxer Rebellion" has shown a remarkable ability to survive in texts on Chinese and world history."²¹⁸

The brief Boxer war might have seemed almost a minor incident in a tumultuous millennial year. Devastated by flooding in 1898, the provinces north of Beijing suffered severe drought in 1900. Natural disasters only added to the economic losses and social disruption caused by the influx of Western goods, and expanding foreign “spheres of influence” within China. Anti-foreign fervor erupted in violence agitated by secret societies, one of which gave the episode its name. The “Boxers”—so-called by Westerners observing their martial arts practices and possession rituals derived from folk operas—were a semi-religious sect known as the 义和团 or *Yihétuán* (Sacred Harmony Fist or Militia United in Righteousness) that arose in 1898 along the Shandong-Zhili border. By 1900, Boxer attacks on Christian missionaries and their converts swept across the northern provinces to climax in a 55-day siege of the foreign Legation Quarter in Beijing. Wildly inaccurate news headlines such as “Foreigners Slaughtered...1,500 Were Slain and Consulates Destroyed,”²¹⁹ helped raise the alarm. Eight international powers formed an unprecedented alliance, and launched the China Relief Expedition. The troops came from Japan, Russia, United Kingdom, France, United States, Germany, Austro-Hungary, and Italy (listed from largest to smallest in number).

Initially against the civil unrest, the Empress Dowager later embraced the Boxer momentum in hopes of ending colonial aspirations in China. The foreigners launched a naval attack on Dagu harbor, causing the Qing dynasty to issue an “Imperial Decree of Declaration of War against the Foreign Powers.” After capturing the Dagu forts, and relieving the siege in Tianjin, the Allied forces marched on Beijing in the sweltering August heat. The siege of the legations was lifted on August 14, and fighting moved deeper into the city. The Empress Dowager and her adopted son, the Guangxu Emperor, fled under cover of darkness before the Allies penetrated the Forbidden City to pilfer and take photos sitting on the imperial throne. The foreign powers would occupy Beijing for the next year, looting, and hunting and executing alleged Boxers in the countryside.

²¹⁸ Esherick. *The Origins of the Boxer Uprising*, xiv.

²¹⁹ *The Americus Times-Recorder*, June 23, 1900, Americus, Georgia.

Fatality estimates are that Boxers killed 270 foreign missionaries and 18,722 Chinese Christians. Civilian deaths at the hands of both Boxers and foreign troops count far more. Of the 473 foreign civilians and 409 soldiers who endured the siege in Beijing, 70 died, as well as a larger unknown number of the approximated 2,800 Chinese Christians who also took refuge in the legations. War deaths count about 2,500 international expedition soldiers, a similar number of Qing troops, and an unknown number of Boxers.

Signed on September 7, 1901, the Boxer Protocol peace agreement crippled China with an indemnity of 450 million taels of silver (about 330 million U.S. dollars at the time) in war reparations payable to the eight nations over the next 39 years. By 1927, most of the payments had been revoked or channeled back into education and other programs in China.

Ten Chinese leaders who supported the war were executed, and formal apologies to foreign governments were required. China was further partitioned. Russia occupied Manchuria while Germany took Tianjin. All parties realized that Qing rule was necessary and returned the Imperial family to power, but a mortal blow had been dealt to the more than 2000 year old imperial system, which would fall in 1911.

Historicizing the Boxer Uprising

While the visual record of the Boxer Uprising conveys a complex history, most scholarship on the topic has been text based, drawing on document sources and appearing in written publications. Many histories have been written as well as “hundreds of personal memoirs and after-event ‘diaries’”²²⁰ mostly by socially elite Westerners. Books by historians have been in continuous production from as early as 1901 to the present day.

Historiographically, the studies reveal the kinds of filters that historians cannot escape. The work of historians reflect the biases of their own eras based on availability of sources, and cultural, political mores. The story turns depending on who tells it and when it is told. Political scientist Lanxin Xiang describes the variety of Boxer Rebellion histories:

Anglo-American studies have tended to belittle the other nations and nationalities, while studies from other countries have viewed the Americans and the British with equal suspicion and disrespect. Those who survived the siege tended to blame each other for the tragedy. The missionaries blamed the diplomats for their arrogance and the diplomats accused the missionaries of causing all the trouble in the first place. The journalists blamed both groups. The old-fashioned cultural imperialists viewed the trouble through the eyes of

²²⁰ Lanxin Xiang, *Origins of the Boxer War: A Multinational Study* (London: Routledge Courzon, 2003), viii.

the Yellow Peril. China scholars, the orientalists of Edward Said's school, saw the trouble as solely embedded in the Yellow Peril sentiment itself.²²¹

Xiang's 2003 book, *Origins of the Boxer War: A Multinational Study*, draws on sources from all of the participating countries to examine the war fought between the Chinese (Qing government and Boxers) and the Eight-Nation Alliance. He claims that popular historians and academics diverge in their treatments of the Boxers, either casting the sect as "inscrutable" to support the theme of civilization triumphing over barbarism or as misunderstood and demonized by the West:

Popular historians have taken a delight in mythologizing the Chinese side as unfathomable and inscrutable, hence a perfect setting for the thesis of the civilized man against the barbarian. Academic historians have been fascinated by the mysterious business of the beliefs and behavior of the Boxers.²²²

Just as Xiang's "Multinational Study" compares textual sources from different countries to expand the historical lens, digitization of the visual record similarly unites the data in a single field. Sorting and resorting the imagery deepens our understanding for, as we know from optical illusions, perception of an image shifts based on its proximity to other images.

Comparisons include photographs snapped at the same moment; images of an event depicted by several observers; or media transformations, from photograph to drawing to magazine illustration to advertisement to postcard. Images preserve moments in time and place as events unfold. Combined in the visual narrative field, these "micro" views converge into a broad "macro" overview.

Our own recent millennial passage echoes 1900 in rapid technological innovation. The burst of visual reporting lets us revisit these century-old vistas and in the process interact with an emerging historiographic form.

Minimally, the optical approach adds sensory knowledge to the roster of written Boxer histories. The themes here emerge from observation of patterns in the digitized visual record. We must also look for what isn't there, what people and events are not shown, and what these omissions tell us.

²²¹ Ibid., vii.

²²² Ibid., ix.

Building an Image Database of the Boxer Uprising “Media Storm”

My Boxer Uprising image database offers a previously unseen view of this extensively written-about event. The extensive visual record had never before been assembled digitally. Starting in 2009, I collected, scanned, and downloaded nearly 2500 objects²²³, just the tip of the iceberg with digitization ongoing in small and large archives around the world. Eyewitnesses, military regiments, religious groups, and the mass media left many types of documentation, including diaries, memorials, missionary publications, political commentary, journalism, advertising, entertainment, and propaganda. The types of media generated include photographs from within the siege; stereographic tours through China; army photographs, drawings, and maps; illustrated news; political cartoons; Chinese *nianhua* (woodblock prints); missionary photographs and memorials to slain comrades; and advertisements such as trade cards packaged with chocolates. Likewise, physical artifacts such as thousands of military photographs, grow in value as digital methodologies reinvent the ways they can be compiled, displayed, and analyzed.

An explosion of types of media and communications took place in 1900. Cheaper and faster methods of reproduction vastly increased the number of illustrated newspapers and magazines, with 13 journals competing each week in London alone.²²⁴ The events in China were covered globally in these and other forms of visual print media, including postcards, advertisements, photographs, and stereographs. In the upcoming Visualizing Cultures units, Peter Perdue writes about the widespread fascination with the Boxer-related events:

Since China was not a colony controlled by a single power, but a “semi-colony” in which all the rival imperial powers held spheres of influence, all of the eight powers claimed responsibility for the suppression of the Boxers....The great advance of transportation and media networks, which allowed journalists and photographers immediate access to the battle, and easy access to Beijing, meant that images of the Boxer expedition could be transmitted around the world instantaneously.²²⁵

To organize the Boxer Uprising database I used Media Pro, a software designed for photographers to catalog their large image output. I created categories and keywords to sort and

²²³ Most of the current count of 2489 images, many collected with Professor Peter C. Perdue, Professor of Chinese History at Yale University, are available at http://ellensebringarchive.com/boxer/menu_es/. Accessed October 2015.

²²⁴ Clement K. Shorter, “Illustrated Journalism: its Past and its Future,” from *Popular Print Media, 1820-1900*, volume 3, Andrew King and John Plunkett, editors, (London: Routledge 2004), 567.

²²⁵ Peter C. Perdue, “Visualizing the Boxer Uprising—1,” units in development in collaboration with Ellen Sebring, Visualizing Cultures, MIT, 2015.

view subsets within the sources. Most scholars lack the tools for this critical work, unsupported in basic software applications and training for working with visual data sets.

The illustrations below show the Boxer database categories. The numbers next to the categories indicate the number of images in each subset. I created these categories in order to sort the visuals by a wide range of factors, including sources, makers, subjects, media types, genres, and themes. Visual narrative thinking began with viewing the sources in a variety of relationships to other sources. In this way, patterns emerged. By pondering the database—filing and researching images and their variants—the historical fabric came into view. The process mirrored the way historians work with document sources, with prolonged and detailed inquiry into sources, their origins and place in the larger field of data.

Category	Count	Keyword	Count	Keyword	Count
1898	8	&	1	maker: Ricalton	41
1899	8	5/4	1	maker: Sydney Adamson	9
1900	12	1690	1	maker: Underwood	7
1901	1	15618	1	male	1
Book Scans	65	93760	1	medium: album	22
Categories a-z set	256	All Web 2015	7	medium: books	1
Chandless Album	10	Asia	1	medium: mutoscope	1
David Hogge	114	book scans: all	63	medium: photo	3
Dept of Defense	7	book scans: Ament	9	medium: postcard	42
Flickr	16	book scans: Bickers	5	medium: stereo	156
Harvard Online	32	book scans: Bodin	3	medium: stereo text	3
Harvard Scans	758	book scans: Cohen	20	medium: stereoscope	13
Illustrated News	847	book scans: Daggett	2	medium: woodblock print	19
Kings Academy	8	book scans: Elliott	38	origin: Austria	2
Landor	170	book scans: Hevia	2	origin: China	33
Library of Congress	20	book scans: Sharf	1	origin: France	86
LPJ	16	book scans: Smith	2	origin: Germany	4
MFA	10	BOX	1	origin: Italy	2
Miscellaneous	11	Boxer	1	origin: Japan	49
National Army Museum UK	6	carrying	1	origin: US	3
NY Public Library	11	Conflict	1	person: Chaffee	8
Siege	222	dirty	1	person: Conger	6
Stereographs	163	Execution	13	person: Emperor	22
US National Archives	25	genre: 1st person account	219	person: Empress Dowager	78
VCEA	104	genre: advertising	37	person: Gaselee	1
Yale	34	genre: cartoon	104	person: Landor	1
Anne S.K. Brown Military Collection	8	genre: cover page	7	person: Li Hung Chang	39
Cause of Riots in the Yangtse Valley	85	genre: map	86	person: MacDonald	2
CRYV Chinese Only	35	genre: military sketch	1	person: McKinley	5
National Archives UK	22	ill news: Am Review of Reviews	24	person: Morrison	1
Punch 1900	129	ill news: Black and White	1	person: portraits	17
ALL	2489	ill news: British Rev of Reviews	70	person: Prince Ching	5
Map	86	ill news: Graphic	144	person: Prince Chun	8
Atrocity	13	ill news: Harpers	137	person: Queen Victoria	1
Chocolat-Louit	37	ill news: ILN	140	person: Ricalton	21
Punch	26	ill news: Judge	34	person: Robert Hart	1
Underwood	7	ill news: Le Petit Parisien	2	person: Waldersee	13
Postcard	42	ill news: Leslie's Weekly	169	person: Yuan Shikai	1
		ill news: Life	48	place: Legations	14
		ill news: LPJ	46	place: Ming Tombs	6
		ill news: Puck	33	place: Pao Ting Fu	9
		ill news: Punch	26	place: Peking	18
		ill news: Simplicissimus	3	place: Shanghai	5
		ill news: Sphere	1	place: street scene	3
		J85119601	1	place: Taku	19
		laughing	2	place: Tientsin	51
		maker: Chocolat-Louit	15	place: PUNCH China	12
		maker: Killie	2	Rebellion	1
		maker: Landor	170	rifle	1
		maker: O'Keefe	25	siege: bell tower	2
		maker: Raphael Kirchner	6	siege: defense	44
				siege: Giles	164

Figure 104. Boxer Uprising database subsets and keywords, Media Pro page 1. Screen shots from "Media Pro" software, show the sources, and keywords I created for the Boxer Uprising database of 2489 images collected for this case study. Sebring, 2015.

[bx_keywords01]

siege: Killie	57	subject: homefront	3	theme: heroes & martyrs	1
siege: Lander	3	subject: hospital	2	theme: history	2
siege: relief	28	subject: Ketteler	2	theme: humiliation	1
siege: students	11	subject: loot	29	theme: imperialism	25
soldiers: 1st China Regiment	11	subject: march	50	theme: Japan & West	16
soldiers: Allies	22	subject: market	3	theme: mislabeled & mis-reported	13
soldiers: Australia	2	subject: massacre	10	theme: missionaries & religion	14
soldiers: Austria	4	subject: medals	1	theme: open door & expansionism	41
soldiers: Britain	10	subject: messengers	3	theme: parallax	3
soldiers: China	23	subject: military review	1	theme: Philippines	27
soldiers: Cossacks	3	subject: missionary	62	theme: Qing	4
soldiers: France	9	subject: Mongolia	1	theme: queue	7
soldiers: Germany	19	subject: news & artists	13	theme: race & class	17
soldiers: India	33	subject: observatory	1	theme: recycled media	29
soldiers: Italy	6	subject: occupation	43	theme: Russia & Manchuria	29
soldiers: Japan	9	subject: parade	15	theme: US politics	37
soldiers: Kansu Braves	2	subject: Peking massacre	3	theme: US-Britain	12
soldiers: Prussian	1	subject: pirates	22	theme: war & peace	6
soldiers: Russia	7	subject: prisoners	9	theme: white man's burden	4
soldiers: US	36	subject: Proclamations	5	theme: yellow peril	22
subject: 1900 expo	19	subject: protocol & reparations	20	War	1
subject: arr & dep	21	subject: punishments	15	weapon	1
subject: assassination	2	subject: punitive expedition	2		
subject: atrocity	39	subject: refugees	2		
subject: battle	64	subject: rr	34		
subject: Beitang Cathedral	3	subject: Seymour exp	17		
subject: bell tower		subject: ships	29		
subject: Boer War	19	subject: Sino-Japanese War	2		
subject: Boxers	62	subject: tour	7		
subject: Buddhist	6	subject: tourism	2		
subject: camels	2	subject: trials	6		
subject: cameras & photography	12	subject: truce	1		
subject: carts	2	subject: Tsungli Yamen	4		
subject: China concessions	4	subject: uniforms	14		
subject: China Crisis	27	subject: wall	21		
subject: Chinese Christians	23	subject: weapons	19		
subject: Chinese US	5	subject: women	18		
subject: coolie	3	subject: Yale	3		
subject: corpses	8	theme: Allies	32		
subject: death Victoria	3	theme: animals	39		
subject: decapitation	9	theme: anti-war	18		
subject: destruction	41	theme: Boxer analogies	7		
subject: diplomats	21	theme: China & West	8		
subject: execution	28	theme: China asleep	10		
subject: fire	20	theme: China carving	13		
subject: flags	14	theme: China exotic	66		
subject: food & famine	14	theme: China problem	37		
subject: Forbidden City	30	theme: civilization & barbarians	68		
subject: gates	21	theme: colonialism	19		
subject: graves & memorials	22	theme: comradie	4		
subject: group portraits	6	theme: Gt Game	43		
subject: Hanlin Yuan	17	theme: heads of state	4		

Figure 105. Boxer Uprising database subsets and keywords, Media Pro page 2.

Sebring, 2015.

[bx_keywords02]

About the Visual Narratives

The visual journey through the Boxer Uprising follows a fluid and unstable mosaic of narratives that overlay the raw database. The sources converge into a kaleidoscopic view that, with each turn, resorts the themes, creators, and media. The digital model retains the media attributes of the original images, thus introducing an irregular interplay of sources that enriches and complicates the narrative texture.

Limiting the set of visual narratives to those that can reasonably be built for the purposes of this case study misrepresents how extensively these images inform about the events of 1900. Visual representations take the same lengthy development time as historical books, and here we can only glimpse what this historiography might become in a full realization.

The format of a written dissertation limits the presentation of visual narratives in their native digital format. They can be described but not viewed in the text. Reading about visual narratives is different from viewing them and attempts to explain them underscore the problems that arise when word and image meet. Interdisciplinary thinking bridges the gap, but a historian's knowledge of the Boxer Uprising may be far from the expertise of visual designers and vice versa. The case study plunges head-on into the gray area where both content and design matter equally to authors at either end of the theory-practice spectrum.

Complete List of the Visual Narratives

The narrative pathways I developed based on observation of the database appear in the list below. In the VNF model, the narratives would interweave to form an image-based historical representation. While I built many partially or in full, only three of the visual narratives are discussed in this chapter, due in part to the difficulty of translating them to a written format, but also because the research focuses on the qualities of visual narrative observed in these experiments. While it would be fascinating to create the full set of narratives as a digital historiography, the purpose of this research is to investigate visual grammar and history.

I grouped the visual narratives suggested by the database into six themes:

- (1) On the Ground in Northern China
 - (a) March: Tientsin to Peking, Allied Troops, August 4-14, 1900*
 - (b) Relieving the Siege of Peking, August 14, 1900
 - (c) The Railroad
 - (d) Destruction

- (2) Visual Evidence of the Participants
 - (a) Swords and Magic vs. Cameras and Guns
 - (b) Soldiers and Uniforms
 - (c) Religious Clash: Missionaries and Chinese Christians
 - (d) Siege: Contrasting Views of 55 Days in the Peking Legations*

- (3) Civilization as a Turn-of-the-Century Construct
 - (a) Civilization and Barbarism*
 - (b) Looting
 - (c) Parades in Peking
 - (d) Penetrating the Forbidden City
 - (e) Occupation

- (4) Unexpected Emphases in the Visual Record
 - (a) Russians in Manchuria
 - (b) British Colonial Indian Forces

- (5) Untangling the Visual Record
 - (a) The Punishments Trope
 - (b) Stereographic Worlds

- (6) Non-Traditional Narratives
 - (a) Walls: A Spatial Narrative
 - (b) Time is Now
 - (c) A Kaleidoscope of Medial Translations
 - (d) Looking Through Time

*narratives presented in this chapter.

A general note on the transliteration of Chinese names in the narratives, period names have been left intact when taken from historical media, otherwise contemporary names (Pinyin) have been used.²²⁶

²²⁶ Note on Transliteration of Chinese Names: “Transliteration of Chinese names to English is a complex process. Two systems are currently in use, the most widespread of which is the Wade–Giles system....The other system of transliteration is the Pinyin system, which came into general use in 1979.” from “The Boxer Rebellion in China 1898-1900,” Key Features of Modern History, Case Study, *Clio Journal* online. <http://cliojournal.wikispaces.com/file/view/Boxer%20Rebellion%20Case%20Study.pdf> Accessed October 2015.

The visual narratives examined in detail are:

- (1) “Civilization & Barbarism,” analysis with examples of the initial build in Quark Express and final version as an image-driven essay published on MIT Visualizing Cultures; this visual narrative explores the theme of transnational views of imperial wars at the turn of the 20th century, and looks at how image-driven narrative works within a written essay;
- (2) “Siege: Contrasting Views of 55 Days in the Peking Legations,” comparing the photographs of two men trapped during the siege and two treatments of the visual record; this visual narrative explores the parallax between two close but different views of the same event, and the way that juxtaposition restores the triangulation between photographer, subject, and viewer;
- (3) “March: Tientsin to Peking, Allied Troops, August 4-14, 1900,” a recap of the interactive animation built in Keynote; this visual narrative reconnects images that are usually classified by country and genre with the physical progress of the march on Beijing as conveyed in historical maps that illustrated the military campaign, and brings the history close in on the visual documentation of armies.

The visual narratives discussed in shorter form and summary are:

- (1) “Relieving the Siege of Peking, August 14, 1900,” comparing visualizations of the moment when the Allied troops arrived to break the siege; this visual narrative examines a seminal moment and the multiple ways it is celebrated in visual representations;
- (2) “Swag, Bootle, Loot,” visual reporting on the looting during the expeditionary interventions and occupation; this visual narrative collects the ample visual documentation and commentary on the topic of looting, demonstrating who the looters were, its widespread practice, and the range of perpetrators and victims from peasants to imperial monarchs;
- (3) Unexpected Emphases in the Visual Record will discuss two visual pathways that reveal sidebars to the usual Boxer histories: Russians in Manchuria and the British Colonial Indian Forces; this visual narrative illustrates the global image of events at the time with themes somewhat marginalized in many written histories;
- (4) “Stereographic Worlds,” making sense of armchair travel as it documented China and the Boxers; this visual narrative collates the large numbers of stereographs with the stereographic tour created by the photographer to demonstrate his individual viewpoint, to contextualize the impression these images make as they circulate freely on their own;
- (5) Non-Traditional Narratives will briefly discuss Walls: A spatial narrative, Time is Now, and A Kaleidoscope of Medial Translations; these visual narratives show how history itself, as seen through images in the digital medium, can be spatial and rooted in sensory, uninterpreted experiences.

5.3 Visual Narrative 1: “Civilization & Barbarism”

Objectives

This section considers visual narrative in an image-driven essay format, and looks at:

- (1) how visual narrative parallels the text as a content stream within an essay;
- (2) the difficulties of non-traditional formats in academic publishing;
- (3) how design changes content, both for author and reader;
- (4) how images within essays make scholarly arguments and push research in new directions.

This visual narrative evolved through three formats: initially, a Keynote presentation, then, a set of visual narratives, and finally, an image-driven essay titled, “Civilization & Barbarism: Cartoon Commentary & the ‘White Man’s Burden’ (1898-1902),” published on Visualizing Cultures in the fall of 2014.²²⁷ The essay was reformatted and published in the *Asia-Pacific Journal: Japan Focus* in 2015.²²⁸

The challenge of turning a visual presentation into an academic paper highlights the real world problems of image-driven scholarship in digital publications still heavily influenced by the methodologies of written text and print. Visual narratives that communicate ideas non-verbally face difficulties with intellectual property, doubts over pictures as scholarship, and the entrenchment of text as the dominant form of intellectual argument. Yet, such experiments pry us away from outmoded approaches that needlessly limit the use of images in the digital terrain.

Stories vary by how they are told. The graphical layout changes the narrative, whether horizontal, as with visual narratives, or vertical, as with essays. Design also determines how a document will fit within established publishing networks and whether the work is perceived as research or pedagogy. Typically used for conference talks and teaching, visual presentations aren’t considered historical representations.

In my interview for this research with historian Lillian Li (Sara Lawrence Lightfoot Professor Emerita of History, Swarthmore College) who created a unit for Visualizing Cultures on the Imperial Summer Palace, *Yuanmingyuan*, voiced the problems scholars have with visual,

²²⁷ Ellen Sebring, “Civilization & Barbarism: Cartoon Commentary & the ‘White Man’s Burden’ (1898-1902),” (Cambridge, MA: MIT Visualizing Cultures, November, 2014). http://ocw.mit.edu/ans7870/21f/21f.027/civilization_and_barbarism/index.html Accessed October 2015.

²²⁸ Sebring, “Civilization & Barbarism” *The Asia-Pacific Journal: Japan Focus*, Vol. 13, Issue. 27, No. 2, July 06, 2015. <http://www.japanfocus.org/-Ellen-Sebring/4339/article.html> Accessed October 2015.

digital history. Li perceived “image-driven scholarship” as “image-driven pedagogy.” Despite her experience with *Visualizing Cultures*, she still identified scholarly work with publication “as an article or a book.”

Since working with MIT-VC I have often...wondered what an example of original image-driven scholarship would be—i.e. scholarly research driven by images. All the wonderful units in VC are certainly scholarly, but they seem to be examples of wonderful and powerful “Image-driven pedagogy.” Perhaps I am interpreting “scholarship” too narrowly as the kind of original and path-breaking work that gets recognition as a publication, either as an article or a book.²²⁹

Scholars like Li understand the use of images for teaching. But without scalable tools for creating and sharing visual essays and digital experiences, I believe scholars will have difficulty bending their practice to imagine what visual historiographies might be. *Visualizing Cultures*, for example, presents one among many possible approaches. To date, a universal tool has not emerged in the way print has to define and shape the field. Visual history might elude digital publications, and may gravitate towards museums where exhibit guidelines support visual display. While Facebook, for example, at this time dominates and unifies (to a large extent) online discussion, visual narrative as a form is far from achieving the simplicity and ubiquity needed for widespread adoption. Yet the following visual narratives, I believe, show that digital images offer many new avenues of research, understanding, and dissemination, making the contemplation of visual narrative forms worthwhile.

Story

The words “civilization” and its nemesis, “barbarism,” emblazon cartoons, advertisements, and posters in the Boxer Uprising visual record. Visual motifs feature white, Western males bringing “Civilization” often personified as classical goddesses, to non-white, non-Christian “barbarians.” Enlightenment appears literally as a celestial light shining down on primitive heathen.

Rudyard Kipling’s famous 1899 poem, “The White Man’s Burden,” called on the West to civilize “Your new-caught, sullen peoples, Half-devil and half-child.”²³⁰ Kipling—an Englishman born in Bombay who married an American and lived in Vermont from 1892 to 1896—intended the poem to counter isolationist attitudes in the United States, especially to build

²²⁹ Lillian M. Li, from Interview by Ellen Sebring, October 7, 2014.

²³⁰ Rudyard Kipling, “The White Man’s Burden.” *McClure’s Magazine*, (New York: The S. S. McClure Co., February, 1899). <http://legacy.fordham.edu/halsall/mod/kipling.asp> Accessed October 2015.

support for the nation's first overseas colonial war in the Philippines. The U.S. was late in joining the "great game" of international powers competing for influence in faraway continents. Military power, advanced technology, and missionary zeal fueled the civilizing mission while also promoting political and business interests overseas. The brutality of expansionist invasions at the turn of the century raises the question: who is the barbarian?

Media

Expansionism was passionately debated in political cartoons originating in the U.S. and Europe, particularly France and Germany. The word "cartoon" hardly does justice to this ebullient genre at its creative peak in 1900. The sophisticated graphics were reproduced in fine detail and vibrant color in large format illustrated magazines.

Cartoons that argued for and against imperialism offer insights into what the public knew and thought about the wars their countries waged in foreign lands. The historical theme of civilization and barbarism emerged when juxtaposing a large number of graphics that touched on the topic in the database. The theme still resonates today as debates over might and right and world power politics continue to draw on this deep-rooted rhetoric.²³¹

Technical Information

Version 1: I first presented the topic at the 2013 "Visualizing Asia in the Modern World" conference at Yale University, using Apple's Keynote presentation software to compare and zoom in on cartoons while giving a running commentary.

Version 2: Asked to create a unit for MIT Visualizing Cultures, I built a series of image-to-image visual narratives, formatted like a horizontal scroll. Faced with publishing, however, I realized that they would be perceived by academics as no more than a reference, rather than a scholarly work, indeed, a readymade resource for someone else's scholarly essay. Visual arguments in such non-traditional formats fail as academic publications in crucial ways, such as not being quotable.

Version 3: I then created a third and final version, rewriting the content in the essay format used by Visualizing Cultures, published online with about a 50-50 image-text ratio.

[Essay: http://ocw.mit.edu/ans7870/21f/21f.027/civilization_and_barbarism/index.html]

²³¹ See Adam Hochschild, "Colonial Folly, European Suicide." *The New York Times*, July 29, 2014.

Converting my visual narratives showed that, as expected, the essay format amplifies the author’s voice and control through textual argument. In line with the consensus that images alone can’t make scholarly arguments, additional research was needed to describe in writing the historical events evoked by the images.

However, the images fundamentally shaped the content by linking three wars not typically presented together. Further, they conveyed these imperial wars and the civilizing mission through the passionate, prejudiced, and personal testimony of primary sources. Finally, image sequences presented a parallel narrative equal to the text throughout the essay.

Sorting Digitally and on Paper

The first part of the research process involved sorting the digital data sets using keywords in the photo management software, Media Pro, pictured here, creating categories for publishers and keywords for subjects. Multiple versions of sources can be compared, and topics and patterns observed.

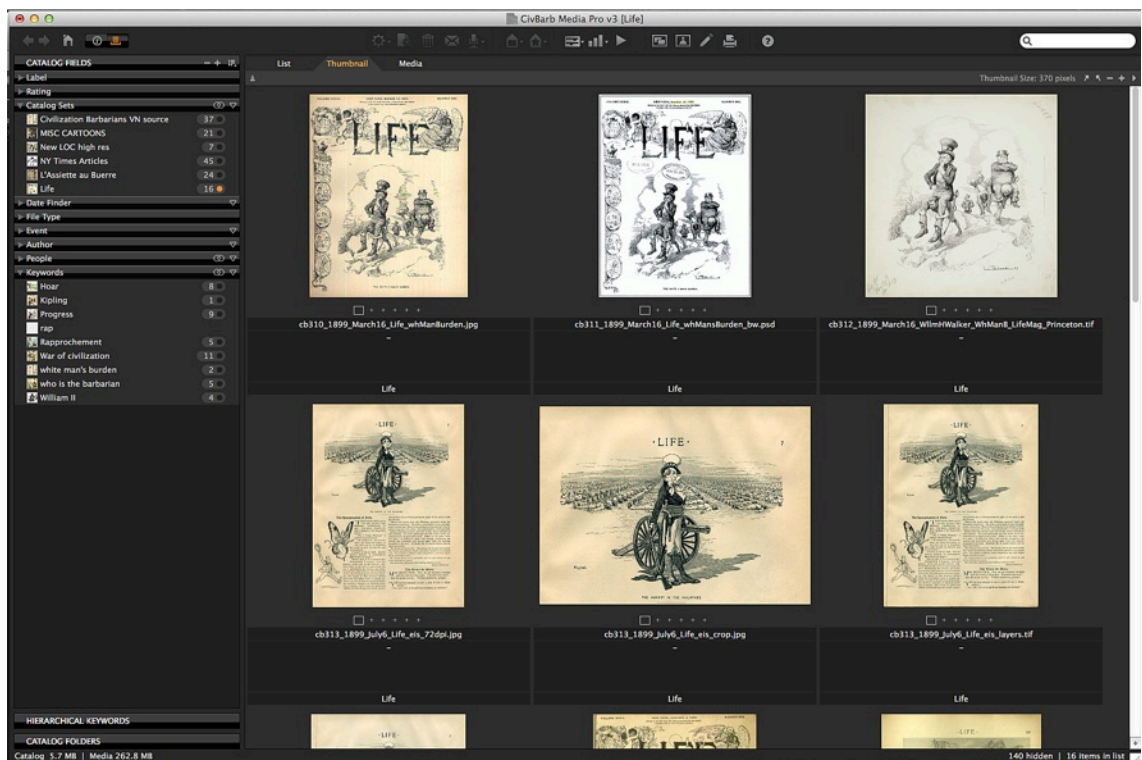


Figure 106. Sorting Images in Media Pro software.

Workflow for “Civilization & Barbarism” includes sorting in MediaPro software. Keywords and publication sources are created at the left. Here, all images and versions of Life magazine are shown in one section. Source: author.

[CB_MediaPro_sorting_Life]

Next, the thumbnails were printed, cut out, and sorted using tape and hand-written annotations as shown in the image below.



Figure 107. Sorting on paper:

An example of thumbnails printed, cut out, taped, and annotated by hand to develop the visual narrative sequences for the “Civilization & Barbarism” unit. Here, the visual narrative themes are written in pen: “White Man’s Burden,” “Who is the Barbarian?,” “Progress of Civilization,” and “War of Civilization.”

Ellen Sebring, Visualizing Cultures, 2014.

[cb100714_thumbnail_layout]

The ease of moving the physical pictures around on a table helps the author play with relationships between images. The physical workspace restores the tactile qualities of images. Touch responds intuitively to visual cues in concert with the eye, bypassing rational decision-making. Freed from the small size of computer screens, images can be spread out over a large surface and easily shifted between groups and stacks.

The element of play supports visual logic, responding to the way images talk to our physiology through line, light, shadow, color, and graphical symbolism. Digital database softwares may facilitate the same actions, but over the years of Visualizing Cultures productions, working with printouts added ease, interplay when collaborating in a group, and allowed for a simple way to add embodied gestures to the digital design process. Studies of

reading ebooks versus physical books show similar mind-body links in knowledge and perception.²³²

When I interviewed art historian James T. Ulak, he discussed the unique hand-mind connection documented in the book, *The Hand: How Its Use Shapes the Brain, Language, and Human Culture*, by Frank R. Wilson. Ulak describes the “articulating movement”:

There is a documentable phenomenon of a hand-mind connection. If I'm sketching something on a piece of paper, the nerves in the tips of your fingers connect to the brain in a unique way. But increasingly, there is a disjunct, for example, in architecture between people who use CAD and people who do drawings in the feel of doing things. There's a book called *The Hand* that describes this phenomenon. The articulating movement, whether it's to do a design or a book, feeds my brain in a different way than using a computer program. There is a crisis in education now in Japan where kids are losing the skills of doing calligraphy. They are losing the feel of the flow sense patterns in the brain. We are being changed and is it for the better?²³³

Horizontal Scrolls

Following the paper sorting, the digital visual narratives were authored in Quark Express, a layout software. I wrote the introductions, captions, and transitional texts and created the image details and juxtapositions. The first version of the visual narrative, “Who is the Barbarian,” appears below. The horizontal scroll-like sequence barely fits on an 8-1/2” x 11” page and shows the incompatibility of digital, image-driven composition with this standard printed format.



Figure 108. Early visual narrative layout for “Civilization & Barbarism.”
”Who is the Barbarian?” a visual narrative for “Civilization & Barbarism” was turned into an essay chapter for the published unit on Visualizing Cultures. Image: Sebring.
[cb_vn02-1_full_pt1and2]

²³² Rachel Grate, “Science Has Great News for People Who Read Actual Books.” *Arts.Mic*, Sept. 22, 2014. <http://mic.com/articles/99408/science-has-great-news-for-people-who-read-actual-books> Accessed October 2015.

²³³ James T. Ulak, from Interview by Ellen Sebring, July 15, 2014, at the Freer-Sackler Museum, Smithsonian Institution, Washington, DC. See appendix for full text.

The layout recalls hand-painted Japanese scrolls in which a loose narrative literally unfolds in pictures with handwritten annotations. The Visualizing Cultures unit by John W. Dower, “Black Ships & Samurai: Commodore Perry and the Opening of Japan (1853-1854),” features several scrolls of this type and the site shows how these historical works can be digitally reconstructed for enhanced viewing.²³⁴ The 50-foot long “Black Ship Scroll” circulated in 1854 in multiple versions that highlighted the human, often humorous, interactions and widespread curiosity often lost in discussions of the historical implications of the momentous encounter. The hand-painted scroll depicts a cross-section of people from the Perry Expedition and reveals a great curiosity about the Westerners visiting their isolated land. The images show people-to-people interactions in an example of history “from the bottom up.” Normally, sections of the scroll must be individually unwrapped and spread out on a table. The website digitally connects the scenes from the scroll.

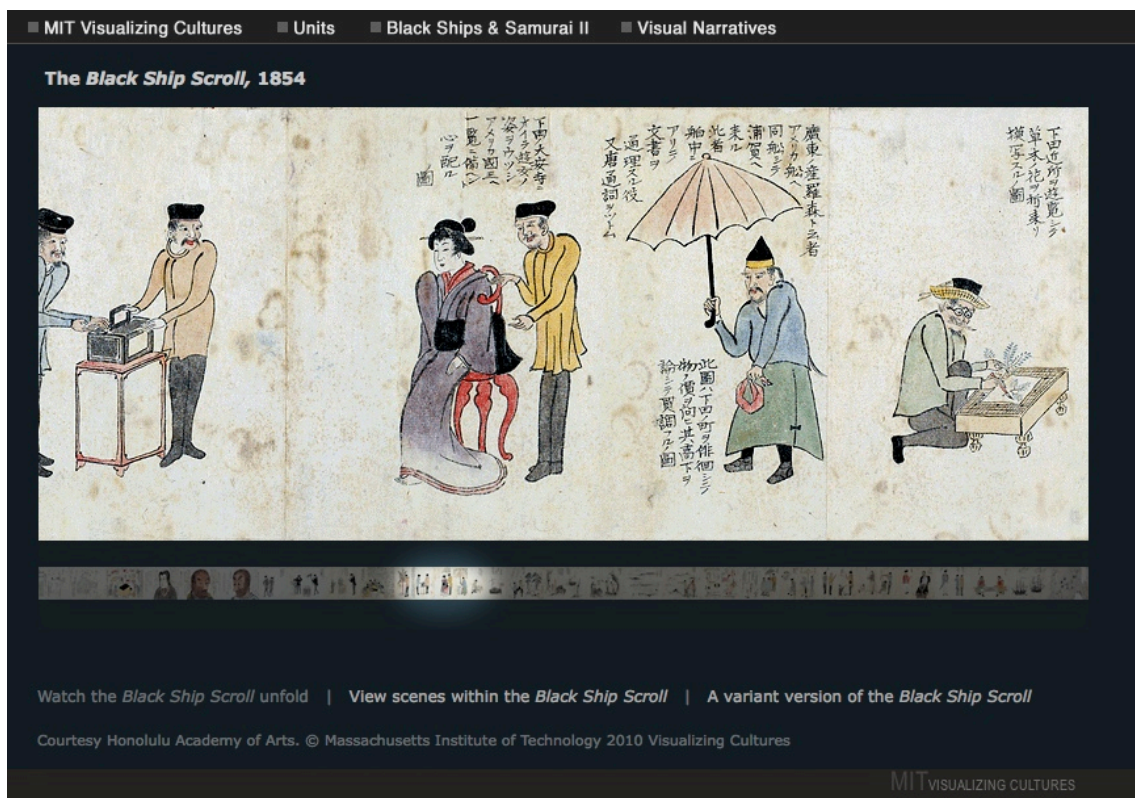


Figure 109. Digitally reassembled 1854 Black Ship Scroll. The digitally reassembled scroll is animated and can be seen in its entirety, from the unit “Black Ships & Samurai,” Visualizing Cultures, 2008. [bss_BlackShipScroll_screenshot_vc] [link]

²³⁴ “Black Ships & Samurai 2: The Visual Narratives.” MIT Visualizing Cultures, 2008. [link]

An article on the British Museum's recent acquisition of a version of the scroll quotes curator Tim Clark: "I think you have to imagine this scroll being unrolled for private delectation perhaps after a very good dinner." Then as now, picture-based narratives are considered entertainment. Nevertheless, this type of history is gaining legitimacy as a valid part of cultural memory studies.

Given Japan's rapid adoption of Western technology following the Perry Expedition, the inclusion of detailed measurements for uniforms, guns, trains, telegraph, and so forth indicate the drawings had more than entertainment value.

A photograph of the "Black Ships Scroll," a 50-foot scroll depicting the Perry Expedition of 1853-1854, appeared in an article on the British Museum's acquisition of the scroll.²³⁵ Note on the left, a printout of the MIT Visualizing Cultures unit, "Black Ships & Samurai," suggests that John Dower's work on the Perry Expedition is used by researchers and, as we have long suspected, people often use print versions. Visualizing Cultures was designed to make printouts possible in order to make the research more accessible.



Figure 110. Photograph of the Black Ship Scroll with VC unit printout. "British Museum snaps up historic scroll depicting birth of modern Japan," by Maev Kennedy, The Guardian, April 2, 2013. Photograph: Graeme Robertson. [bss_2013_April2_British-Museum] [[link](#)]

²³⁵ Maev Kennedy, "British Museum snaps up historic scroll depicting birth of modern Japan," (London: *The Guardian*, April 2, 2013). <http://www.theguardian.com/uk/2013/apr/02/british-museum-japanese-scroll> Accessed October 2015.

The physical unpacking and viewing of scrolls confines their circulation to museums and archives, but as digital designs, picture-based narratives can circulate widely. Yet content in this format has no legacy as serious scholarship. Written texts offer linear arguments clearly controlled by the author. Readers don't have to wonder what the author intends as they might when viewing pictorial scenes.

Visual Narrative in an Image-Driven Essay

This section discusses the ways the antipodes of image and text cross-pollinate in a hybrid image-driven essay that enables images to retain their power within a text-based format. Turning the "Civilization & Barbarism" visual narratives into an essay reinstated strategies used by authors in linear forms. An essay gave the unit a narrative arc. Previously self-contained sequences became part of a framework with beginning, middle, and end. Unlike with the visual narrative menu, readers of the essay were expected to begin with Chapter 1 and proceed through four chapters to the end.

Visual and linear thinking may be in many ways antithetical. For example, the unit originally began with the image that inspired it, a French cartoon spelling out "Barbarie — Civilisation." The opening image mirrored the way many films start with a scene that thrusts the audience into the action without introduction, immersing them in the tone, setting, ambiance, protagonists, and critical oppositions of the plot. John Dower, as editor for *Visualizing Cultures*, suggested that the cartoon instead be used to frame the unit's key question, "Who is the Barbarian?" and be placed in the essay's final chapter. The earlier chapters methodically built the scholarly argument, shifting towards a text-based strategy more like a book.

When writing in the essay format, authors may not realize that image-to-image narrative is simultaneously active. They can compose for visual attributes, some of which are described here.

Color

The chapter "Who is the Barbarian" begins in black-and-white with graphics depicting raised swords, pointed guns, arrests, and detention. The signature graphic, "Barbarie— Civilisation," poses the central question of the essay.



Figure 111. Cartoon inspiration for the unit, “Civilization & Barbarism.”

“Barbarie — Civilisation”

Le Cri de Paris, July 10, 1899, Paris

Artist: René Georges Hermann-Paul.

From the chapter “Who is the Barbarian” (Sebring, 2014)

[cb54-002_1899_July10]

Red gradually seeps into the imagery in the color of flags, violent bloodshed, and, finally, washes over the scene as blood gushes from a cornucopia with the caption: “The Europeans pour the blessings of its culture over the globe.” As editor, Dower suggested removing an equally visceral image from the same German magazine, *Simplicissimus*, a green-hued image titled, “Wie die Alten sungen.” Color thus became a narrative element in the essay, a device well-known to cartoonists who use the device to cue emotional responses in viewers. The green background in the graphic evoked a pastoral summer setting, adding to the shock when viewers looked closely at the horrific war crimes reenacted in the children’s games. The rarely seen image drew attention to a newly digitized database that reproduces the full archive of the magazine’s issues in high resolution. However useful, the predominantly green image distracted from the gradual saturation by the color red as the chapter unfolded. In pointing this out, Dower extended the editor's role beyond the text to the visual narrative.

show no mercy. Heine provided *Simplicissimus* with what has become a justly famous image: an armed knight, representing the West, pours a torrent of blood over Asia, while his sword drips blood on Africa. Titled "Dream of the Empress of China," the dream is an obvious nightmare, as the sardonic sub-caption makes clear. "Europeans," this reads, "Pour the Blessings of Their Culture over the Globe."

Figure 112. The color red in the essay.
 "Der Traum der Kaiserin von China" (*Dream of the Empress of China*) *Simplicissimus*, August 3, 1900, Germany. Artist: Thomas Theodor Heine. Source: Weimar Classics Foundation "Der Europäer giesst die Segnungen seiner Kultur ueber den Erdball aus." (*The Europeans pour the blessings of its culture over the globe.*) From the chapter "Who is the Barbarian." (Sebring, 2014)
 [cb80-010ss]



"Der Traum der Kaiserin von China" (*The Dream of the Empress of China*) *Simplicissimus*, July 3, 1900
 Artist: Thomas Theodor Heine
 Source: The Weimar Classics Foundation
 [cb80-010_Simplicissimus_July3_1900]

"Der Europäer giesst die Segnungen seiner Kultur ueber den Erdball aus." (*The Europeans pour the blessings of its culture over the globe.*)

The satirical weekly, *Simplicissimus*, flourished from 1896 to 1967 with a hiatus from 1944 to 1954.
 [Click here to view complete issue]



Der Europäer giesst die Segnungen seiner Kultur ueber den Erdball aus.

"Think It Over: All this for politics—is civilization advancing?"

Figure 113. Green interrupts the narrative flow. "Wie die Alten sungen" (*Like the old song*) *Simplicissimus*, August 21, 1900, Germany. Artist: Thomas Theodor Heine. Source: Weimar Classics Foundation. "Die Kinder des herrn Major spielen China krieg und verbreiten Preußische Kultur in der Sommerfrische." (*The children of the Lord Major play China war and spread Prussian culture in the summertime.*)
 [cb009ss]

Wilhelm II's exhortation to show no mercy. His cover illustration for the August 21, 1900 issue of *Simplicissimus* indicted the warfare in China by rendering it as children playing atrocious war games back home.



"Wie die Alten sungen" (*Like the old song*) *Simplicissimus*, August 21, 1900, Germany
 Artist: Thomas Theodor Heine
 Source: The Weimar Classics Foundation
 [cb009_Simplicissimus_Aug21_1900_Heine]

"Die Kinder des herrn Major spielen China krieg und verbreiten Preußische Kultur in der Sommerfrische." (*The children of the Lord Major play China war and spread Prussian culture in the summertime.*)



Shape

Art historian Allen Hockley commented, “When you work with pictures sometimes an outline is problematic, because once you start writing around a picture or several pictures you'll find that most of your thinking gets done on the page when you're writing.”²³⁶

Hockley describes thinking that makes intuitive connections while immersed in visual sources. Scholars unfamiliar with using images will need to recognize the subconscious power of visual grammar. Visual motifs as abstract as shape can drive the narrative toward fresh insights, links, and lines of inquiry. The globe, for example, appeared frequently in the graphics collected for “Civilization & Barbarism,” and was an easily recognizable shape when scanning new databases for relevant images.

A globe sequence in the chapter, “The White Man’s Burden,” begins with one of the unit’s standout cartoons depicting the U.S. and U.K. as conjoined twins who have swallowed the world, a commentary on the newly-minted Anglo-Saxon alliance. Next, the personified nations jointly raise the earth to the heavens with the caption, “And Peace Shall Rule.” A French cartoon casts the globe in a darker light, depicting it as a victim, drained of color, carried away on a stretcher by the allies. The last image, which I may have missed if I weren’t looking for the globe symbol, adds a significant opposing viewpoint when grouped with the other globe images.

²³⁶ Allen Hockley, Interview by Ellen Sebring, June 18, 2013. See appendix for full text.



"It Ought to be a Happy New Year Uncle Sam and his English cousin have the world between them"
 Judge, January 7, 1899
 Artist: Victor Gillam
 Source: CIGACKIA - The Ohio State University Billy Ireland Cartoon Library & Museum (view)
 [cb09-140_1899_Jan7_Judge_d_10385_osu]
 John Bull, whose portliness stood for prosperity, has joined with Uncle Sam to swallow the globe. The boats crossing their chests, labeled "Suez Canal" and "Managua Canal," show the importance of efficient naval and shipping routes through their "attended" routes. The countries have been jumbled to align them with American or British imperialistic interests.



Figure 114. Globes as a thematic sequence.
 From the chapter "The White Man's Burden" in "Civilization & Barbarism." by Ellen Sebring, 2014.

Top: "It Ought to be a Happy New Year. Uncle Sam and his English cousin have the world between them"
 Judge, January 7, 1899,
 Artist: Victor Gillam
 Source: The Ohio State University Billy Ireland Cartoon Library & Museum
 [cb09-140_1899_Jan7]

Udo Keppler, a Puck cartoonist who was still in his twenties at the time, was more benign in his rendering of the great rapprochement. A cartoon published in May, 1899 over the caption "—And Peace Shall Rule" offered a female angel of peace flying over a globe (turned to Asia and the Pacific) hoisted by John Bull and Uncle Sam.



"—And Peace Shall Rule"
 Puck, May 3, 1899
 Artist: Udo Keppler
 Source: Library of Congress (view)
 [cb10-101_puck_1899_May3_Peace_28594u]
 John Bull and Uncle Sam lift the globe, turned toward Asia and the Pacific, to the heavens. The angel of peace and caption suggest that their joint strength will bring about world peace.

Middle: "—And Peace Shall Rule"
 Puck, May 3, 1899 Artist: Udo Keppler
 Source: Library of Congress
 [cb10-101_puck_1899]

Bottom: "Leur rêve."
 ("Their dream.")
 L'Assiette au Beurre, June 27, 1901,
 Paris
 Artist: Théophile Steinlen
 Source: Bibliothèque nationale de France
 [cb20-226_1901_June27_212-213]

From the high to the low, by 1901 the collaboration between the two Anglo nations held a different fate for the globe. In the French cartoon "Leur rêve" ("Their dream"), the globe is portrayed as a victim carried on a stretcher. The two allies had been embroiled in lengthy wars with costly and devastating effects on the populations in Africa and Asia.



"Leur rêve."
 Translation: "Their dream."
 L'Assiette au Beurre, June 27, 1901
 Artist: Théophile Steinlen
 Source: Bibliothèque nationale de France
 [cb20-226_1901_June27_212-213]

Protagonists

Many Americans today are unaware of the Philippine-American War due in part to government censorship that covered up its brutality, and over time, erased it from public memory. The visual book, *The Forbidden Book: The Philippine-American War in Political Cartoons*,²³⁷ unveils its complex cartoon record.

The globe appears once again in an 1898 cover of *Leslie's Weekly*, another image cut from the essay, this time because of the protagonist. On the cover the American President, William McKinley, searches for the Philippine Islands with a magnifying glass and comments, "Guess I'll keep 'em!"

*Figure 115. A deleted image:
"Uncle Sam—Guess I'll keep
'em!"*

*Leslie's Weekly, June 9, 1898,
NYC. Artist: E.N. Blue.*

*Image cut from the chapter "The
White Man's Burden." (Sebring,
2014)*

[cb132gb_1898_KeepEm]

Americans were sold on military aggression—note the battleships in the porthole—by the

rhetoric of the McKinley administration. After a long period of post Civil War isolationism, public support for entering into world power politics was encouraged by portraying the country as a benign conqueror. The paternalistic view personified in the grandfatherly image of the president belied the military, political, and commercial aspirations that made the Philippines vital to the U.S. as a fledgling world power.



²³⁷ Abe Ignacio, Enrique de la Cruz, Jorge Emmanuel, Helen Toribo. *The Forbidden Book: The Philippine-American War in Political Cartoons*. <http://www.yourhistorysite.com/PDFs%202009/Imperialism/Political%20Cartoons%20Imperialism.pdf> Accessed October 2015.

Though set apart in a gray box, a convention used by Visualizing Cultures to highlight separate but related topics, the McKinley cartoon interrupted the narrative exposition of the chapter's theme "The White Man's Burden" as it evolves in a growing partnership between the old world imperial power, England, and the newly militarized United States.

The two national symbols face the world together, guns drawn, and carry their colonial subjects towards enlightenment. In *Life's* biting response, the colonial subjects bear the true white man's burden, staggering under the weight of these imperialist aggressors.

Figure 116. The Anglo-Saxon "duo" as a visual theme.
From the chapter "The White Man's Burden." (Sebring, 2014)

"Misery Loves Company; — but they hope soon to be out of it"
Puck, March 20, 1901. Artist: Louis Dalrymple
Source: Theodore Roosevelt Center at Dickinson State University

"The Anglo-Saxon Christmas 1899 War on Earth. Good Will to Nobody."
Life, January 4, 1900. Artist: unidentified
Source: Widener Library, Harvard University

"The White Man's Burden (Apologies to Rudyard Kipling)"
Judge, April 1, 1899. Artist: Victor Gillam
Source: CGACGA - The Ohio State University
Billy Ireland Cartoon Library & Museum

"The White (!) Man's Burden"
Illustration for Life, March 16, 1899.
Artist: William H. Walker
Source: William H. Walker Cartoon Collection, Princeton University Library



The protagonists of the chapter are Uncle Sam and John Bull and their duet was interrupted by the insertion of President McKinley dealing with internal U.S. attitudes. The appearance of Uncle Sam as a solitary protagonist signaled a domestic rather than global theme. Removing the image strengthened the exposition of the chapter's primary theme of a budding imperialist coalition between the U.S. and U.K.

Visual Tropes

Cartoonists created visual tropes to symbolize concepts and create sympathies using a range of tools made possible by detailed, full color reproduction in large format magazines. In cartoons from the chapter titled, "Progress & Profits," the civilizers literally shine the light of progress on barbarians. The

headlight of Uncle Sam's "Auto Truck of Civilization and Progress" illuminates "China," depicted as a bestial dragon. In "The Pigtail Has Got to Go," "Civilization" appears as a goddess in white radiating starlight down upon an archaically-clad Chinese mandarin running away from progress. She threatens to cut his pigtail, a common symbol for old China, inscribed with the words "worn out traditions."



"Some One Must Back Up." (detail)
 Judge, December 8, 1900
 Artist: Victor Gillam
 Source: Widener Library, Harvard University
 [1027-004_1900_Judge_Barkis_00014]



Figure 117. Visual Tropes.
 From chapter "Progress & Profits." (Sebring, 2014) "Some One Must Back Up" Judge, December 8, 1900. Artist: Victor Gillam. Source: Widener Library, Harvard University. [cb27-004_1900_Judge]

"The Pigtail Has Got to Go"
 Puck, October 19, 1898. Artist: Louis Dalrymple. Source: Beinecke Rare Book & Manuscript Library, Yale University [cb30-021_puck_1898_Oct19]

Visual templates were often recycled by cartoonists and some motifs can be traced back many years through different conflicts and regimes. The chapter “Bibles & Guns” juxtaposes two uses of a vignette-style template to show rare instances of self-reflection. Grouped in a gray box titled, “As the Heathen See Us,” the vignettes convey the double-standards of America’s civilizing mission, depicting uncivilized behavior at home, including feuds, corruption, lynchings, and burning at the stake.

In the second graphic, similarly ugly scenes in 19th-century American life are ironically labeled “refined and elegant” to pillory the hypocrisy of raising money “to save the heathen of foreign lands” while ignoring barbarity at home. These two images flip the label “heathen” back on the civilizers.



Figure 118. Recycled Templates. From the chapter “Bibles & Guns.” (Sebring, 2014)

“Our ‘Civilized’ Heathen. And yet Uncle Sam is always giving money to ‘save the Heathen.’”

Puck, September 8, 1897. Artist: Samuel D. Ehrhart
Source: Library of Congress [cb43-104_puck_1897_Sept8]

“As the Heathen See Us — A Meeting of the Chinese Foreign Missions Society.” Puck, November 21, 1900. Artist: John S. Pughe

Source: Library of Congress [cb44-017_libc_1900_25475u]

Complex public attitudes toward barbarity emerge in these graphics with a vividness that text cannot match. Alone, these images are only partially understood; collecting the larger visual data field reveals the complex environment in which the sources originated, just as in traditional document-based historical methodology. Research into magazines, editors, cartoonists, and audiences, bolsters interpretations not always transparent when looking back at the satyric cartoons. For example, *Life*, one of the few American publications expressing anti-imperialist views, was run by Harvard Lampoon alumnae. In the globe sequence discussed above a suffusion of warm heavenly light shows sympathy with the U.S.-British alliance while a lifeless gray cast over the globe indicates a negative view coming from France. The history preserved in the commercial news industry reveals public sentiments and diverse intellectual stances.

Unexpected Historical Themes

The database on the theme of civilization and barbarism pushed the essay beyond the Boxer Uprising to encompass the Philippine-American and Anglo-Boer wars. Within the essay, the visual record suggests other unexpected historical themes, including: (1) religion and war; (2) protest art magazines; (3) hidden concentration camps; and (4) battlefield dead and graves.

Another finding became evident by its absence: a lack of self-critical British cartoons. Caustic British humor magazines like *Punch* were surprisingly benign when commenting on their nation's imperial wars, especially when answering foreign critics. *Punch* cartoons protested the peril of soldiers overseas and the domestic costs of prolonged wars, but in general during times of war the British public rallied around their troops and the nationalist cause. *Punch* cartoons of 1900 express suspicions of Japanese and Russian incursions into China, suggesting post-Boxer themes including the great game leading to World War 1.

Perhaps the best known British cartoon of 1900, titled "The Avenger!," reprises the story of St. George and the Dragon with Britain, labeled Civilization, attacking a bestial dragon, labeled China. Mirroring famous paintings of the scene by Raphael and others reinforces timeworn notions of civilization triumphing over barbarism. At the time of publication, British forces were marching with the international expedition to relieve the besieged foreign legations in Beijing.

Figure 119. "The Avenger!" St. George and the Dragon. From the chapter "Bibles & Guns." (Sebring, 2014)

"Civilization" bears down on China depicted as a dragon in a British cartoon titled, "The Avenger!" Punch, or the London Charivari, July 25, 1900 [1900_punchvol118a119]



Bibles and Guns

Cartoons critiqued the irony of spreading Christianity through force, lampooning the holier-than-thou stance of the so-called benevolent conquerers. In two *Puck* cartoons, Kaiser Wilhelm II of Germany leads the civilizing mission, astride a huge gun in "The Advance Agent of Modern Civilization," and preaching from a machine gun pulpit in "The Gospel According to St. William."

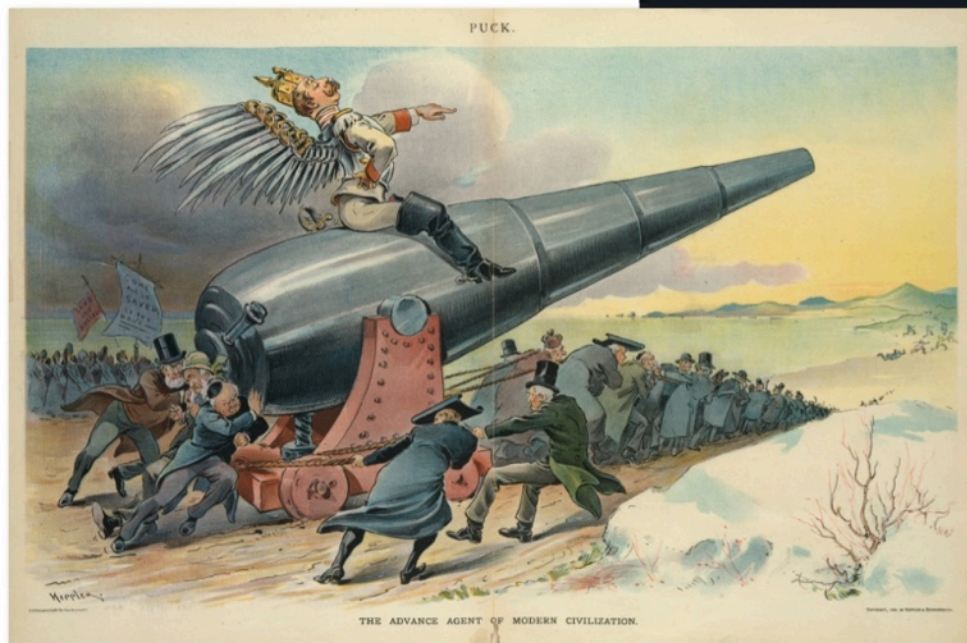


Figure 120. Bibles, guns, and Wilhelm II.

From the chapter "Bibles & Guns."

(Sebring, 2014)

Top: "The Advance Agent of Modern Civilization"

Puck, January 12, 1898. Artist: Udo Keppler

Bottom: "The Gospel According to St. William"

Puck, September 26, 1900. Artist: Udo Keppler

[cb_ch4_Wilhelm_guns]

Machine guns fueled one-sided attacks and aggressors mowed down their adversaries with minimal losses, part of a historical pattern linking lopsided casualties with superior technology. Germany made up for its late entry into the imperial grab with the ferocity of its wars and Wilhelm became synonymous with atrocities, leading to depictions of him as a devil incarnate by World War I. Self-reflective cartoons questioned the ends justifying the means in images like one from *Puck* depicting Confucius and Jesus Christ looking down on the battling Boxers and missionaries, each brandishing banners with variant versions of the golden rule. The caption reads, “Are Our Teachings Then, in Vain?”

Figure 121. Confucius and Jesus Christ: images and details.
From the chapter “Bibles & Guns.” (Sebring, 2014)

A large detail enables readers to understand the cartoon by observing the parallel stances and reading the message that matches on the flags of the opposing sides.

“Are our teachings, then, in vain?”
Puck, October 3, 1900
Artist: Udo Keppler. Source: U.S. Library of Congress. [cb53-005_1900_PUCK_Oct3]



“Are our teachings, then, in vain?”
Puck, October 3, 1900
Artist: Udo Keppler
U.S. Library of Congress [view]
[cb53-005_1900_PUCK_Oct3_Jesus_25461u_lc]

This rueful cartoon places Confucius and Jesus side-by-side and laments the failure of all parties to practice what they preach. The banners of both side pronounce fidelity to the “golden rule.”



Boxer banner (Chinese forces flags): “Do not do unto others what you would not that others should do unto you. Confucius”

Missionary banner (Allied forces flags): “Whatever ye would that men should do to you do ye even so to them. Jesus”

Artist Editions

The painstaking process of tracing images to their source is often rewarded by uncovering new veins of content. Clarifying graphics that circulate on their own with questionable metadata often reveals that they aren't what they seem. For several years, I traced a poorly reproduced black-and-white image of Allied troops walking over the blood-soaked corpses of Chinese civilians, including babies. During that time the *Bibliothèque nationale de France* digitized and put the French illustrated magazine, *L'Assiette au Beurre*, online and I found the image, in full color, as part of a special edition designed by artist Théophile Steinlen.

The issue was a searing indictment of imperialist wars over the past century. The illustrations form a gruesome mural depicting the bloodshed of contemporary colonial wars in Turkey, China, and Africa. Juxtaposing a detail from Steinlen's image with one depicting savage Boxers from a *Harper's Weekly* cover showed the barbarism on each side. Looking as if they were marching towards each other, the juxtaposition posed the question "who is the barbarian."

Artist's editions of illustrated magazines add a personal perspective on events that are usually explained and theorized about politically, economically, and militarily in historical texts. The emotional testimony, seen firsthand, of those whose work has long been outside of the genre of written documents, and only recently made available digitally, might be ignored in traditional histories, but belongs in our knowledge of the past.



From the issue titled: "A Vision de Hugo, 1802-1902."
L'Assiette au Beurre, February 26, 1902 (No. 47)

Artist: Théophile Steinlen

Source: Bibliothèque nationale de France

[cb72-245_1902_26Feb_pg05_HugolIssueBySteinlen_lassiette_au_beurre]

This special issue illustrated by Théophile Steinlen comprises a particularly gruesome mural depicting the bloodshed of contemporary colonial wars in Turkey, China, and Africa. The scene above turns the tables on the Harper's Weekly cover (above) and accuses foreign troops and missionaries of atrocities during the Boxer Uprising in China.

Figure 122. Juxtaposed details; artist editions.
From the chapter "Who is the Barbarian?"
(Sebring, 2014)

Images from a special artist's edition titled, "A Vision de Hugo, 1802-1902,"

L'Assiette au Beurre,
February 26, 1902 (No. 47),
Paris.

Artist: Théophile Steinlen.
Source: Bibliothèque nationale de France.

Image, lower left: detail from cover Harper's Weekly,
July 28, 1900.

[cb_ch5_juxtaposition]



[Click here for the complete issue]

[Click here for a website that discusses the full panorama of Steinlen's searing 1902 graphics]

Who is the Barbarian?

Juxtaposing the shocking Chinese barbarity depicted on the Harper's Weekly cover with the equally shocking barbarity of Steinlen's depiction of Allied atrocities in China gives rise to the question: who is the barbarian? Severed heads. Slaughtered infants. At first glance, the two mirror-image renderings could be part of the same picture.



Harper's Weekly, July 28, 1900
(detail)

L'Assiette au Beurre, Feb. 26, 1902
(detail)

Concentration Camps

The digital archive of illustrated magazines revealed another aspect of the imperial wars that was largely suppressed. Another special issue of *L'Assiette au Beurre*, this time by artist Jean Veber, focused on some of the first concentration camps. Based on the ability to run

electricity through fences, the tactic was used by the British in the Second Anglo-Boer War to prevent the civilian population from protecting roving fighters. The cover image of a veiled woman raising her finger to her lips in a plowed-over field suggests a cover up. The drawings of prisoners of war and incarcerated women and children are accompanied by captions that ridicule Britain's official praise of the humanitarian behavior of their armies. Images such as these helped publicize a subject that was censored.



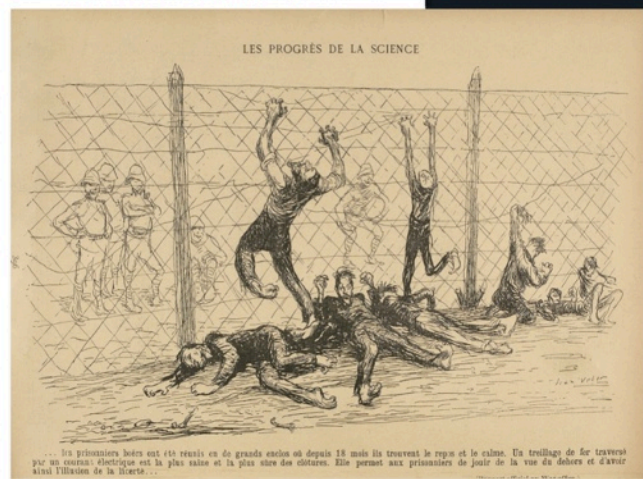
"Les Camps de Reconcentration au Transvaal. Le Silence"
 ("Concentration Camps in the Transvaal. Silence")
 L'Assiette au Beurre, September 28, 1901
 Artist: Jean Veber
 Source: Bibliothèque nationale de France
 (c060-200_1901_Sep28_Transvaal_pg00)

This special issue of L'Assiette au Beurre drew particular attention to the brutal tactics adopted by the British in the Boer War, including herding the families of the Boer opponent into concentration camps. Stark images such as these helped make public a subject that was generally suppressed.

Figure 123. Concentration Camps.
 From the chapter "Who is the
 Barbarian?"
 (Sebring, 2014)

"Les Camps de Reconcentration au
 Transvaal. Le Silence"
 ("Concentration Camps in the
 Transvaal. Silence")

L'Assiette au Beurre, September 28,
 1901. Artist: Jean Veber Source:
 Bibliothèque nationale de France.
 [cb_ch5_camps]



"Les Progrès de la Science"
 (The Advances of Science)
 L'Assiette au Beurre, September 28, 1901
 Artist: Jean Veber
 Source: Bibliothèque nationale de France
 (c061-201_1901_Sep28_Transvaal_pg06)

In an image titled, "Vers le Camp de Reconcentration" (To the Concentration Camp), women and children are dragged off by British soldiers. The caption again ironically quotes an "Official Report to the War Office" that praises the British soldiers' bravery in the face of a fierce enemy, in this case women and children: "The humanity of our soldiers is admirable and does not tire despite the ferocity of Boers."



"Hier encore nous avons pris un important command. Je l'ai fait reléguer sous bonne escorte. L'humanité de nos soldats est admirable et se laisse pas malgré la ferocité des Boers."
 (Rapport officiel au War Office.)

Battlefield Dead

The essay ends with a kaleidoscopic turn through depictions of war fatalities. The three images that conclude the “Civilization & Barbarism” essay do this in surprising ways. The top image from *Life* calls attention to the staggering death toll of Filipino soldiers during the Philippine-American War. Heavily armed and unapologetic, Uncle Sam cocks an eye pugnaciously at the viewer, above the caption: “The Harvest in the Philippines.”

The essay points out that the word harvest “evoked both the fact that the bulk of the U.S. force was made up of units from the Midwestern states. And, more subtly yet, it reflected the shift from the nation’s agrarian roots toward global engagement.”²³⁸

In the second image, from the American magazine *Judge*, a battlefield strewn with corpses from wars in the Philippines, the Transvaal and back to ancient times, “when the civilization myth first emerged to mask the brutal realities of politically-motivated conflicts.”²³⁹ The caption asks, “Think It Over. All this for politics—is civilization advancing?”

In the third graphic, from the French magazine, *L’Assiette au Beurre*, graves stretch into infinity haunted by the gaunt figure of armor-clad Britannia who raises her staff as if to rouse the army from the dead to fight on. Titled, “Le Royaume-Uni” (“United Kingdom”), the image highlights the devastation brought upon soldiers from many parts and colonies of the United Kingdom who fought Britain’s wars of civilization. The essay concludes by noting the historical evidence offered by the visual record:

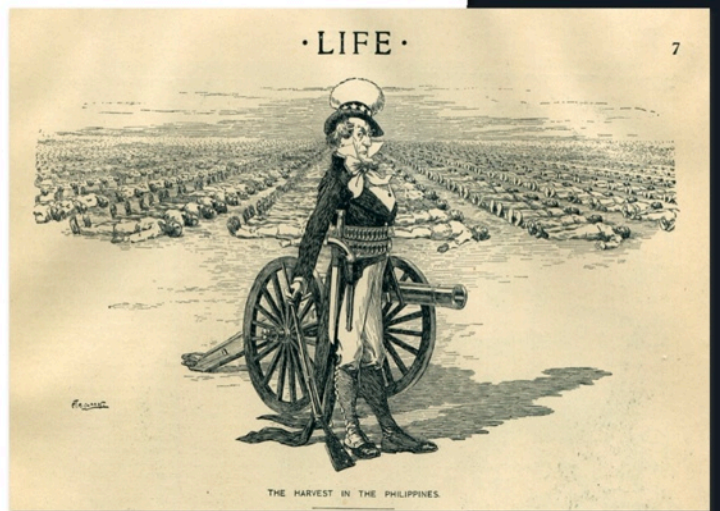
The wars undertaken in the name of “Civilization and Progress” were more savage, tortuous, and contradictory than is often recognized. And the political cartoons of the time—subjective, emotional, ideological, highly politicized and at the same time, politically diversified—convey this complexity with unparalleled sophistication and intensity. It is all too easy to assume that Americans, English, and others on the home front could not see what their nations were doing overseas. The turn-of-the-century visual record tells us otherwise.²⁴⁰

²³⁸ Sebring, “Civilization & Barbarism,” 2014. (Chapter 5 “Who is the Barbarian.”)

²³⁹ *Ibid.*

²⁴⁰ *Ibid.*

Figure 124. Battlefield Dead.
From the chapter
"Who is the
Barbarian." (Sebring,
2014)



"The Harvest in the Philippines"
Life, July 6, 1899
Artist: Frederick Thompson Richards
[cb91-313_1899_July6_Life]

"The Harvest in the
Philippines"
Life, July 6, 1899
Artist: Frederick
Thompson Richards
Source: the author

"Think It Over.
All this for politics—is
civilization
advancing?"
Judge, February 3,
1900

Artist: Victor Gillam
Source: Widener
Library, Harvard
University



"Think It Over.
All this for politics—is civilization advancing?"
Judge, February 3, 1900
Artist: Victor Gillam
Source: Widener Library, Harvard University
[cb82-016_Judge_1900_007]

"Le Royaume-Uni"
("United Kingdom")
L'Assiette au Beurre,
September 28, 1901,
Paris
Artist: Jean Veber
Source: Bibliothèque
nationale de France

[cb_ch5_battlefields]



"Le Royaume-Uni"
("United Kingdom")
L'Assiette au Beurre, September 28, 1901
Artist: Jean Veber
Source: Bibliothèque nationale de France
[cb90-210_1901_Sept28_Travevaal_pg22]

Findings

The “Civilization & Barbarism” essay demonstrates how images drive scholarship, both research and argument, in a hybrid “image-driven essay” form. The image-driven essay gives readers both visual and written narratives simultaneously. It is a hybrid form that can bridge contemporary print publishing with the digital formats of the future. The essay unites three wars because the graphics of the period connect them. The thematic subset put the Boxer Uprising in China alongside the American war in the Philippines and the British-Boer war in Africa. The three campaigns reflect the visual record of the time in an idiosyncratic presentation of turn of the century expansionism. This view of the past was determined by the past itself and the platform enables audiences today to experience the minds of the makers through visual designs that have lost none of their visceral power.

The test case on “civilization and barbarism” revealed the following:

- (1) Non-traditional digital formats—specifically the horizontal visual narratives initially created using this content—face insurmountable obstacles as academic publications in current practice.
- (2) Rewriting the content in the more traditional, but image-driven, essay format used by MIT Visualizing Cultures solved the problem of being a academic publication. Being text-based, it became quotable; scholarship increased, writing in greater detail about the events touched on in the images; and finally, the essay benefitted from a stronger narrative arc with beginning, middle, and end.
- (3) Unlike the interactive form, in the essay form, the written text introduced the author’s singular, dominant voice, adding increased control, detail, and authority to the narrative.
- (4) Authoring for the images equally with the text revealed that the visual portion of the essay could become a significant content stream with its own visual grammar and unique historical insights, countering the ambiguity of interpreting images.
- (5) An “image-driven essay” differs from a text-based essay in that the visual images and sequence determine the themes, the research, and make up a minimum of 50% of the essay content.
- (6) Visual grammar appeared through color, shape, protagonists, and visual tropes that connect images like phrases. Visual grammar was further evidenced by the need to cut otherwise compelling images that interrupted the flow of the visual sequence. (See detailed discussion above.)
- (7) Observation of the visual data set determined the way this history was presented and lead to unique insights derived from these sources and their collective reading. The themes indicated by the images include: putting the three wars together historically; the connection between religion and war (bibles and guns); artist publications, dissent and anti-war indictments; concentration camps; and the death toll and costs of imperial war (battlefield dead). (See detailed discussion above.)

- (8) The key contribution of the image-driven essay is the move back and forth between text-based and image-based exposition. Perceptual shifts occur when confronting these two mediums—users shift between reading and looking—and a new digital model will benefit from supporting both image-to-text and image-to-image exposition.

5.4 Visual Narrative 2: Comparative Views of the Siege

Objectives

This topic looks at the grammar of juxtaposition and comparative views by contrasting two eyewitness photographic records of the 55-day siege of the foreign legation quarter in Beijing (June 20-Aug. 14, 1900). Many diaries were kept during the siege, but only a few contained images. Two besieged photographers left us a black-and-white look inside the privation, isolation, and dangers suffered in the siege: Lancelot Giles and Charles A. Killie. My approach focuses on juxtaposing these two subjective, personal historical views.

The key questions for this form of visual narrative are:

- (1) Can an event conveyed in a personal visual diary be experiential history?
- (2) How does a historical representation convey micro views, here illustrated by participants literally walled in from the outside world?
- (3) Does comparing two close but different views—both men were confined in the same football field-sized space for the same period of time—deepen historical understanding?
- (4) Do contrasting visual representations create a parallax view that depicts history in a sensory model of the past?
- (5) How do the same image sets elicit varied interpretations by modern viewers?

Story

The siege fell over the foreign legations in Beijing on June 20, 1900. In this most famous incident of the Boxer Uprising, 473 European, American, and Japanese diplomats and families, 409 international soldiers, and some 2,800 Chinese Christians took refuge within the cramped foreign legation quarter, defending themselves for 55 days against Boxer and Qing government army attacks. Seventy of the non-Chinese civilians and soldiers were killed and many more Chinese converts, though the numbers are unknown. The siege became a flash point in consolidating alliances and triggering the war.

In early June, Beijing's diplomatic quarter was in already in a semi-siege as Boxers destroyed the railway to Tianjin, Beijing's Race Course, and telegraph line. On June 11, Chinese Muslim troops, the Kansu Braves, murdered and beheaded the Japanese legation chancellor, Sugiyama Akira. Boxers burned thousands of stores and foreign premises in the city. On June 17, Allied ships fired on and captured the forts at Dagu (Taku). Two days later the *Tsungli*

Yamen issued an ultimatum calling on all foreigners to leave Beijing within 24 hours. That same day, June 19, unbeknownst to the foreigners in Beijing, the Seymour relief expedition was turned back by Boxers a mere 20 miles from the city. Foreigners rushed to take cover in the legation and, deciding that travel was unsafe, the diplomatic community chose to ignore the ultimatum and stay put. On June 20, the German minister von Ketteler recklessly ventured out and was killed by Boxers.

The Empress Dowager's Imperial court had long vacillated between crushing the Boxer rampages and joining them in freeing China from foreign interference. Following the Allied naval attack on Dagu, the Empress Dowager Cixi had little choice but to embrace the Boxers and issued a declaration of war on foreign powers on June 21. Losing communication with the outside world, the foreign legation community undertook to survive and defend themselves. The Allied forces first relieved the Boxer siege in Tianjin and arrived in Beijing on August 14 to end the siege in Beijing.

Media

Views from inside the siege were captured in the photographs of a 22-year-old British student interpreter, Lancelot Giles, and a 43-year-old American reverend, Charles A. Killie. Giles was one of the student interpreters training in Chinese language for several years in preparation for a career in diplomatic work. He kept a daily diary during the siege which he compiled as a letter to his father, Herbert Allen Giles, a famous Sinologist. Unlike accounts by British diplomats that were repressed in favor of the official government version, an expurgated version of the young official's diary was published in 1900 in the *Christ College Magazine*, Cambridge. It was published in full by L. R. Marchant in 1970, along with many of his photographs, in the book, *The Siege of the Peking Legations: a Diary*.²⁴¹ Giles' photographs are archived in the Giles Family Collection of Australia National University.²⁴²

Born in Illinois, Charles Killie graduated from Princeton Seminary in 1889 and embarked on missionary work in China. He was transferred to the American Presbyterian

²⁴¹ Lancelot Giles, with introduction by Leslie Ronald Marchant, *The Siege of the Peking Legations; a Diary*. (Nedlands, W.A.: University of Western Australia Press, 1970). See also, Kevin Baker and Lancelot Giles, *The siege that never was, Beijing 1900 : the journal and photographs of Lancelot Giles*, Yass, N.S.W. : Military Research Press Int. (2009).

²⁴² Giles Family Collection, Australia National University <https://digitalcollections.anu.edu.au/handle/1885/20/simple-search?query=boxer> Accessed October 2015.

Mission in Beijing in 1899. He photographed the siege primarily in August 1900 and put together an album with captions, titled, *50 Views of Siege of Peking*, for which he received a bronze and gold medal of the Military Order of the Dragon by the U.S. Army and Navy. Many of Killie's photographs are in the University of Bristol collection, Historical Photographs of China. Their notes imply that he had a role as an official documenter with "views taken by request of the British Minister and the General Committee of Public Comfort of the Siege."²⁴³ Men in the diplomatic corps organized themselves into numerous committees including health and sanitation, water, fuel, labor, and food. Killie was part of the Fortification Staff.

Of note, though not covered in this chapter, is a third visual account from A. Henry Savage Landor, an English adventurer and author who published two lavishly illustrated volumes in 1901 titled, *China and the Allies*.²⁴⁴ Savage Landor appeared in one of Giles' photographs arriving with the Relief Expedition.

Technical Information

I created galleries including both siege accounts in order to view and manipulate the material in a malleable image set. Sixty-seven of Giles' photographs were downloaded from the archive at Australia National University, and an additional sixty-four images scanned from his published diary. Killie's album (50 images) was scanned in high resolution by the Beinecke Rare Book and Manuscript Library, Yale University, and provided through Yale professor, Peter Perdue. An accurate chronology of the photographs proves difficult to compile, with conflicting captions in books and handwriting, since captions may be written much later from memory.

I presented the visual narrative, "Peking 1900: Siege / Campaign" at Kefalonia, Greece, April, 2012, focusing mainly on Giles' photographs. I also taught a module on the topic in an MIT undergraduate class Visualizing Japan (2012 and 2013). One of the students made the topic his final project, taking a more technical approach to the material, as if placing himself in Giles' position to ask how he and the community would survive.

The Visual Narrative: Juxtaposition and Comparative Views

Juxtaposing the two major photographic records of the 55-day siege in Beijing helps reveal the subjective eye of the beholder in the nuanced differences between them. Comparing

²⁴³ Historical Photographs of China, Robert Bickers, Project Director, University of Bristol, UK. <http://hpc.vcea.net/Database/Photographers?ID=59> Accessed October 2015.

²⁴⁴ A. Henry Savage Landor, *China and the Allies*, 2 volumes, (New York: Charles Scribner's Sons, 1901).

similar visual records of an event creates a “parallax” view, introducing different angles, literally lenses, on the same subject, to bring depth and granularity beyond individual photographic views.

As a collection, the visual diaries present a vastly expanded canvas in which the photographers documented the people and places of the siege, including geography, destruction, defense, the besieged population, rescue, and commemorative group portraits. Themes emerged by grouping the images by visual motifs and subject.

The visual narrative begins with a graph of concentric circles emanating geographically out from the “Peking Siege,” the eye of the storm in the conflict between the Qing dynasty and the Allied Second Relief Expedition.

The circle around the siege delineates an area cut off from the outside world. Likewise, in the outside world accurate news on the fate of the legations was hard to come by. Events in close proximity (shown within the second circle), including the failed rescue attempt by the Seymour Expedition, Boxer attacks in outlying provinces, Allied victories in Taku and Tientsin, and the approach of the Second Relief Expedition, were largely unknown.

The circles expand to include participants farther from China, each with a subjective view of events limited by their location and communications. Below, the circle graph displays the types of media geographically, broadly defined as political cartoons in the U.S.; illustrated news and advertisements in Europe; postcards and woodblock prints in Japan; strategic maps, stereographs, military photos, Boxer pamphlets, Chinese posters inside China; and finally, inside the walls of the siege, personal photographs and drawings. What people knew during the crisis is thus a combination of physical location and communication media.

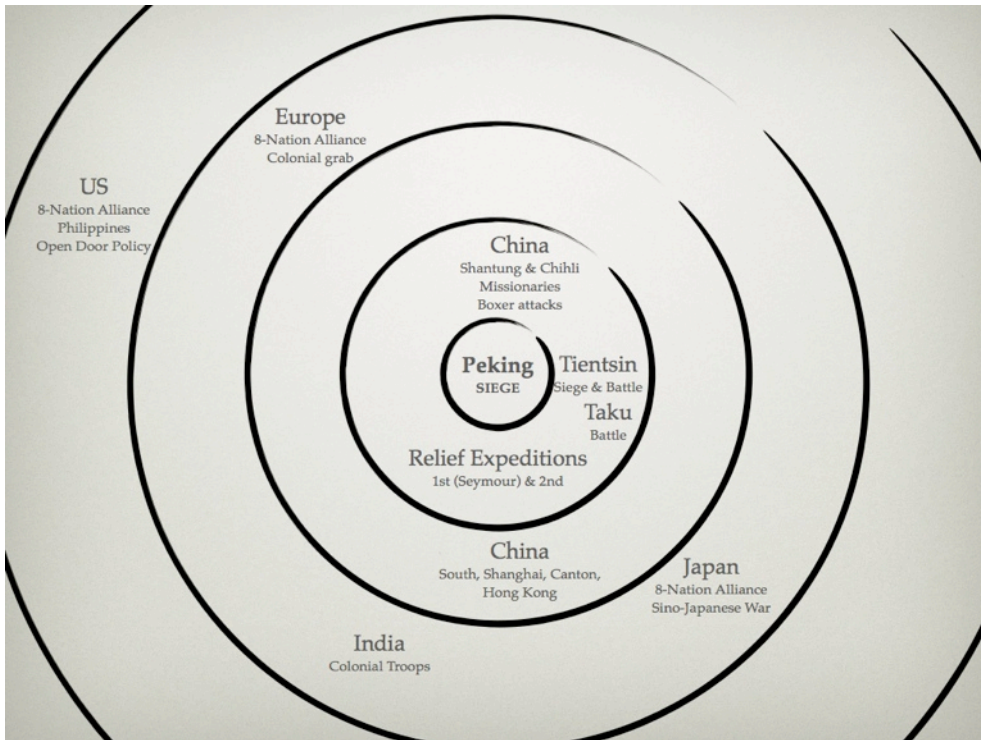


Figure 125. “Factions” graphic from visual narrative “Siege.”
 Ellen Sebring, presentation, Kefalonia, 2011.
 [Siege08_Kefalonia_Apr2011]

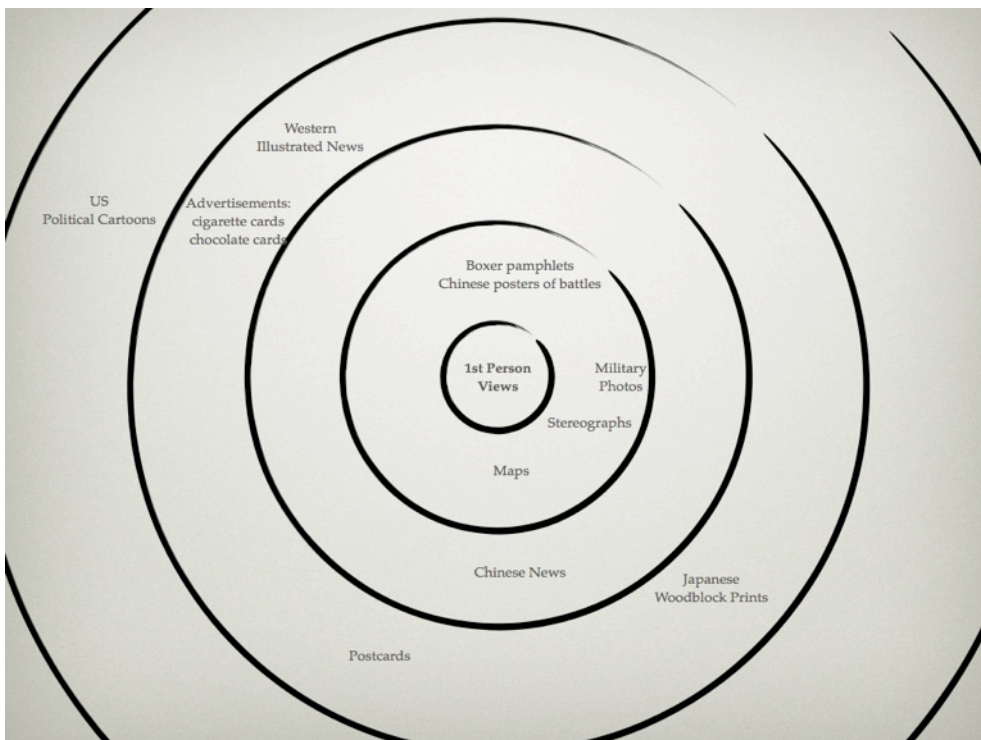


Figure 126. “Media” graphic from visual narrative “Siege.”
 Ellen Sebring, presentation, Kefalonia, 2011.
 [Siege09_Kefalonia_Apr2011]

(Self)-Portraits

When looking at visual sources, especially with personal records, readers want to see the authors themselves. The young Giles wears a crisp suit in a photo dated August 8, 1899, a year before the siege. Killie appears in a photo he supervised and labeled, “Six ‘Fighting Parsons’,” a well-known image that shows the destruction and inventive defenses mounted during the siege.



Figure 127. Comparing the siege photographers.

Left: A well-known photograph titled, “Six ‘Fighting Parsons,’” by Charles A. Killie, 1900, in which he himself appears wearing a hat and specs (inset detail). Lower right: The young Lancelot Giles, in a photographic portrait taken August 8, 1899.

[killie09_46832_yale_08_Giles1101]

Before and After Comparisons: Student Interpreters

The transformation of inhabitants into defenders becomes graphically evident when juxtaposing before and after photographs of Giles and his fellow student interpreters. He appears in two group portraits below: in a formal group of twenty taken prior to the siege and in a photo labeled, “The Survivors,” with numbers dwindling to eight. Another juxtaposition visualizes the changing lives of the students, foppishly costumed for “Lady MacDonald’s Fancy-Dress Ball,” and later outfitted with rifles as part of the Students’ Corps.



Figure 128. The student interpreters before and during the siege. Left, the students at “Lady MacDonal’s Fancy-Dress Ball,” and right, holding rifles and dressed for battle as part of “The Students’ Corps,” Giles, far right front row. [giles1104_1900_1003_ball]



Figure 129. The student interpreters, before and after the siege. The student interpreters in Beijing, c. 1900, show greatly dwindled numbers. Both photos include Giles. From the Giles archive. [giles1150_1900_1152_StudentInterpreters]

Viewers quickly grasp aspects of location and conditions from these images. Placing himself amongst the “fighting parsons” speaks to Killie’s senior role in defense of the legations. The photo shows the rough conditions, a scratched out sign “Fort Cockburn” identifying Henry Cockburn’s house. The man in white, Reverend Stonehouse, was killed shortly thereafter.²⁴⁵

²⁴⁵ The ‘Six Fighting Parsons’, a group of missionary defenders, at ‘Fort Cockburn’, British Legation, Peking (Beijing), during the Siege of the Legations, Boxer Uprising. <http://hpc.vcea.net/Database/Images?ID=31152> Accessed October 2015.

Comparing Views: "Our Betsey"

Both documentarians photographed "The International Gun." So named because it was put together with scrap parts collected from the many nations in the compound, the cannon, also nicknamed Betsy, Our Betsey, Boxer Bill, the Empress Dowager, and Old Crock, achieved such notoriety that it is preserved in the U.S. Marine Corps Museum.

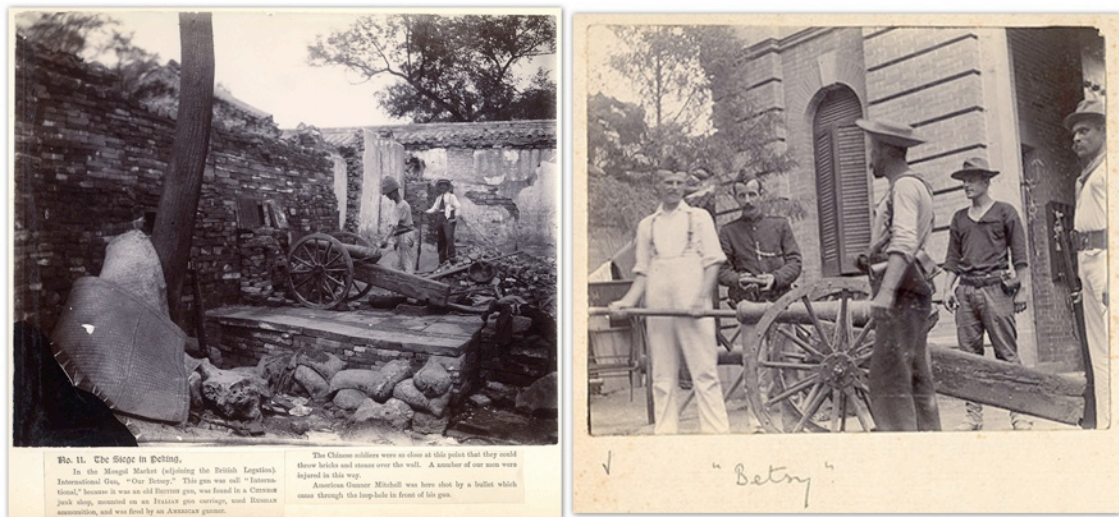


Figure 130. "Our Betsey" and "Betsy."

Left, "Our Betsey," from Killie's album with the caption:

"No. 11. The Siege in Peking.

In the Mongol Market (adjoining the British Legation). International Gun, "Our Betsey." This gun was call "International," because it was an old BRITISH gun, was found in a CHINESE junk shop, mounted on an ITALIAN gun carriage, used RUSSIAN ammunition, and was fired by an AMERICAN gunner. The Chinese soldiers were so close at this point that they could throw bricks and stones over the wall. A number of our men were injured in this way. American Gunner Mitchell was here shot by bullet which came through the loop-hole in front on his gun."

Charles A. Killie, Beijing, 1900.

Right, "Betsy" photographed by Lancelot Giles, Beijing, 1900.

[killie11_46834_yale_10_giles1115]

Killie's photograph appeared on the December 15, 1900 cover of the American news magazine, *Leslie's Weekly*, with the caption: "The Famous International Gun that Saved the Legations at Peking. The remarkable story of this ancient but effective weapon has been read with interest in every part of the civilized world."

THE GUAM TYPHOON ILLUSTRATED.

LESLIE'S WEEKLY

ILLUSTRATED

Vol. XXI - No. 50
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NEW YORK, DECEMBER 15, 1900.

PRICE, 10 CENTS. Sent by Mail in Advance at the New York Post-Office.
Entered as second-class matter at the New York Post-Office.



THE FAMOUS INTERNATIONAL GUN THAT SAVED THE LEGATIONS AT PEKING.

THE REMARKABLE STORY OF THIS ANCIENT BUT EFFECTIVE WEAPON HAS BEEN READ WITH INTEREST IN EVERY PART OF THE CIVILIZED WORLD.—PHOTOGRAPH BY C. A. KILLIE, PEKING.—COPYRIGHT APPLIED FOR.—(SEE PAGE 95.)

*Figure 131. The Famous International Gun.
"The Famous International Gun that Saved the Legations at Peking."
Cover, Leslie's Weekly, December 15, 1900.*

Photo by Charles A. Killie.

[SiegeMil_leslies_1900_Dec15]

Zooming in to the background of the digitized photograph, Killie again appears with his round glasses and mustache, white hat. He grips a rifle, looking on while the soldier poses as if lighting the fuse of the gun. Killie had a photographic team and choreographed the shots, capturing wide views in superb detail. Giles, on the other hand, rarely appears in his less formal, sometimes blurry, lower resolution, and generally closer up shots, suggesting that they were taken with his own camera in an unofficial capacity.



Figure 132. Detail from “Our Betsey.”
Zooming in to the digitized photograph reveals Killie in his signature pith helmet, with a rifle, standing in the background. (Full photograph and caption from Killie’s album above.)
[killie11_46834_yale_10_detail]

Comparing Details: Betsy’s Fuse

Comparing details can reveal a game of Chinese whispers as misconceptions grow when the original is blurred through copies. A minor point within Killie’s “Our Betsey” photograph, the soldier holds an object to the cannon as if about to light it. In the newspaper reproduction, the object has become attached like a fuse.



Figure 133. Posing and lighting a fuse. Details from “Our Betsey” show the detached object (right) held by the soldier in the original photograph, has become a long cord, possibly a fuse, in the reproduction (left) on the cover of Leslie’s Weekly.

[killie11_46834_leslies_1900_v91_4_024]

Comparing Media: The Bell Tower

Details bring us closer to events. Here, enlarging a high resolution scan of the photo, “The Bell Tower,” reveals the range of people thrown together in close quarters.²⁴⁶ Killie must have commanded attention at the moment of exposure, for almost everyone in the shot gazes into the lens, including exhausted-looking soldiers, one of the Chinese men, and Western women (more women appear in the full image) who collaborated in surviving the siege.

²⁴⁶ Whether the siege population would have survived if Chinese forces had launched definitively targeted attacks is debated. Evidence suggests ambiguity in the Imperial government’s strategy and attacks on the foreign legations.



Figure 134. Detail from the “Bell Tower.”

Detail from Killie’s photograph; full album caption reads:

“No. 4. The Siege in Peking. Bell Tower, showing the bulletin boards, where all news items and announcements were posted daily. House occupied by United States Minister Conger. Chapel, where seventy Americans ate their meals, and where thirty-five of them slept on the floor and benches for almost two months.”

[killie04_detail01]

Before digitization, such scrutiny would have been technically impossible with a large set of images. Digital databases make viewing extreme close up details a simple and constant behavior while studying the sources.

Another part of the photograph demystifies the often referred to “message board” that was central to siege life. The notes on the board viewed close up presents a view free of period costumes, hairstyles, buildings and other cues to the passage of time. The messages themselves look as if they could have been written yesterday: in capital letters, “Do Not Forget to Register,” tells us about the structures that organized the diplomatic community. The daily life of the Chinese Christians, excluded from much of this support structure including food rations, was more difficult.



Figure 135. Intimate details: notice board.
Above and right, details from Killie's photograph, "The Bell Tower."
[killie04_detail02]

Other messages include long notes, lists, symbols, and portraits, all of which detail logistics, supplies, assignments, possibly interpretations of symbols, identification of personalities, and news from the outside world—would that we could read them.

Several months after the siege ended, the cover of the American periodical, *Harper's Weekly*, featured the photo with the caption, "The Bell-Tower in the British Legation Compound, Peking. Here all notices were posted during the siege. The ringing of the bell called every able-bodied man to arms." The table of contents for this October 20, 1900 issue lists several photographic essays on the relief of Beijing, showing a continuing interest in the ordeal.



Figure 136. Three views of the bell tower and notice board.
 Left: “The Notice Board” from Giles;
 Middle: Cover of Harper’s Weekly, Oct. 20, 1900, photographer unidentified;
 Right: “No. 4...Bell Tower, showing the bulletin boards, where all news items and announcements were posted daily” from Killie.
 [giles1142_harpers1900_09-12_011_killie04]

Technically, reproductions only partially transmit the original photograph, altering the texture, light and shadows, tactile surface, and clarity. Conceptually, reproductions move viewers farther from the point of origin and the uniquely photographic moment preserved by the “click” of the camera. Interpretively, reproductions help viewers by contextualizing images through captions and articles. Yet in the process, images lose the dominant role and become illustrations in a publisher’s storyline.

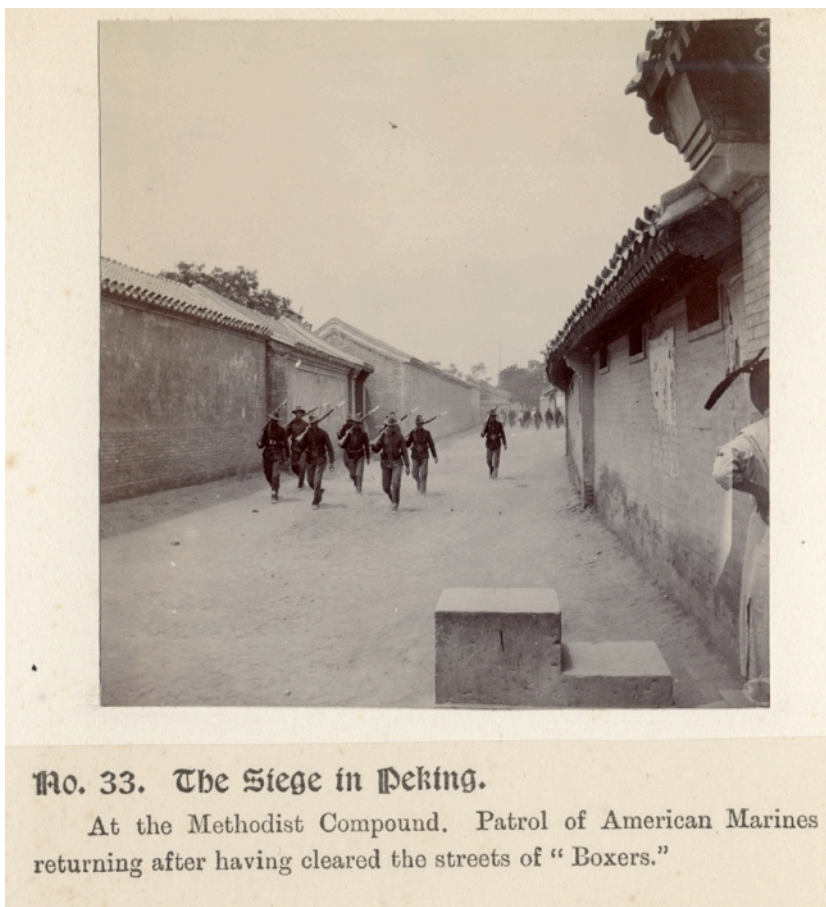
Viewers become readers as they seek to understand what they are looking at. Raw databases, on the other hand, as non-hierarchical data sets neither sorted and nor contextualized, distance viewers with their anonymity. Viewers must investigate and make connections to understand the images. In a digital model, embedded image-driven scholarship can facilitate this inductive process of understanding.

Reading visuals means tempering initial responses to their appearance by comparing related images. Details like cropping, mounting, captions, color, clarity, and size influence viewers’ perceptions. Sepia-toned, worn images, for example, have a patina of age and veracity that can romanticize the past and trigger unconscious reactions. Cross-checking for alternate versions and related images is vital for refining first impressions. In the Giles and Killie collections, the photographs vary in print quality, captioning, and mounting, giving each a

distinct character: Killie's professionally printed and captioned album of 50 views and Giles' handwritten captions and diary text.

Parallax: Marines in a Lane

Juxtaposing nearly identical photographs creates parallax in which the subject is captured from two different angles or points of view. The combined angles of view triangulate to reflect back on the photographer, whether coming from two sources (lenses) or, as in the following example, a single source making sequential exposures displaced by time. Killie photographed the approach of a group of soldiers in a walled lane.



*Figure 137. American Marines in a lane.
"No. 33. The Siege in Peking. At the Methodist Compound. Patrol of American Marines
returning after having cleared the streets of 'Boxers'."*

Charles A. Killie, Beijing, 1900.

[killie33_46851_yale_27]

In the foreground, barely visible in the frame, a figure in white watches them. The album caption describes the scene, "At the Methodist Compound. Patrol of American Marines returning after having cleared the streets of 'Boxers'." The photo also appears in the Visual

Cultures in East Asia (VCEA) database along with a second exposure, identified respectively as “Allied forces in a lane, Peking” (below left) and “American marines in a lane, Peking” (below right).



*Figure 138. Parallax between similar views.
“Allied forces in a lane, Peking” (left) and “American marines in a lane, Peking” (right)
Photographs by Charles A. Killie, Beijing, 1900.*

Source: Visual Cultures in East Asia (VCEA), photos from National Archives, London.

[killie_1900_NA05-20_NA05-21_AmMarines_vcea]

In the photo on the right—the image not selected for Killie’s album—the Chinese man is fully visible, in traditional dress with his foot on an object identified in the accompanying notes as a block for mounting a horse. The man holds an object that is difficult to identify, looking more like a knife in the photo on the right and more flexible, like a fan, on the left. Neither is clear. Nor can the man’s role in the scene be understood from the two images alone.

Multiple exposures that create this parallax effect cast several angles on the same scene, calling attention to small differences between the shots. The mechanics of making the shot become visible, hinting at the photographer’s process and presence. How long, we might wonder, did it take him to reset and take the second snap? Given exposure times in 1900, the troops following in the far distance in the left image may have come to the foreground by the time the photo on the right was taken.²⁴⁷

²⁴⁷ A photograph that shows the bulky equipment of a photographer is discussed in “Who took the photograph, reprised?” September 11, 2013 by Jamie Carstairs, Visualizing China Blog <http://visualisingchina.net/blog/2013/09/11/who-took-the-photograph-reprised-2/> Accessed October 2015.

Multiples disrupt the authority of the single image and its frame. Looking at both photos, the man in white appears to be interacting with the soldiers at the scene. He moves into the frame, disrupting its limits, adding the movements in time and space to these still photographs. Did Killie choose to publish the photograph that minimized his presence because he was an incidental bystander or to emphasize the soldiers as the primary subject? Or was the selection made for practical or even casual reasons?

The answers may not be important in understanding the historical events, but that we ask them as we contemplate the photographs means we are penetrating the historical moment interactively. In a kind of psychological transference, we enter the scene. The friction between the two views activates the imagination and a heightened sensory perception through looking.

Digital databases facilitate comparative looking at visual sources that may not have been easy to spot previously. In the past, most viewers would only see the single image published in the album. Together, the photos almost work like frames in a film in which we would watch the soldiers walk up the street and observe the actions of the man in white. This gray area between still photographs and film raises the question of how we observe film and photographic sources differently as sources of historical information. Are we more passive when viewing film because the action appears to be self-evident? Do we continue to dissect the scene and look beyond its borders to broaden our understanding, knowing there is more information that is unseen, or do we fall for the completeness because it appears to be neatly explained? If the scene were filmed, parallax would disappear.

The three points of focus between the subject and two lenses, or two moments in time, would disappear and no justification on the part of the viewer would be required. The viewer's awareness of the camera and shooter dissipates, and takes a passive, receptive mode. Digital narrative brings such sources together to disrupt the spells cast by the original media. Through digital juxtaposition, images are questioned and with the extra information flowing between several paired images, we seek to find answers. We look between and beyond them to glimpse the moments in which they were created.

Grids: the Chinese in the Siege Photographs

Giles' pre-siege photos of picnics and riding show the high spirits of the young men, ladies, and the isolated social life of the foreign enclave in China. Chinese troops were still a

common sight in the legation quarter, fulfilling their role as defenders of the foreigners against the Boxer rebels.



Figure 139. "Chinese Cavalry - 1900"
From the archive of Lancelot Giles, Beijing, 1900.
Source: Australia National University
[giles1108]

Among these, Chinese Muslim troops known as the Kansu Braves (Gansu Braves) would later become the most effective of the Chinese forces to fight against the Allies. Their xenophobic general, Dong Fuxiang, urged the Empress Dowager to expel the foreigners, and it was these troops who engineered her escape from the Forbidden City.

Giles' portrait of smiling "Kansu Soldiers" is among very few close up photographs of Chinese soldiers. "We have a body of about twelve Chinese soldiers (Kansu troops) in gorgeous red uniforms with Mauser rifles, to assist us in holding our position," he wrote in his diary. Such images document interactions in Beijing in ways that differ from written descriptions and statistics.



Figure 140. "Kansu Soldiers. (Tung Fu Hsiang's)"
From the archive of Lancelot Giles, Beijing, 1900 Source: Australia National University
[giles1181]

Chinese Christian converts escaped the Boxers by taking refuge in the legations where they were quartered in the Su Wang Fu palace grounds confiscated from the Manchu Prince Su. They received no food rations and were reduced to eating tree bark and leaves during the siege. Giles notes that, "Every Chinese man in the compound has to do two hours work a day for the general good."²⁴⁸ The converts did most of the manual labor, filling sandbags, digging trenches, building barricades and the fortifications critical to survival. They also suffered the highest

²⁴⁸ Giles and Marchant, *The Siege of the Peking Legations: a Diary*, 124.

death toll though the numbers are not known. Often minimized in written histories, perhaps due to the lack of documentation, the Chinese siege population appears prominently in the photographic records.

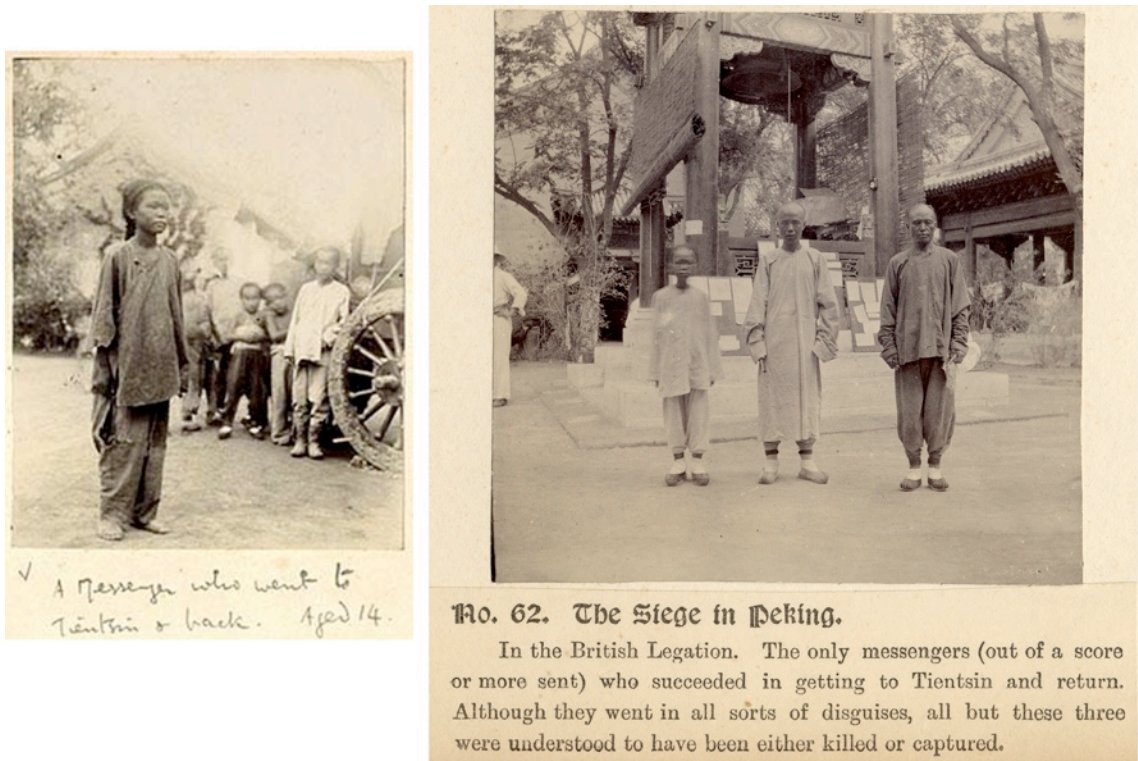


Figure 141. Messengers.

Top left: "A messenger who went to Tientsin & back. Aged 14" by Giles. Top right: "The only messengers (out of a score or more sent) who succeeded in getting to Tientsin and return. Although they went in all sorts of disguises, all but these three were understood to have been either killed or captured," by Killie.

[killie62_giles1126_messengers]



Figure 142. Four soldiers, four prisoners. Bottom left: "Modern Chinese Soldiers" by Giles, 1901. Bottom right: "Prisoners to be Shot" by Giles, 1901.

[giles1159_1901_ChSoldiers_1162_prisoners]

Messengers, for example, were paid to go over the walls on the deadly missions, described in Killie's caption (above), "The only messengers (out of a score or more sent) who succeeded in getting to Tientsin and return. Although they went in all sorts of disguises, all but these three were understood to have been either killed or captured."

The above grid juxtaposes messengers photographed by Giles and Killie in their respective styles, close up and wide. Giles altered the caption for his photo of the young messenger in his published diary from "A messenger who went to Tientsin & back. Aged 14" in the handwritten version, to "A Chinese messenger, Liu Wu-yuan (age 16), who went to Tientsin and back." Adding the subject's name elevates him from a generic type to someone Giles may have known or at least considered worthy of identification.

The grid of images makes visual connections in the bottom two pictures, where the subjects are, similar to Killie's image, posed in a line. The two images appear to have been photographed by Giles at the same location, the left labeled, "Modern Chinese Soldiers," and the right, "Prisoners to be Shot," both dated 1901. Given the matching details in the shots (if these scenes are not artificial) they may have been taken at the same time as the execution is prepared.

While Killie's album has no pictures of Boxers or the Imperial government troops, Giles includes two dramatic images of Boxers, "Boxer Temple" and "First Boxer Captured," (below). His diary describes several mid-June sorties to rescue Chinese converts: "Russians and Americans went off in a strong body to the Nan T'ang to save native Christians. Many were found roasted alive, and so massacred and cut up as to be unrecognisable."²⁴⁹ On June 16, he describes a raid on a Buddhist temple in which apparently unarmed Boxers were killed: "To-day twenty British marines, ten Americans and five Japanese went out eastwards and a temple was surrounded, and burst into. Some fifty Boxers were found there. Every one was killed almost without resistance."²⁵⁰ Wartime brutality manifested on all sides. Captured Boxers were soon executed and, Giles writes, "their bodies chucked over the wall."²⁵¹

²⁴⁹ Giles and Marchant, *The Siege of the Peking Legations: a Diary*, 114.

²⁵⁰ *Ibid.*, 115.

²⁵¹ *Ibid.*, 129.



*Figure 143. Boxers in Giles' photographs.
 Left, "Boxer Temple" and right, "First Boxer Captured"
 From the archive of Lancelot Giles, Beijing, 1900
 [giles1106_1900_BoxerTemple_1156_BxCaptured]*

The "Boxer Temple" photograph raises the question of who is the photographer, since Giles does not indicate that he participated in these raids. The undated photographs cannot be linked to specific dates and diary entries. Marchant's 1970 book reproduces the diary from the original handwritten text and states explicitly that, "The photographs reproduced in this book were taken by Lancelot Giles during the siege of the Legations, many of them under fire from the Chinese positions."²⁵² However, looking at the array of photographs in these albums it is possible that Giles collected some photos from other sources or had others take them. As with much visual ephemera such as diaries and albums, attributions are often vague.

Killie's photographs capture the Chinese community in candid shots working on sandbags, fortifications, and food preparation. They are present in many photos as a very visible part of siege life, at times as other than as laborers and servants, countering the impression given in many histories that emphasize their marginalization by a diplomatic community that left them to fend for themselves without provisions. Album photo No. 55 shows "twenty foreign and native Catholic nuns, who were the guests of the manager of the Peking Hotel," and No. 66 includes the Chinese "on the tennis court discussing the situation after the arrival of the relief party."

²⁵² *Ibid.*, (xiii).



No. 55. The Siege in Peking.

In the British Legation. End view of the Front Tinger (or Pavilion). This part was usually occupied by about twenty foreign and native Catholic nuns, who were the guests of the manager of the Peking Hotel.



No. 66. The Siege in Peking.

In the British Legation. Foreigners and natives on the tennis court discussing the situation after the arrival of the relief party.

Figure 144. People within the siege.

Left, “No. 55. The Siege in Peking. In the British Legation. End view of the Front Tinger (or Pavilion). This part was usually occupied by about twenty foreign and native Catholic nuns, who were the guests of the manager of the Peking Hotel.”

Right, “No. 66. The Siege in Peking. In the British Legation. Foreigners and natives on the tennis court discussing the situation after the arrival of the relief party.”

Images by Charles A. Killie, Beijing, 1900

[killie51_killie55_46873_yale_49]

Variations: Loopholes and Sudden Death

Fortifications during the siege were penetrated on both sides with deadly loopholes—vertical holes in walls and barricades for viewing and through which rifles picked off the opposition. Photographs of the loopholes by Giles and Killie contrast their styles and the impressions they make on viewers. Giles aims his lens directly through the loophole in an extreme close up that blends claustrophobia and exposure in an experiential view. At first glance the image, “Through a Loophole,” looks abstract, but once viewers learn what a loophole is, it becomes frightening. Killie’s image could not be more different, a long shot of a building with a fence in the foreground. The only reference to loopholes comes in the caption.

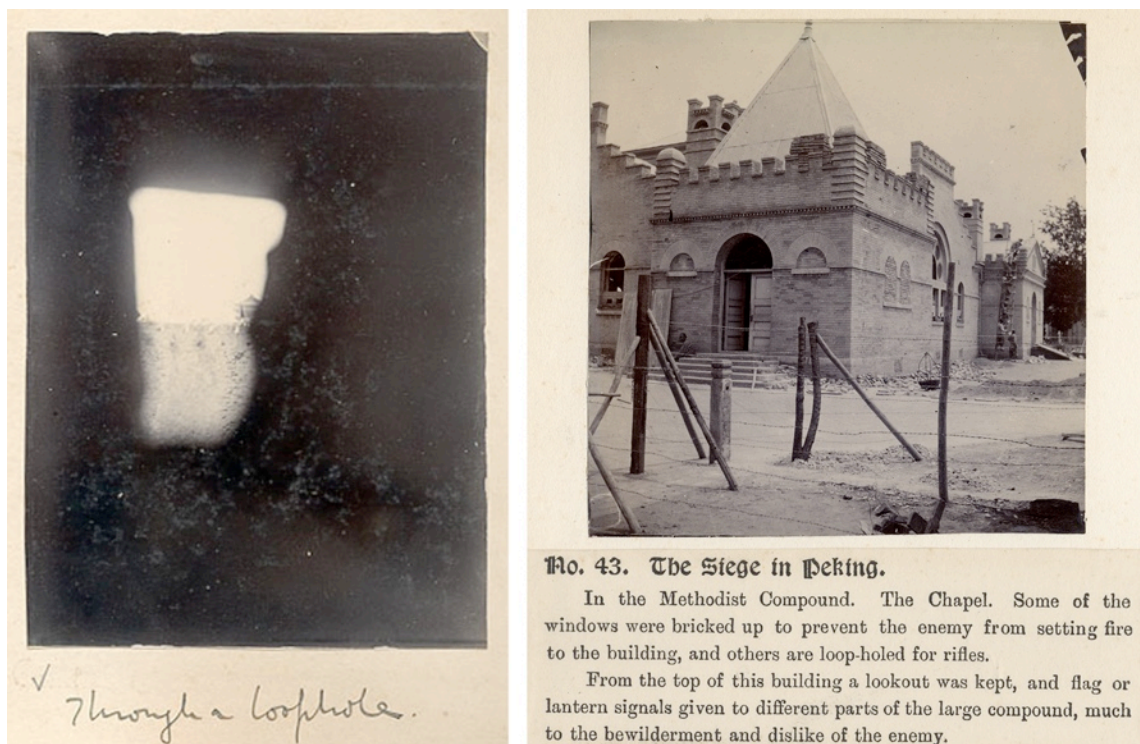


Figure 145. Loopholes and barbed wire.

Left, "Through a Loophole" by Lancelot Giles, Beijing, 1900.

Right, "No. 43. The Siege in Peking. In the Methodist Compound. The Chapel. Some of the windows were bricked up to prevent the enemy from setting fire to the building, and others are loop-holed for rifles. From the top of this building a lookout was kept, and flag or lantern signals given to different parts of the large compound, much to the bewilderment and dislike of the enemy," by Charles A. Killie, Beijing, 1900.

[killie43_46855_yale_31_giles1174]

Bland on the surface, Killie's shot comes to life upon close viewing. After zooming in to examine the loopholes in the bricked in windows, we notice the barbed wire, "Put up to prevent a rush by the Chinese soldiers and Boxers,"²⁵³ Killie notes. Its appearance ties the scene to a topic with far-reaching effects in the American West, war, concentration camps, and today's refugee crises. Other details that Killie mentions include the communication signals that emanated from the tower. In the far distance on the right, the photo captures a line of Chinese and Western men on a ladder, apparently handing sandbags up to the roof.

Through a combination of textual cues, visual details, and contrasting views the logistics of the siege come into focus. We notice "loopholes" in other photographs, as in "Old Betsey," in which "American Gunner Mitchell was here shot by bullet which came through the loop-hole in front on his gun."

²⁵³ Killie, Charles A. Photo album, *50 Views of Siege of Peking*. Caption "No. 41. The Siege in Peking. In the Methodist Compound. Barbed wire fences. Put up to prevent a rush by the Chinese soldiers and Boxers." (1901).

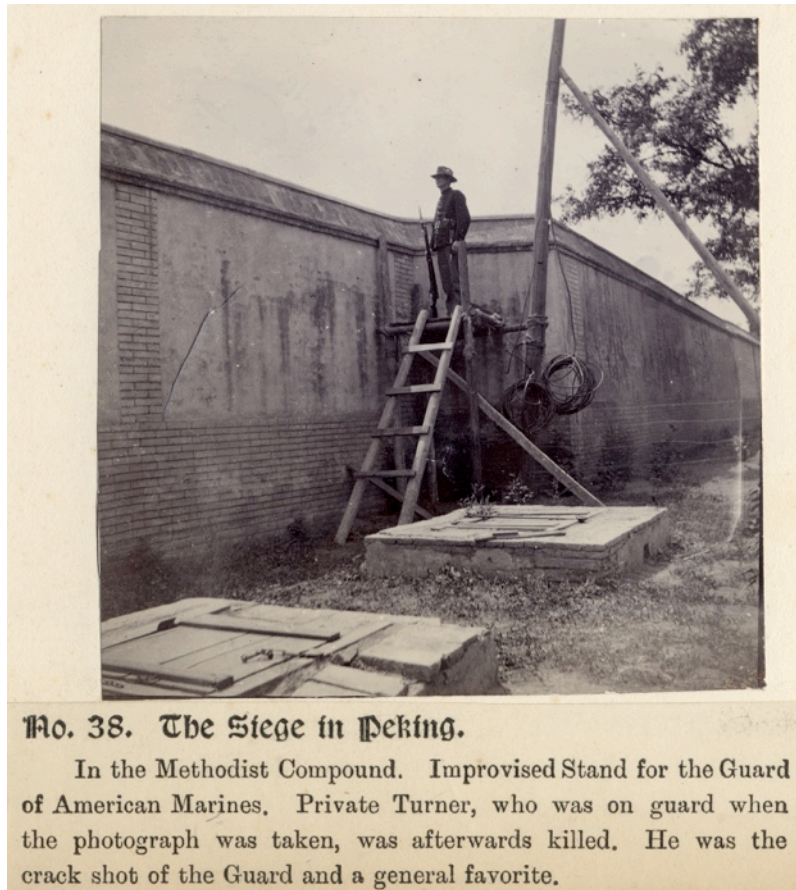
Friends and comrades of the photographers appear in images with captions relating their deaths. In Killie's haunting photo "No. 38," Private Turner stands at his post, exposed and vulnerable to enemy fire. The caption confirms that he was later killed: "Private Turner, who was on guard when the photograph was taken, was afterwards killed. He was the crack shot of the Guard and a general favorite."

Figure 146. Death of comrades and friends.

"No. 38. The Siege in Peking. In the Methodist Compound. Improvised Stand for the Guard of American Marines. Private Turner, who was on guard when the photograph was taken, was afterwards killed. He was the crack shot of the Guard and a general favorite."

*Charles A. Killie,
Beijing, 1900*

[killie38_46853_yale_29]



Evidence of sudden death shows the immediacy of historical views made while events are unfolding. A supreme tension between image and caption forces viewers to reconcile the moment when a person lives, preserved in a photograph, with notice of their death in the caption. It is a seminal juxtaposition, like an on-off switch. Unlike pictures of corpses, where life is not present to counterbalance death, these photos speak about sudden and irrevocable change, loss, courage, and uncertainty. The grammar necessarily combines language and vision—we see the living person; we are told they are dead—in a uniquely photographic lexicon.

Comparing Subjects: Fire, Hanlin Yuan, Birds-Eye Views

Lancelot Giles was born in China and spoke Chinese. During the siege he was assigned to the Fire Defense Committee. He addressed his account of the siege to his father, a scholar in Britain best known for developing the Wade-Giles system of romanization for Mandarin Chinese. Charles Killie had been in China for ten years as a missionary when, worried about escalating Boxer attacks, he and his wife moved to Beijing just weeks before the siege. A 1901 U.S. military report claims that Boxers killed 171 of 240 Chinese converts in Killie's former district.²⁵⁴ Killie was on the Fortification Committee.

Their identities are reflected thematically as visual clusters within the photographic sets. The many pictures of fires, for example, show Giles' involvement in fire defense. He chronicles the daily life in the compound and includes harsh experiences: butchering the ponies for food (his own horse was lost this way); destruction of living quarters, checkpoints at barricades, and the graves of his fellows. His account begins before the siege and follows through to its aftermath, the signing of the Boxer Protocol, and even includes a rare photograph of the Empress Dowager's return to the capital in the winter of 1902. His group of student interpreters were indispensable to the military. Giles wrote:

One of the students is always on duty at the North Bridge held by the British marines. During the day anyone can pass...but at night everyone passing over it is stopped...I did not find any difficulty in making myself understood or in understanding the talk of the people questioned. (page 113)

Of particular interest to Giles was the Hanlin Library, a repository for many priceless manuscripts just yards from the British Legation. Giles wrote: "There was some doubt as to whether we should occupy the Hanlin as a strategic position, and pull down the buildings as a preventive of fires. It was argued, however, that the Chinese would never set fire to so venerable a monument of the country's literature."²⁵⁵

On June 23rd, fire destroyed the Hanlin Yuan. Conflicting accounts blame either the Boxers or the British. Giles wrote, "An attempt was made to save the famous *Yung Lo Ta Tien*,²⁵⁶ but heaps of volumes had been destroyed, so the attempt was given up. I secured vol. 13,345

²⁵⁴ *Annual Reports of the War Department for the Fiscal Year Ended June 30, 1901*, part 4. Washington D.C. 1901. Report dated March 20, 1901, p. 491.

²⁵⁵ Giles and Marchant, *The Siege of the Peking Legations: a Diary*, 126.

²⁵⁶ *Yong Lo Da Dia*

for myself, merely as a specimen."²⁵⁷ With his Sinologist father and brother at the British Museum, he would have been sensitive to the destruction of the extant scrolls from the irreplaceable encyclopedia of all Chinese knowledge compiled by 2,169 scholars. The destruction of the Hanlin Yuan puts the siege of Beijing in studies on the destruction of cultural artifacts during war, including stories of children playing with the charred wood blocks of great works and soldiers using them to plug holes in walls.²⁵⁸

A side-by-side comparison reveals different emphases within the two photographic sets:

Giles	Killie
Fires	Fortifications
Hanlin Yuan: interior destruction & books	Hanlin Yuan: exterior destruction & fortification
Commemorative Portraits: small military & fellow students	Commemorative Portraits: large formal groups
Places: barricades & hand-drawn maps	Places: general scenes & birds-eye views
Time span: June 1900 - winter 1902	Time span: August 1900

*Figure 147. Comparison of emphases in the two photographic records of the siege.
Chart: Sebring, 2015.
[chart 4-1]*

Killie made formal commemorative photos of large foreign groups who had survived the siege. He also took spectacular birds-eye views looking over the walls and documented the destruction of the city. The sensory effect of these views as visual narrative is discussed in a later section of this case study.

Findings

What were some of the similarities and differences in the two photo sets left by Giles and Killie? These views from within the siege can be juxtaposed to reveal nuances that reflect

²⁵⁷ *Ibid.*, 126.

²⁵⁸ Lucien X. Polastron, *Books on Fire: The Destruction of Libraries Throughout History* (Rochester, Vermont: Inner Traditions, 2007), 102-103.

the subjectivity of the maker's eye. Observation of the imagery gradually accumulates evidence about the men, women, children, Westerners, Japanese, Chinese, missionaries, soldiers, and enemies unified in survival and death of its own type. Details about the way executions were carried out, the death toll among the Chinese Christians, diplomatic community, and some 40% of the soldiers, are covered in diaries and historical studies. The visual record touches on these stories without elaborating on them, pushing the narrative in multiple directions. While the imagery can trigger research and writing on many topics, to constantly embed visuals within textual discussion eventually drains their impact, even when these arguments are image-driven. The siege visual record can stand on its own, like albums in counterpoint, as a spatial-temporal graphic view.

Findings include:

- (1) Separating eyewitness images from eyewitness texts enables them to convey their own account of historical events as seen through the lens.
- (2) Parallax between two different eyewitness photographic sets creates a tension between similar shots that activates deep observation by viewers attempting to resolve the gaps—missing information—between the shots.
- (3) Parallax between two shots of the same scene is like a film animation with missing frames, but the viewer's response to single images with gaps versus watching a continuous film becomes passive since the search for missing information beyond the frame relaxes.
- (4) Parallax includes the lens and photographer in the historical moment captured on film.
- (5) The eyewitness diary approach includes a wide range of often unplanned elements in its account of events. The photos capture people, geography, destruction, defense, communication, food, work, clothing, fatigue, and additional intangible environmental factors visible through observation of sets (more than one image) that fall under the description of "atmosphere."
- (6) Juxtaposition of two or more shots facilitates comparative viewing that excavates nuances in the photos, between media, as when reprinted in a magazine and captioned.
- (7) Juxtaposing photos by the two photographers reveals differences in their approaches and what they saw and preserved in their visual records.
- (8) Each photographer featured subjects that the other did not, for example, Lancelot Giles included photographs of the enemy Boxers and Chinese soldiers; Charles Killie included women, group commemorative photographs and birds eye views of Beijing.
- (9) Combining these visual records restores missing dimensions to the historical view. Viewers might ask what else may have escaped documentation and why.

- (10) The best images from each photographer are not necessarily highlighted in this discussion. These can stand on their own, while less obvious photographs become meaningful through juxtaposition with other photos.
- (11) Candid photographs captured unfiltered aspects of daily life. For example, the Chinese Christians within the compound. Some of the observations may undermine attitudes expressed in texts on the subject.
- (12) Creative tension between juxtaposed images and/or image and caption actively engages the viewer in an attempt to reconcile differences.

Restoring the primary source to the historical treatise in terms of presenting images as “text” eliminates some of the judgements and filters of authors looking back at the past. It also allows the unvarnished opinions of the participants to appear front and center. Those who were besieged did not want to be killed. They did everything they could to fight their enemy and there are many nuances in their behavior.

Research and editing of primary sources is the work of the historian, yet there is vibrancy in the unnecessary images that aren’t central to the story. I’m not sure how this translates into a new media presentation of visual materials that are interactive, comprehensive, accessible in micro and macro views and are yet, not databases, but are authored, mediated stories. I hope by building the components, possibilities for the whole will emerge. The diary photographs embody Paul Cohen’s idea of history as “experience” elucidated in his book on the Boxer Uprising, *History in Three Keys*. Those who kept a diary during the siege was confined and deprived of most information except the immediate environment and efforts to survive.

A major part of the historian’s process is data collection and verification. Images hold a unique imprint of their time, and convey a sensibility about the people, the “lay of the land,” and the state of the world at the moment these events took place. It is different than primary source texts and carries both obvious and subtle information in the qualities of the imagery and the ways in which imagery was made during this time period.

In putting together an overarching view of the Boxer Uprising, each set of images offers a new experiential perspective. These image sets coexist as content modules. Their sum total is a collision of points-of-view. The actions of different groups become sympathetic and when you zoom out, the whole appears like a game board of misaligned intentions. Restoring the primary source to the historical treatise and presenting images as “text” eliminates some of the judgements and filters of authors looking back at the past. It also allows the opinions of the participants to appear front and center.

5.5 Visual Narrative 3: Reconstructing the March on Beijing

Objectives

“March, Tientsin to Peking (August 4-14, 1900)” examines visual narrative within a series of images. Users click through the series at their own pace, triggering pre-programmed details, annotations, and texts. This small but significant level of interactivity encourages deep looking and observation by making the user experience active rather than passive, as when watching a movie. Shown full screen, the goal is to immerse viewers in an authored visual space.

The China Relief Expedition, or the Second Intervention, was a key military maneuver in the Boxer war. This visual narrative reconstructs the march on Beijing through the visual record to learn about the following:

- (1) What happened on the 10-day march of the Allied forces from Tianjin to Beijing to relieve the siege of the foreign legations?
- (2) What battles were fought between Allied and Chinese troops?
- (3) What were the conditions that resulted in Allied deaths outside of battles?
- (4) Were atrocities committed as reported overseas in political cartoons and the press?

The visual narrative follows troop movements along a map over the course of ten days with narrative nodes along the pathway. Maps, bird’s eye views, photographs, and illustrations, offer a multi-dimensional view of a basically linear progression from Tianjin to Beijing. Described here in full, the digital versions are not viewable online, but may be sent upon request.

While many visual narratives are not as linear or expository, reconstructing the march reintegrates images that were drifting in databases having lost their original connection to this event. The diversity of media shows the depth of digitally blended sources. When readers move from one image to the next, a trans-medial shift occurs that dislodges the rhetoric of each media type. For example, the armies’ path through the cornfields looks different on a road map than on a picture map or photograph, which in turn contrast with fanciful illustrations of the troops printed in overseas newspapers.

On-site views and distant, editorial views look and feel different. Chinese woodblock prints also change the perspective, not only politically and militarily, but by asking readers to

enter a non-Western visualization of time and space. Re-envisioning events in a variety of media disrupts continuity, forcing readers to deepen observation. A momentary blending in our perception of two different types of images—like a movie dissolve—broadens the internal ontology of each image, adding knowledge that is blurred, indefinite, and sensory. Readers study the visual footprint of the march.

A simple, linear trajectory—the march from Tientsin to Peking (that is, Tianjin to Beijing; note that period names will be used in this section to correspond to the period graphics)—winds through various ways of telling the story such that the whole becomes more than the sum of the parts.

Story

On August 4, 1900, the troops of the eight-nation international alliance began a march from the city of Tientsin to relieve the siege of the foreign legations in Beijing. It took ten days to cross the flat landscape of cornfields, keeping close to the supply junks moving up the curving Peiho (Hai) River. In the first few days Chinese troops lay in wait for the invading army, engaging in battles with significant losses on both sides. Pursuit of the defeated Qing troops, however, was inhibited by the deadly heat. The Chinese blocked the river and used a time-tested technique of cutting away the riverbanks to flood the plains and turn them into impassible marshes.

Villages were largely abandoned by the time the Allied troops arrived. The Allied army depleted the wells, foraged for food and supplies, looted, and burned. Villagers who remained behind, such as family servants ordered to protect property, did not usually survive. The conduct of the loosely unified troops, still under their own commanders and regimental rules, ranged from brutal to orderly and restrained (depending on who was telling the story).

Slipping away before advancing Allied forces, the Chinese army fell into increasing disarray. One Chinese general despaired over the catastrophic loss of discipline and, without clear authority to rally the troops, committed suicide as the foreigners neared Peking. The wealthy merchant city of Tung Chow became a scene of destruction, suicides, and crimes against the civilian population by foreign soldiers. Unmitigated competition between nations marred the Allied entry into Peking, as Russia jumped the march, decamping just before midnight to steal the gate into the city that had been assigned to the Americans. Ironically, the

Russians were pinned down under fire and suffered losses while British forces walked unceremoniously into the city through a water ditch. On August 14th, the siege of the foreign legations in Peking was lifted and by the 16th, the Allies seized the seat of China's dynastic rule, the Forbidden City.

Media

Maps, picture maps or bird's eye views, newspaper illustrations, postcards, drawings, advertisements, photographs of soldiers, and woodblock prints of battles form the grammatical elements of the narrative tracing the route and timeline from August 4 to 14.

Technical Information

Built in Apple Keynote, the narrative should be viewed full screen. Animated moves zoom in and pan across details. Highlights and written texts focus the narrative with story elements, naming the villages along the route and pulling in disparate illustrations and photographs of events there. Twenty-five images appear along with text screens that enhance the visuals with background, timeline, events, and quotes from participants.

Because it cannot be viewed here directly, screen shots are shown with explanations of the medial and narrative strategies particular to this visual narrative, the march to Peking through the visual record c. 1900. In the digital versions, readers advance the screens and animations at their own pace. They need time to observe and sort the visual impressions in their own minds. Self-navigation through the story differentiates visual narrative from film. Films move at the editor's pace and follow the writer's narrative exposition. Authors frame the story with just enough information to create a desire to know more. For example, a map changes from artifact to tool when it is used to plan a route. Historical maps come to life when their use is highlighted. Their original purpose—to show the route the army must take—was tailored for the army, for people on the home front, and for participants and historians recounting the incident.

The Visual Narrative: Image-to-Image Animation

March: Tientsin to Peking, Allied Troops, August 4-14, 1900

The narrative opens on the brink of the expedition as the army assembles in Tientsin in early August of 1900. Readers are cautioned that it gives a partial view of events as recorded by the foreign powers that invaded China, using mainly American and British sources. Names generally appear in the various archaic forms used in the graphics.

A timeline shows the Allied march to Peking in relation to other events.

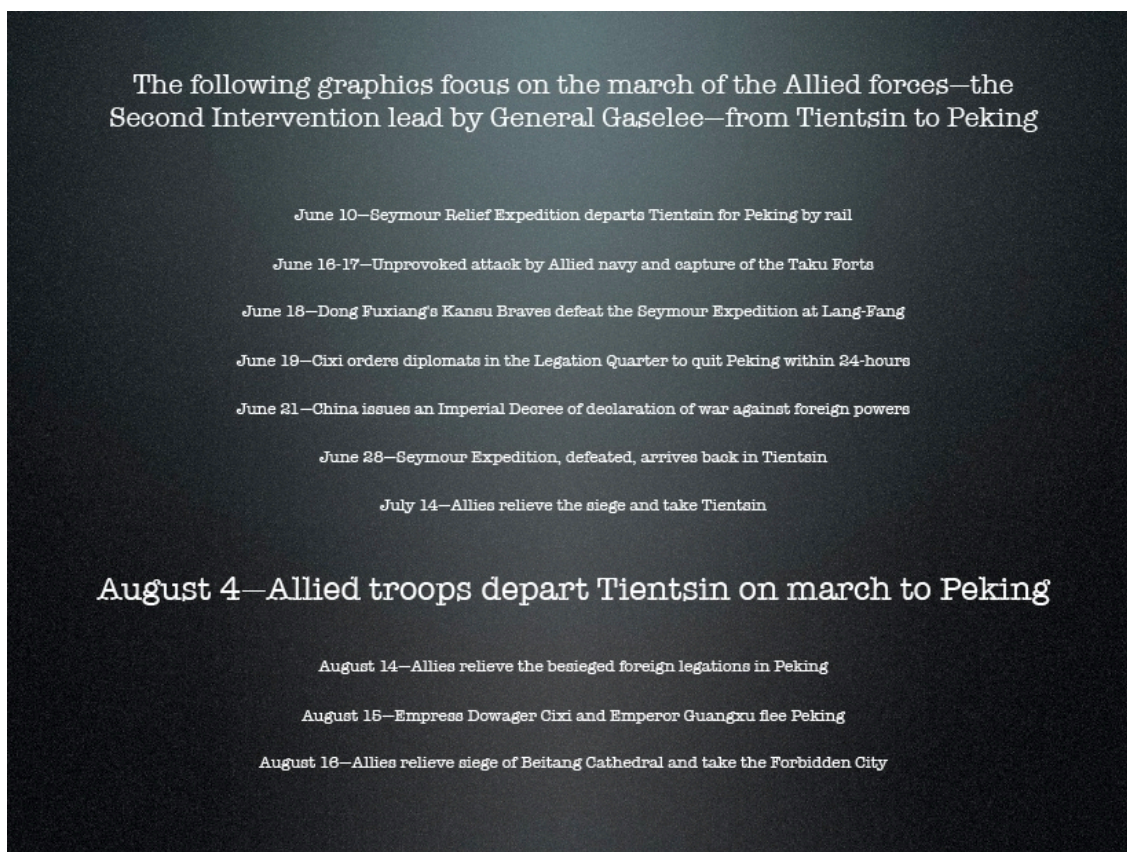


Figure 148. Opening text in the visual narrative.

Text screen: The following graphics focus on the march of the Allied forces—the Second Intervention lead by General Gaselee—from Tientsin to Peking.

[bxvn_scr_march00]

Text from the first screen:

The following graphics focus on the march of the Allied forces—the Second Intervention lead by General Gaselee—from Tientsin to Peking.

June 10—Seymour Relief Expedition departs Tientsin for Peking by rail

June 16-17—Unprovoked attack by Allied navy and capture of the Taku Forts

June 18—Dong Fuxiang's Kansu Braves defeat the Seymour Expedition at Lang-Fang

June 19—Cixi orders diplomats in the Legation Quarter to quit Peking within 24-hours

June 21—China issues an Imperial Decree of declaration of war against foreign powers
June 28—Seymour Expedition, defeated, arrives back in Tientsin
July 14—Allies relieve the siege of Tientsin
August 4—Allied troops depart Tientsin on march to Peking
August 14—Allies relieve the besieged foreign legations in Peking
August 15—Empress Dowager Cixi and Emperor Guangxu flee Peking
August 16—Allies relieve siege of Beitang Cathedral, take the Forbidden City

An artfully rendered picture map, published in the American illustrated magazine *Harper's Weekly* in 1900, zooms in on the terrain around the Chinese forts at Taku. A red circle appears and highlights the starting point of the march at the city of Tientsin and traces the overland route adjacent to the Peiho river to the destination, Peking. The picture map conveys knowledge of the march as a physical passage rather than a statistic—70 miles or 10 days—as it is often described in text.

The next slide shows readers how the picture map was originally published, flipped vertically on a full page next to an article titled, “What America has at Stake in China.”

In slides 7 and 8 road maps give contrasting views of the route. Similar media types, such as road maps and picture maps, offer multiple ways of looking at information. Like crafting a paragraph of textual exposition that sets the scene, the subtle differences between types of maps add depth to the introduction.

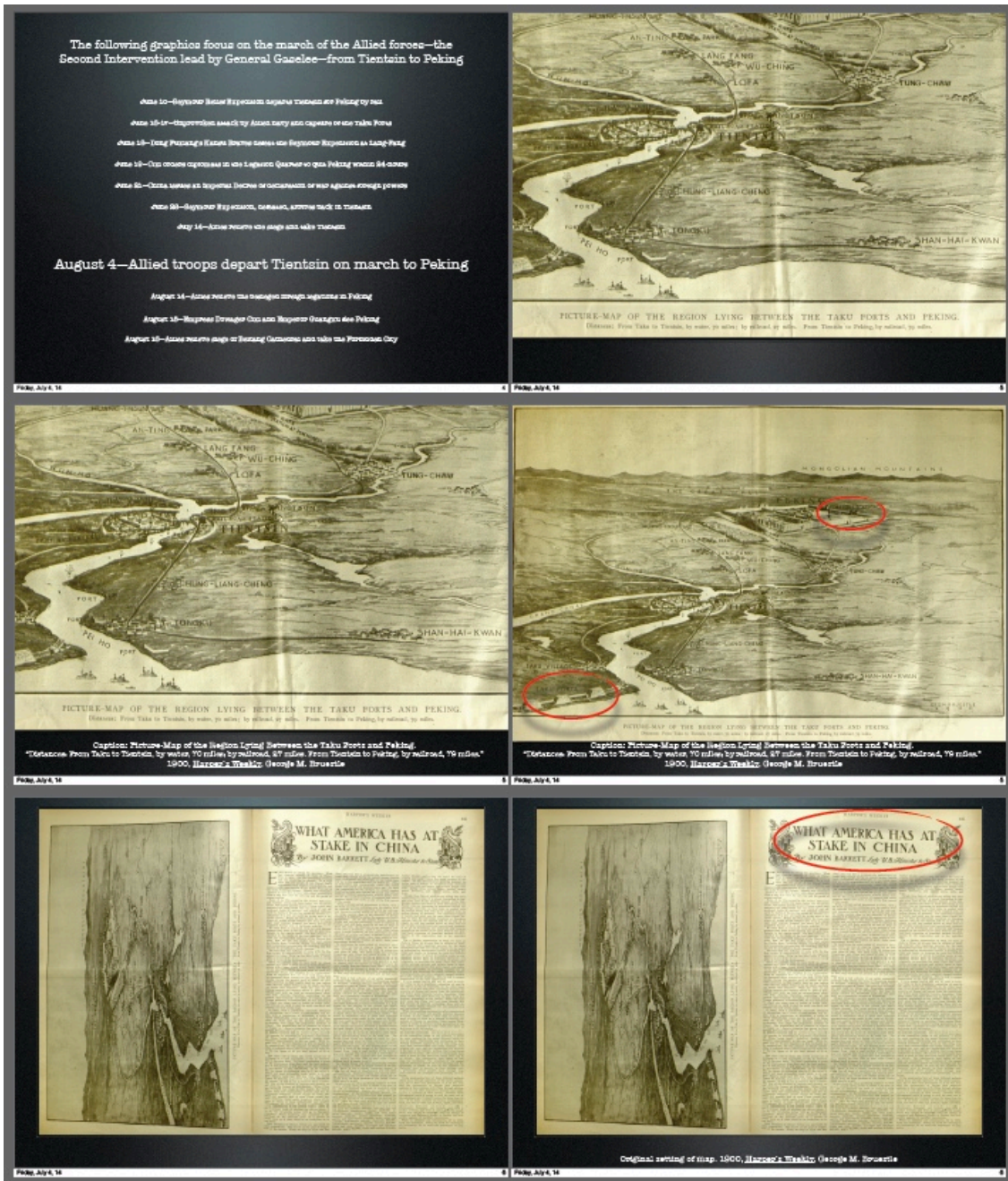


Figure 149. Animating maps to show the route of the march on Beijing.
 Caption: "Picture-Map of the Region Lying Between the Taku Forts and Peking"
 "Distances: From Taku to Tientsin, by water, 70 miles; by railroad, 27 miles. From Tientsin to Peking, by railroad, 79 miles."
 Harper's Weekly, New York City, 1900.

[bxvn_scr_march01]

The two maps had different purposes. The first, a finely detailed French map titled, "Théâtre des opérations en Chine: environs de Pékin," was issued by the Army Geographical Service presumably for military use. The second, "Map Showing Routes of Relief Forces," comes from *China in Convulsion*, a famous 1901 account of the Boxer Uprising by Arthur H. Smith, an American missionary who was among the besieged in Peking. Smith's map shows the

routes of the two relief expeditions in red. “June, Seymour & McCalla” (dotted red line) refers to the first unsuccessful mission, June 10-26, 1900, lead by Admiral Edward Hobart Seymour of the British Navy and his second in command the American Captain B. H. McCalla.

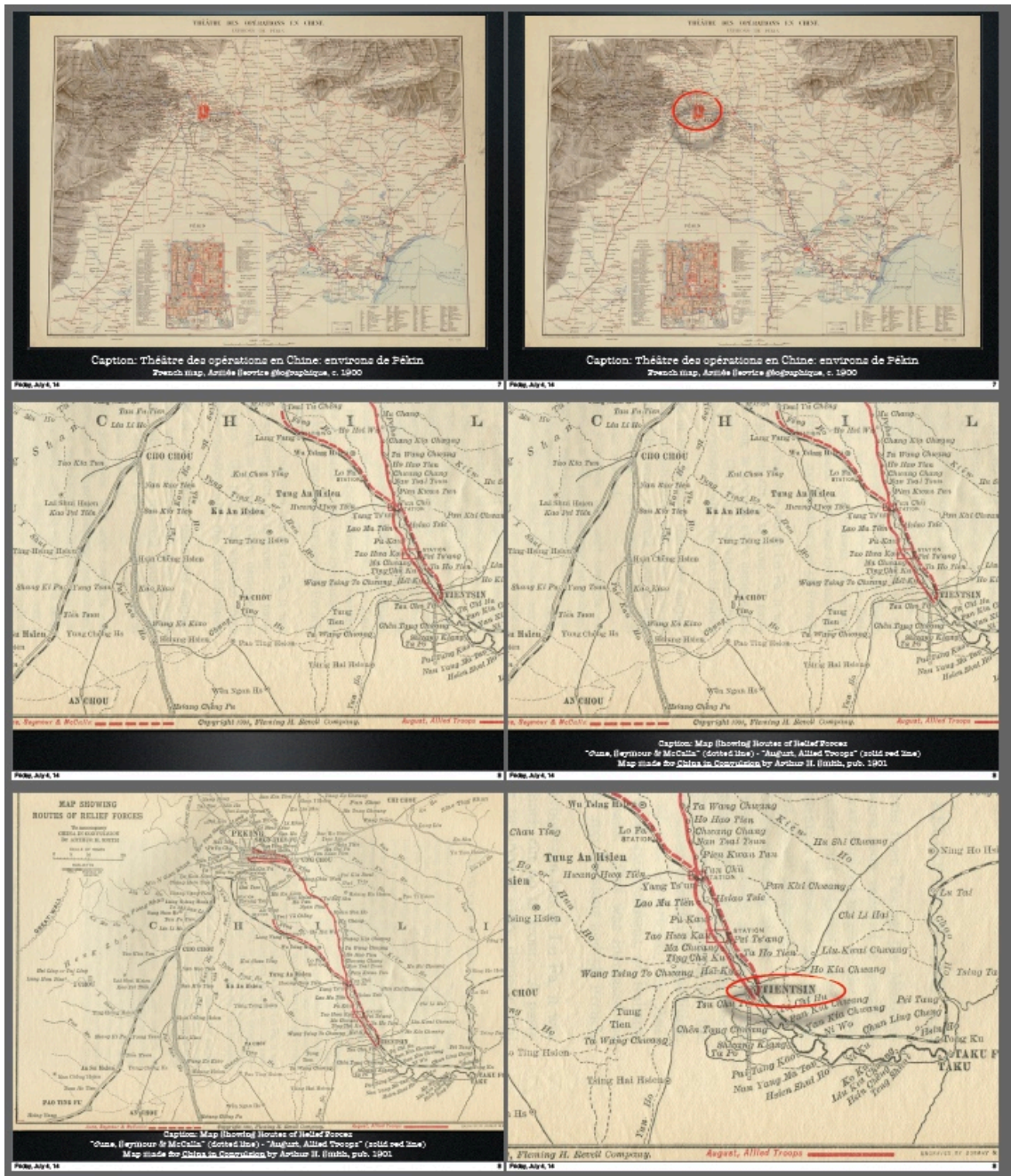


Figure 150. Using period maps to cross check locations of battles.

Map 1: “Théâtre des opérations en Chine: environs de Pékin
French map, Armée Service géographique, c. 1900.

Map 2: “Map Showing Routes of Relief Forces”
“June, Seymour & McCalla” (dotted line) - “August, Allied Troops” (solid red line).
China in Convulsion by Arthur H. Smith, pub. 1901.

[bxvn_scr_march02]

The second, successful mission, labeled “August, Allied Troops” (solid red line), is the mission investigated here. Animation of the images continues with a red circle that moves along the route from Tientsin to Peking, and the map will be used throughout the visual narrative to correlate images to place battles at locations along the route.

The visual narrative turns from geography to soldiers. A group portrait by Japanese photographer Sanshichiro Yamamoto shows the unusual diversity of the troops gathered in Tianjin for the expedition. The first slide, unannotated, allows viewers study the picture, observing the men and their attitude. They pose congenially, even clasping hands. Excavating this print meant identifying the men’s nationalities by uniforms, which have a dauntingly large number of variants. The second slide identifies the soldiers as Indian Sikhs, British infantry, German East Asia Brigade, United State Cavalry, Italian Bersaglieri with their dramatic plumbed hats, Russian and Austro-Hungarian sailors, Japanese infantry, and two soldiers as yet unidentified.



Figure 151. Soldiers of the Allied forces, photograph taken in Tianjin, China. Portrait taken by Japanese photographer Sanshichiro Yamamoto, 1900. Labels of nationalities were added for the visual narrative.

[bxvn_scr_march03a]

Information on period uniforms came from popular illustrated book series on military campaigns, collections like the Anne S. K. Brown Military Collection at Brown University, and from the unexpected source of model soldier enthusiasts. Text slides provide additional details on the make up of the forces:

The Combatants—Chinese Forces

Chinese forces estimated between 50,000–100,000 were Qing troops under command of General Ma Yukun, General Song Qing and General Li Ping-Heng.

Boxers were not encountered on the expedition route; many had by this time been absorbed into the Chinese forces and were in Qing Dynasty uniforms.

The Combatants—Allied Forces

Allied expedition forces of about 18,800 were under acting command of British General Alfred Gaselee. German Field Marshal Alfred von Waldersee was chosen as commander by bickering Allied forces, in part because he was still in Germany and would have little influence.

Allied troops depart Tientsin (Tianjin) – August 4

A photograph captures the British Royal Marine 'Bluejackets' leaving Tientsin for Peking.

Expedition Troops: 8,000 Japan, 4,800 Russia, 3,000 Great Britain (composed of some 900 British, 1,300 Indian Colonial, 200 Chinese)
2,500 United States, 500 France, Austria and Italy, about 100
*(as reported by General Daggett; other sources, such as Harrington give different numbers)

German troops of about 200 went as far as Pei-tsang (Beicang), but unprepared for the conditions, returned to Tientsin following the battle. Based on the defeat of the Seymour expedition in June, larger forces were desired, but British and American commanders emphasized the urgency of relieving the siege of the foreign legations in Peking.

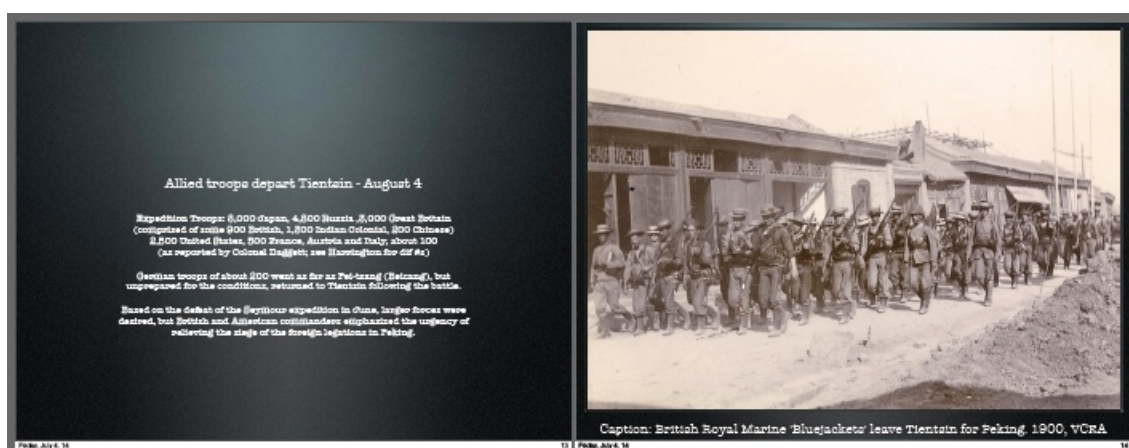


Figure 152. The march begins.

British Royal Marine 'Bluejackets' depart Tientsin for Peking.

Photograph, 1900, from the large database of the Visual Cultures in East Asia Collection (VCEA), Lyons Institute of East Asian Studies.

[bxvn_scr_march04a]

all over the country, and arches erected to the memory of great men dot the landscape. All sorts of carts, beasts of burden, and foot-travellers are the adjuncts to the scene. Note the nearer of the two foremost figures, who is clothed in a waterproof of oiled straw. Literally he is a 'thatched man'.

A quote from *America in the China Relief Expedition*, a 1903 account by General Aaron S. Daggett, explains the daunting logistical challenges of supplying a large army. Military accounts often provide practical information on campaigns that are not part of general histories. Supplies:

About 200 coolies were pressed into the service to carry cooking utensils, cans for boiling water, litters, rations, and many things for which other transportation could not be furnished. Major Waller, having been there longer than most officers, had gathered Chinese carts for the marines. A pack-train of about 50 mules also arrived on the 4th, just in season to be of use that afternoon. The men carried 100 rounds of ammunition... (Daggett, 1903)

The image captioned "The First Coolie Corps Bringing Provisions into Peking for the British Troops," features the colonial troops who fought Britain's wars. The subject of the British Indian soldiers and their simultaneously exoticized and subaltern role in colonial wars drives another visual narrative. Dragging "Peking carts" was an equal opportunity task: another image from the British periodical, *The Graphic*, captioned "A Mixed Team of Cossacks and Coolies Drawing an Ammunition Cart," depicts Russian Cossack divisions and the Chinese referred to as coolies who were hired or pressed into service as the troops advanced.



THE CRISIS IN CHINA: THE FIRST COOLIE CORPS BRINGING PROVISIONS INTO PEKING FOR THE BRITISH TROOPS

Figure 154. Indian colonial troops, and the task of supplying an army.

Caption: "The Crisis in China: The First Coolie Corps Bringing Provisions into Peking for the British Troops. The first coolie corps on the march to Peking brought in carts with hay and all kinds of stores for the troops. A detachment of Madras Pioneers in khaki formed the escort.

Drawn by Frank Dodd, R.I., from a sketch by our special artist, Fred Whiting."

The Graphic, London, Nov. 17, 1900 (detail)

[graphic_1900_057]

A 1900 photograph captures the convoy moving across the flat plains and cornfields followed by explanatory texts.

The Column

"Those who are not accustomed to seeing troops and trains on the march are little aware of the length of road it requires to straighten out a column. ... Cavalry and artillery increase the length of a column enormously. The Americans, therefore, were obliged to begin the march about three hours later than the head of the column; this was unfortunate, for it threw them badly into the heat of the day..." (Daggett, 1903)

Cornfields and Dust

Heat was the enemy, reaching temperatures over 100 degrees Fahrenheit. Marching through cornfields that blocked breezes and raised dust, troops were afflicted by heat stroke which accounted for many casualties. Water was available in village wells, but the length of the column meant troops in the rear arriving hours behind the front often did not get clean water.



*Figure 155. Convoy on the road to Beijing.
Photograph, 1900, Source: VCEA
[vcea_1900_NA03-31]*

August 5: Pei-Tsang (Beicang)

In one of the earliest battles, August 5, the Allies capture Hsiku Arsenal and the town of Pei-Tsang (Beicang). The visual narrative moves north along the map, red circles indicate the town names and related pictures.



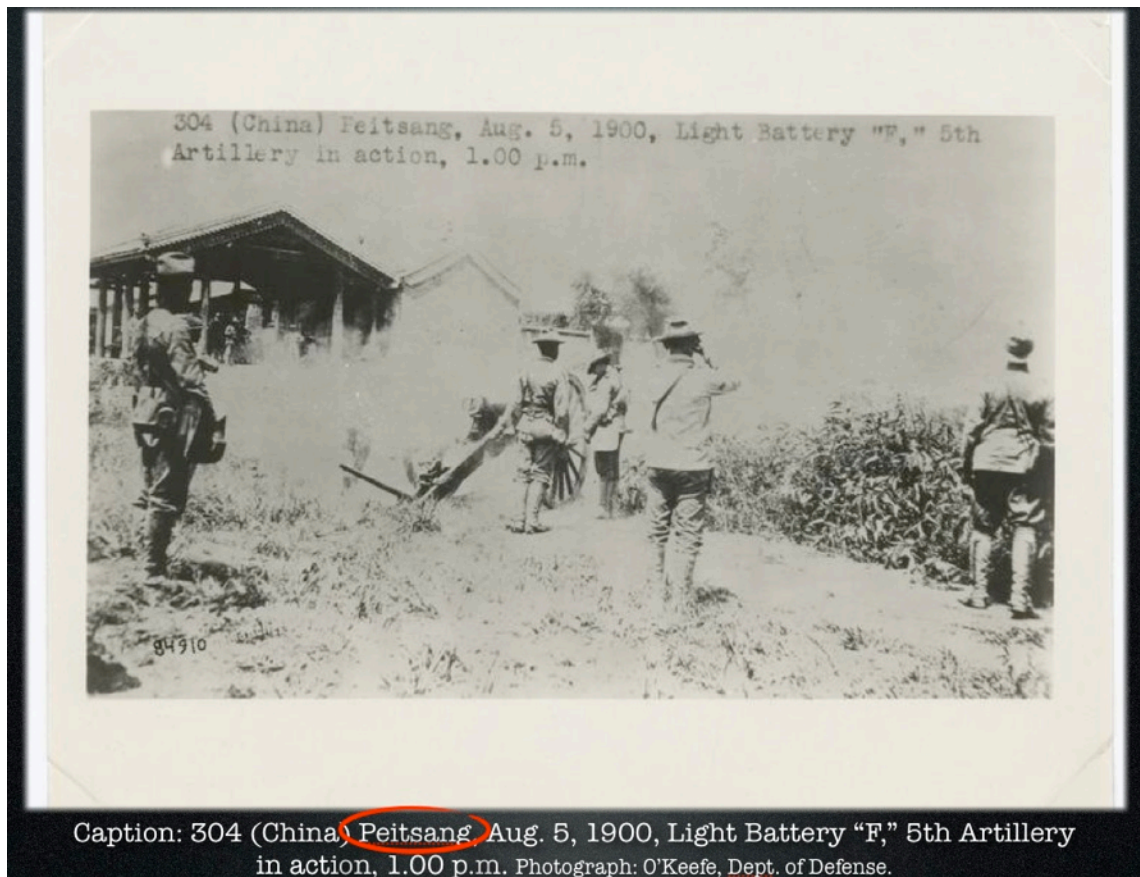
Figure 156. "Ammunition-Train, near Pei-Tsang."

Illustration, America in the China Relief Expedition, A. S. Daggett, US Army, published 1903.

[bxvn_scr_march07]

Prolific army photographer, Francis O'Keefe, annotated the place, date, subject, and even time of day: "Peitsang, Aug. 5th, 1900, Generals Gaselee, Chaffee and Staffs, 8.00 a.m."

He captures gunfire later in the day.



*Figure 157. Scene of fighting in Peitsang.
Caption: "304 (China) Peitsang, Aug. 5, 1900, Light Battery "F,"
5th Artillery in action, 1.00 p.m."
Photograph: Francis O'Keefe, U.S. Department of Defense.
[bxvn_scr_march07b]*

The interplay between several similar photographs deepens our understanding of any single image. Such juxtapositions elevate the status of photographs beyond judgements of their individual aesthetic and documentary value. Placing photographs within a surrounding pastiche of related sources—such as the output of a photographer on the scene—restores their position as pieces of direct evidence, and often illuminates the image-maker’s role in the unfolding drama. Understanding the perspective of the image-maker is critical in excavating these primary sources.

The digital medium means many photographs can populate a narrative node, like a particular place on a particular date. Differing visual sources, tinted by their reproduction in various print formats, help us recognize how we respond to intangible signals: haziness suggesting dust, over-exposure as if sun washed, or type-written labels that herald the imagined

click of keys in a dusty military office before the image is filed with the thousands in the U.S. National Archives in Maryland.

A penned-in caption, “Pei-tsang Camp,” gains significance by locating this otherwise unremarkable album page with other images at Peitsang. We will see the page again as other locations are visited on the route to Peking. The hand-written captions add much needed information that mitigates to some extent the difficulty in viewing the small photographs. The album appears online as numbered by the Colonial Office of the National Archives, UK, in seemingly random order.



Figure 158. Other views of Peitsang and repeats of images of the march.

Caption: “Pei-tsang Camp.” from “Peking” Album,
National Archives, Colonial Office, UK, 1900

[bxvn_scr_march08a]



Figure 159. Sidebar to the visual narrative: pages from the "Peking" Album.
 Source: National Archives, Colonial Office, UK, 1900. To view reassembled album:
http://ellensebringarchive.com/boxer/album_peking/ [[link](#)].
 [album_peking1900]

While the free accessibility of the scans online from site like Flickr helps researchers, libraries could help further by reproducing artifacts as close to the original as possible. For example, the album with photographs in order, with covers, would have been impossible to

reproduce here without visiting the archive and viewing the original. Excavation asks who made and annotated the album and how were the photographs collected? Many of these photographs appear elsewhere in the visual record. While helpful, the captions need verification that correlates them to other versions of the imagery.

August 6: Yang Tsun (Huangcun or Yangcun)

The march moves further north to Yang Tsun (Huangcun or Yangcun). The Bengal Cavalry and Lancers are photographed deep in the cornfields at Yang-Tsun.



Figure 160. Dusty cornfields; the Chinese view.

Top: *Bengal Cavalry and Lancers (British) at Yang-Tsun. Photographs from America in the China Relief Expedition, by Brig.-Gen. A. S. Daggett, US Army, pub. 1903.*

Below: “Imperial Envoy Li commands on the battlefield; Song Gongbao decisively defeats the foreign troops.” *Chinese nianhua (New Years Print), 1900.*

[bxvn_scr_march09]

The demonstration of Chinese competence continued the next day. The allies awoke to find that the Chinese rear guard had snuck away overnight and “vacated” the field. This left the Western powers with nothing to do but chase the Chinese up the road, which they duly did. The next town was Huangcun, about twelve miles north.²⁵⁹

The woodblock print shows one way the Chinese reported on the war. *Nianhua* (New Year prints), explored in another Visual Narrative, were a cottage industry of decorative prints that included political topics, but more commonly, inexpensive popular pictures for the home. The Boxer war *nianhua* depicted victories by the Boxers and Chinese troops including the battles for Tianjin, as well as a large number of prints focusing, perhaps surprisingly, on Russian troops in Manchuria. The print shown here introduces the much-needed Chinese perspective. Though not specifically about the 10-day march, it brings important Chinese generals into the picture.



Figure 161. Chinese battle scene.

“Imperial Envoy Li commands on the battlefield; Song Gongbao decisively defeats the foreign troops.” *Chinese nianhua (New Years Print), 1900.* Source: U.S. National Archives Transcriptions and Translations (below) by Professor Peter C. Perdue.

[ch_na07_1900c_NatArchives008]

²⁵⁹ David J. Silbey, *The Boxer Rebellion and the Great Game in China*, (Hill & Wang, 2013).

The transcribed Chinese texts and translations for this print:

Caption: 李欽差督陣 宋宮保大破外兵

Imperial Envoy Li commands on the battlefield; Song Gongbao decisively defeats the foreign troops.

(left): 內山; 野 (?) 伏兵; 新竹; 浮橋; 張軍門埋伏; 外兵死亡相繼
Inner mountains; guerrilla troops wait in ambush; New bamboo [Place name];
Pontoon bridge; Commander in Chief Zhang's ambush; Foreign troops die one
after another

(right): 大元帥李; 賞銀; 拳民獻首; 拳民接仗 Supreme Marshall Li;
Monetary reward; The Boxers present a head; Boxers engaged in battle.

The *nianhua* conflates battles and commanders in a print that dramatizes China's part of the war: Boxer rebels had killed missionaries in the area; General Song lead troops in the earlier battle at Pei-Tsang; and General Li Ping-Heng (Bingheng) was active in the August campaign. Finally, the depiction of "Commander-in-Chief Zhang's ambush" in the mountains on the left side may refer to Manchuria, but more research is needed, especially using prints that show conflicts in the mountains that are available, but not yet digitized, in the British Library.

General Li fought the Allied forces at Ho-hsi-wu (Hexiwu). Upon defeat he retreated to Changchiawan and wrote despairingly about the disarray of of the Chinese army.

General Li Ping-Heng's report, August 11, on the retreating Chinese troops:

For the past few days I have seen several tens of thousands of troops jamming all the roads. They fled as soon as they heard of the arrival of the enemy; they did not give battle at all. As they passed the villages and towns, they set fire and plundered, so much so that there was nothing left for the armies under my command to purchase, with the result that men and horses were hungry and exhausted. From youth to old age, I have experienced many wars, but never saw things like these. . . . Unless we restore discipline and execute the retreating generals and escaping troops, there will be no place where we can stand. But I am unable to do this because of lack of authority. (Tan, 1967, 110)

The map moves from Yang Tsung to Ho-hsi-wu (Hexiwu), the site of a July 25 battle between the famed General Dong Fuxiang and his Kansu Braves against the earlier failed relief expedition.

The heat became well-nigh insufferable, and it was reported that three hundred men had fallen out, while ten horses succumbed to sunstroke. The advance guard for the day was the Bengal Lancers. As we neared the end of the day's march we found the road obstructed by Chinese troops. Two miles outside Ho-hsi-wu the Chinese cavalry came out to oppose our progress. The Lancers formed up, and for a time there was a desperate encounter. (Rev. Frederick Brown, Intelligence Dept., Allied forces and war correspondent)²⁶⁰

²⁶⁰ Brown, Frederick (2012-06-04). *The Boxer Rebellion: From Tientsin to Peking - The Illustrated Edition* (Campaigns of the British Empire) (p. 6). Parchment Publishing Ltd. Kindle Edition.

The *Review of Reviews* illustrates the “ease with which a small expeditionary force cut its way to Peking” with a simple map captioned “The March to Peking. 1900” that clearly shows the proximity of the Peiho (Hai River).

A fleet of junks also was loaded with reserve ammunition and other supplies, and moved up the river with the troops; but as the Pei-Ho is very crooked, the troops frequently bivouacked many miles from it. (Daggett, 1903)

August 9-12: Tsan-Tai-Toun and Chang-Kia-Wan

With many variations in Westernized spelling of town names, battles on the “March to Peking” map are identified by date which are matched to dates on Chocolat-Louit promotional cards, placing them at the scene.

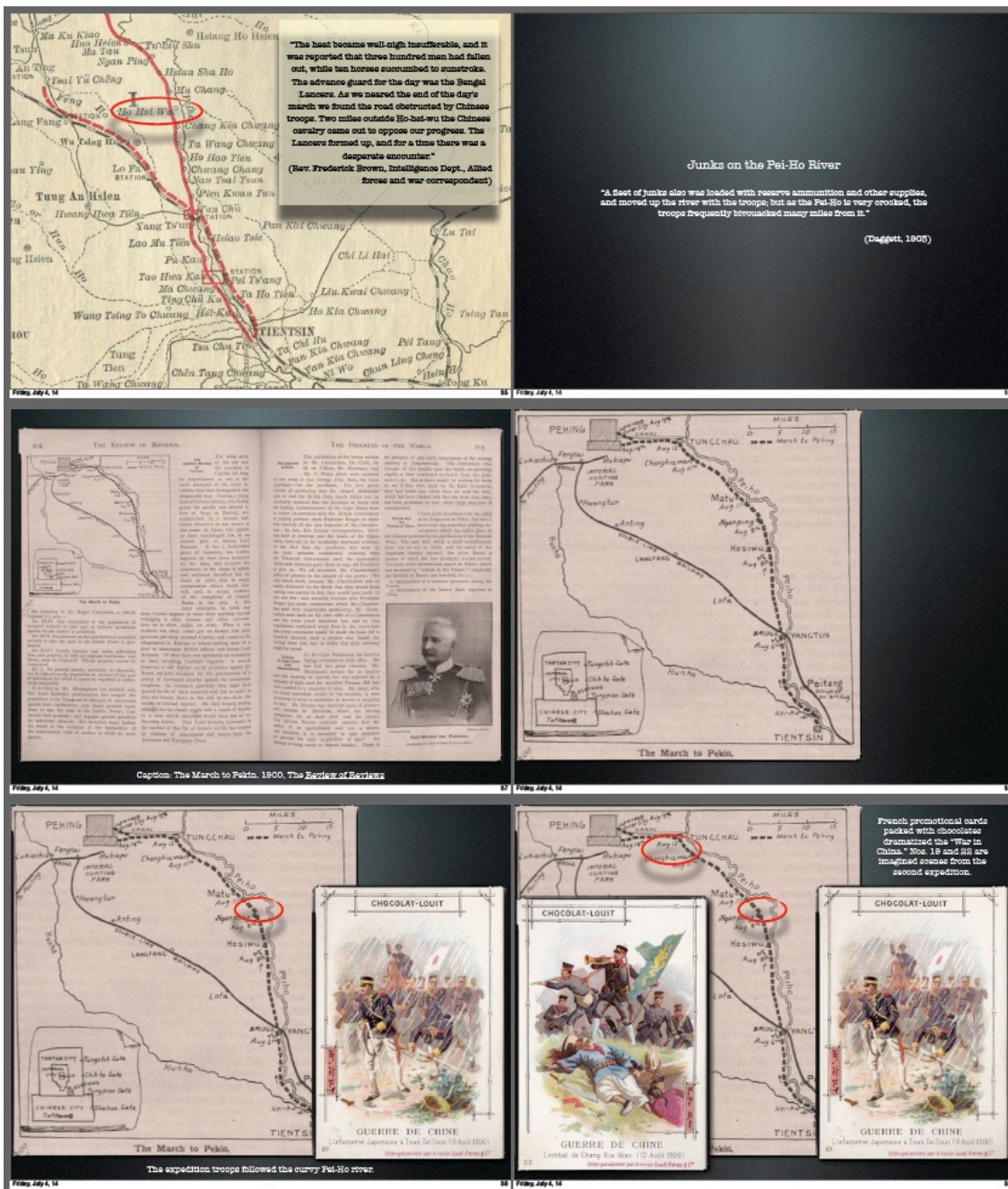


Figure 162. A map identifies battles with promotional cards. Map from the Review of Reviews shows progress, Aug. 9 to 12, 1900. Chocolat-Louit promotional cards imagine battles on those dates.

[bxvn_scr_march10]

Many in number, the Chocolat-Louit cards with their colorful mini-battle scenes appear frequently in Boxer Rebellion searches. They attest to the public fascination with the war in China that extended to commercial trading cards for collectors of all ages. That the melodramatic scenes of various armies, here the Japanese infantry, in heroic poses and bloody battles correspond to the dates and towns in the campaign, is almost unexpected. Certainly the

connection would not easily be made without the large database of sources, but it tells us that news reaching the overseas public was detailed, serialized, romanticized, and of general interest.

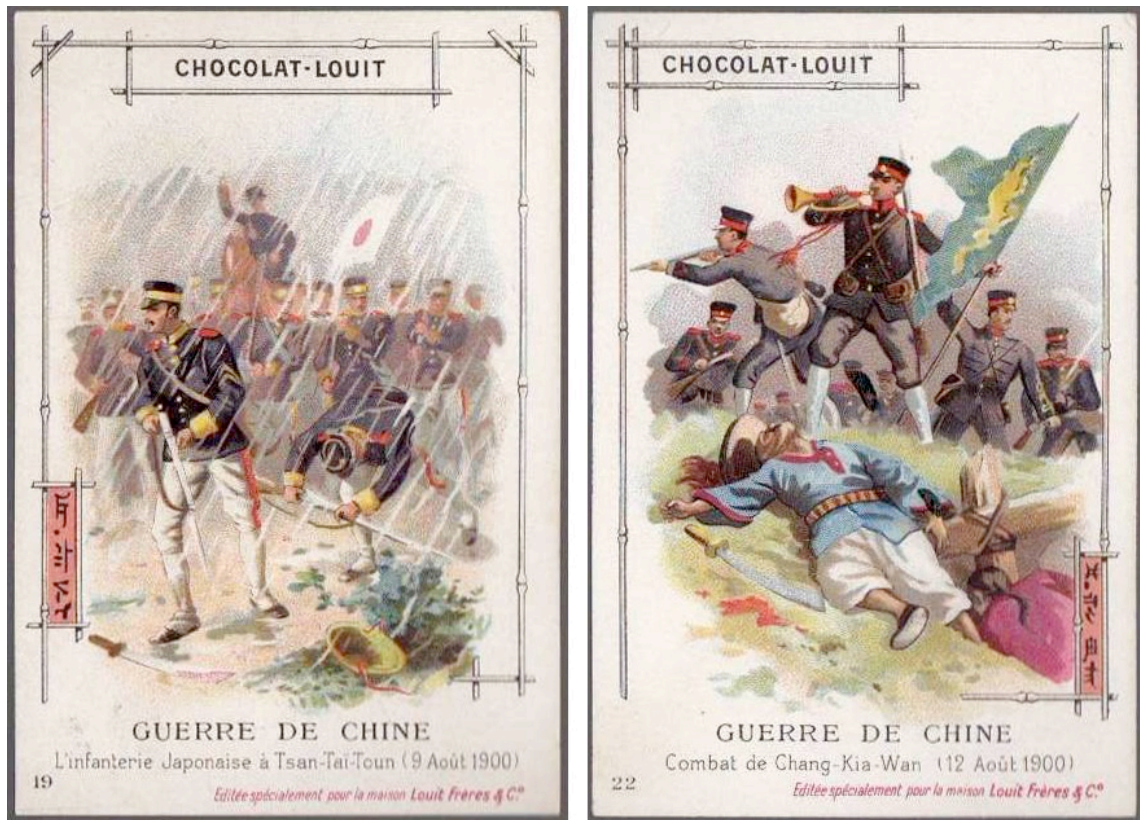


Figure 163. French Chocolat-Louit cards.

Promotional cards packed with chocolates dramatized the “War in China.”

Nos. 19 and 22 are imagined scenes from the second expedition: at Tsan-Tai-Toun on August 9 and Chang-Kia-Wan on August 12. Chocolat-Louit cards, 1900, Editée spécialement pour la maison Louit Frères & Co.

[choc-louit19_1900_09Aug] [choc-louit22_1900_12Aug]

August 12: Tung-Chow (Tongzhou District of Beijing)

Approaching Tung-Chow (Tongzhou District of Beijing), the worst the troops encountered was severe heat and dust. A. H. Savage Landor’s account includes a photograph that illustrates the effects of the flooding tactic used by the Chinese, “Japanese sappers repairing cut in river bank.”



Figure 164. The terrain, Russian and Japanese troops.

(near right) Caption: "Japanese sappers repairing cut in river bank," Photograph from A. H. Savage Landon, *China and the Allies*, v1 (378) 1901. (far right) Caption: "Russian Artillery, near Tung-Chow, showing the effect of the dust." Illustration from Brig.-Gen. A. S. Daggett's *America in the China Relief Expedition*, 1903.

[bxvn_scr_march11]

"They blew open the gate and found the village deserted. The armies were in bivouac by noon," wrote General Daggett of the walled city of Tung-Chow. The wealthy merchant town became a scene of horrors. American clergyman, Arthur Judson Brown, writes of the barbarity of the foreign armies in his 1904 book, *New Forces in Old China: An Inevitable Awakening*:

Captain Frank Brinkley, the editor of the *Japan Weekly Mail*, penned the following indignant paragraph:-- “It sends a thrill of horror through every white man's bosom to learn that forty missionary women and twenty-five little children were butchered by the Boxers. But in Tung-chou alone, a city where the Chinese made no resistance and where there was no fighting, 573 Chinese women of the upper classes committed suicide rather than survive the indignities they had suffered. Women of the lower classes fared similarly at the hands of the soldiers, but were not unwilling to survive their shame. With what show of consistency is the Occident to denounce the barbarity of the Chinese, when Occidental soldiers go to China and perpetrate the very acts which constitute the very basis of barbarity?”²⁶¹

While most reports did not include the atrocities, a full page spread in the American illustrated paper, *Leslie's Weekly*, with photographs by Francis O'Keefe, mentions the suicides.

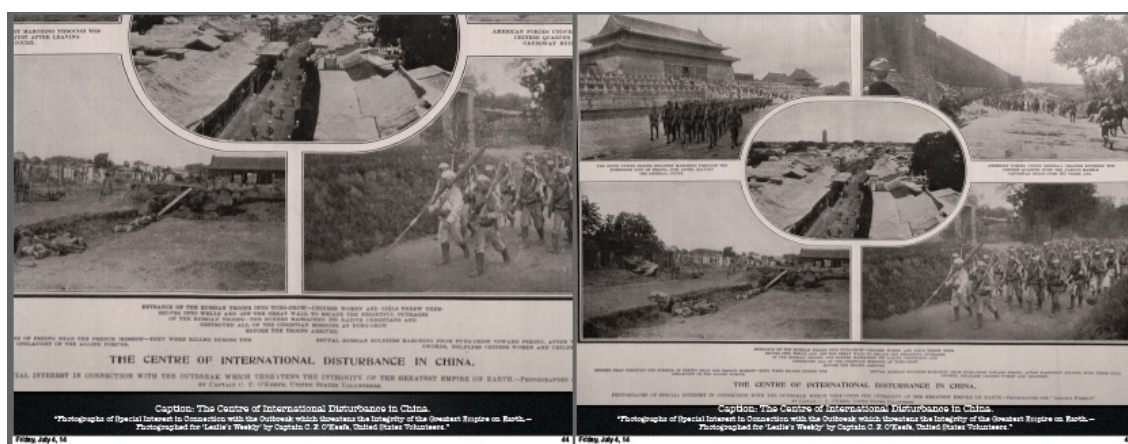


Figure 165. Zooming in on press reports of violence against civilians.

Caption: *The Centre of International Disturbance in China.*

“Photographs of Special Interest in Connection with the Outbreak which threatens the Integrity of the Greatest Empire on Earth.—

Photographed for ‘Leslie’s Weekly’ by Captain C. F. O’Keefe, United States Volunteers.”

Leslie’s Weekly, New York, 1900 (month unknown).

[bxvn_scr_march12a]

The inset caption describes a Boxer attack on the missions in Tung Chow and massacre of Chinese Christians, as well as the terror the inhabitants felt at the approach of the foreign army: “Entrance of the Russian troops into Tung-Chow—Chinese women and girls threw themselves into wells and off the great wall to escape the frightful outrages of the Russian troops—the Boxers massacred 200 native Christians and destroyed all of the Christian missions at Tung-Chow before the troops arrived.”

²⁶¹ Brown, Arthur Judson. *New Forces in Old China: An Inevitable Awakening*, F.H. Revell, New York, 1904. (322)



Figure 166. Pointing fingers at other factions.

Inset caption: “Entrance of the Russian troops into Tung-Chow—Chinese women and girls threw themselves into wells and off the great wall to escape the frightful outrages of the Russian troops—the Boxers massacred 200 native Christians and destroyed all of the Christian missions at Tung-Chow before the troops arrived.” The Centre of International Disturbance in China.

Leslie’s Weekly, New York, 1900 (detail).

[leslies_1900_v91_4_020_f]

A text slide suggests narratives and themes that emerge as repercussions of the occupation of Tungchow and devastation of the Chinese populace. Events in the city preceded the arrival of the army, including a rescue of stranded missionaries mounted by William Scott Ament; and later in 1900 and 1901, the explosion of a munitions facility that killed Westerners, and a passionate controversy over Ament’s acceptance of reparations perpetrated by the famous anti-imperialist, American author Mark Twain. Aspects of Tungchow devastation are listed:

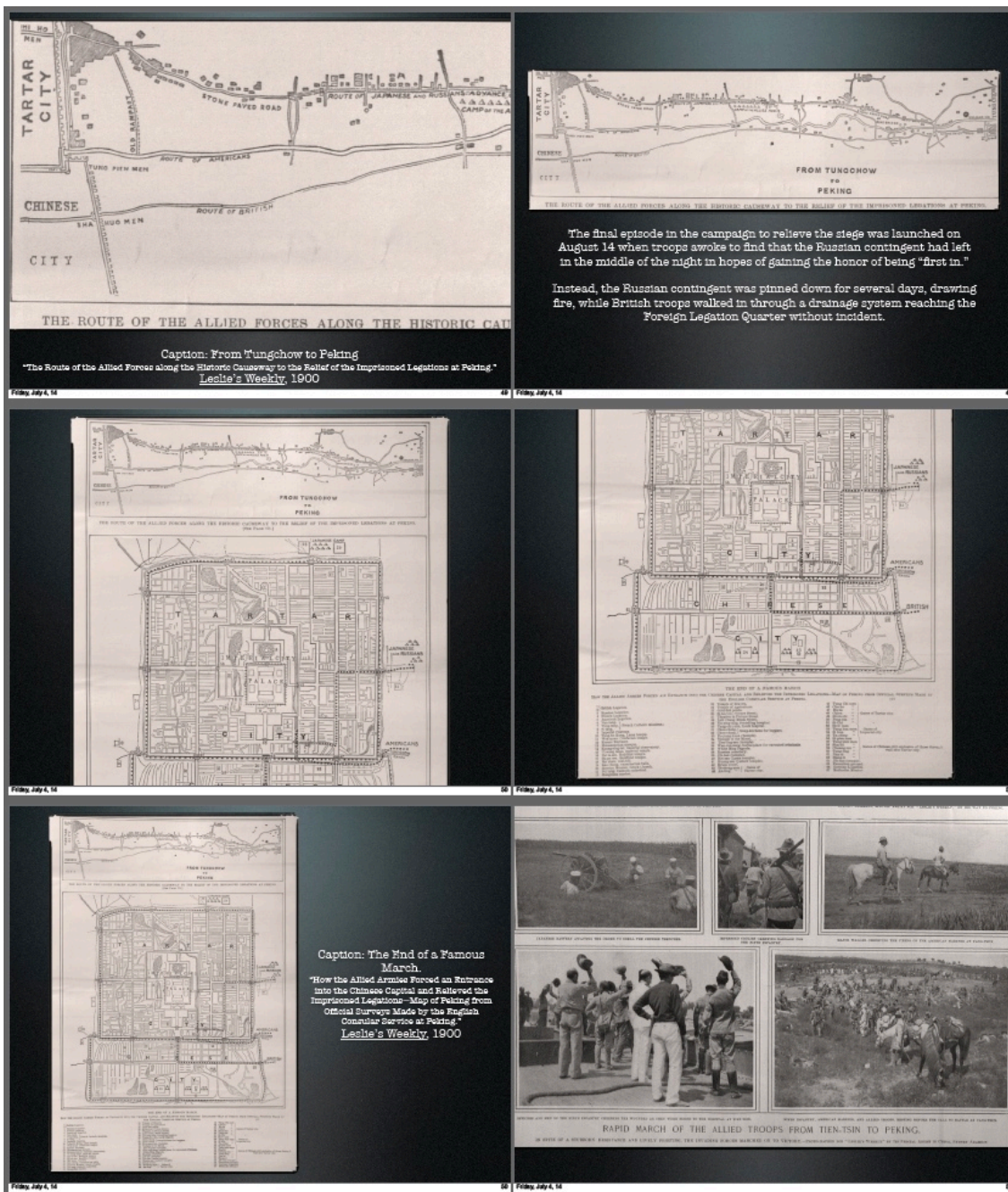
- Tungchow was a wealthy walled city, looted by troops and, after order was restored, by Chinese.
- At its loss, General Li Ping-heng, who left with boats of wounded, committed suicide.
- Boxers had destroyed the Christian mission and parts of the town.
- Allies blew up a temple with munitions.
- Controversy erupted between famous Americans: author Mark Twain accused missionary William Scott Ament who rescued the ABCFM missionaries in Tungchow, of inflating reparations.

The topic of the devastation wrought by both Boxers and the foreign military intervention is bleakly evident in a stereograph, worth introducing here, though it is not specific to this scene.



Figure 167. Scenes of destruction, not often conveyed in accounts.
Caption: "Village of Fung Chow, showing complete destruction by the Allied Forces, China, H. C. White Co., North Bennington, VT., U.S.A., Copyright 1902." Source: U.S. Library of Congress
[libc_1902_3c03017u]

August 13-14: Peking (Beijing)



*Figure 168. Final leg of the assault on the Beijing outer wall.
 (top map) Caption: From Tungchow to Peking. "The Route of the Allied Forces along the Historic Causeway to the Relief of the Imprisoned Legations at Peking."*

*(lower map) Caption: The End of a Famous March. "How the Allied Armies Forced an Entrance into the Chinese Capital and Relieved the Imprisoned Legations—Map of Peking from Official Surveys Made by the English Consular Service at Peking."
 Leslie's Weekly, 1900.*

[bxvn_scr_march13]

Finally, the Allied troops are within striking distance of Peking. Careful plans are made for an organized assault, with each army assigned one of the entry gates in the wall surrounding the city. *Leslie's Weekly* published a map of Peking, marking the gates as assigned by nation.

Reconnaissance of Peking; some troops bivouac at Tungchow;
others advance to Kai-Pei-Tien, August 13;
Allied troops enter Peking and siege of Foreign Legations ends, August 14

The full page features a highly detailed map of “The Route of the Allied Forces along the Historic Causeway to the Relief of the Imprisoned Legations at Peking.” The campsites and routes of the American, British, Russian, and Japanese armies are traced to the very walls of the Tartar City.

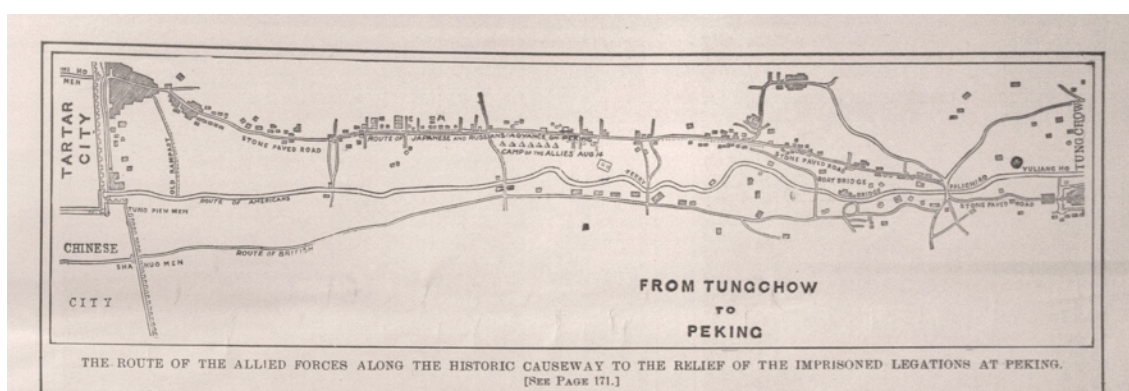


Figure 169. Assigning gates to different armies.

Caption: From Tungchow to Peking

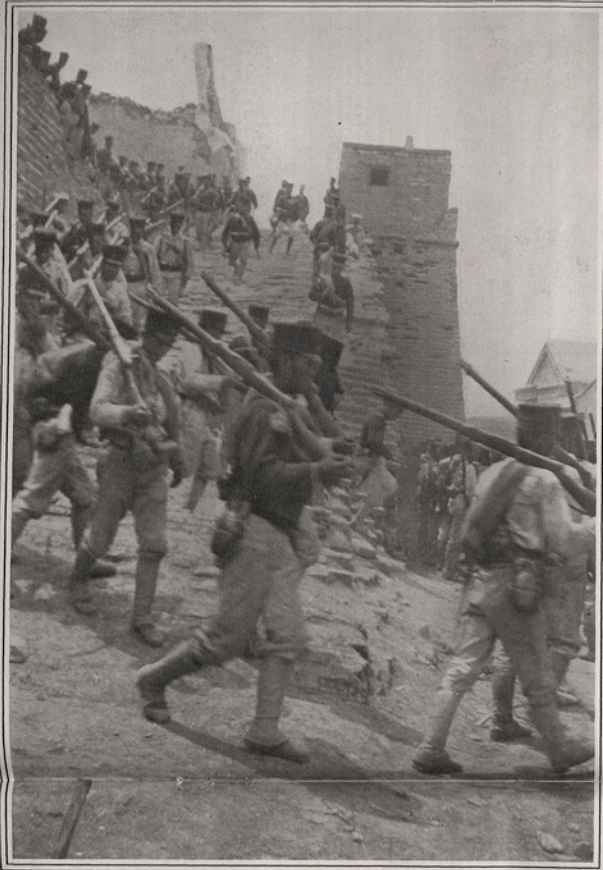
“The Route of the Allied Forces along the Historic Causeway to the Relief of the Imprisoned Legations at Peking.” Leslie’s Weekly, 1900.

[leslies_1900_v91_2_025_TOP]

The orderly plan falls apart, when, in a desire to be hailed as the liberators of the siege, the Russian army absconds around midnight while the other armies are bivouacked for the night. The American contingent follows just before daybreak and a general onslaught begins.

August 14: Relief of the Siege

Celebratory scenes of victory and trials along the way make up a collage titled, “Rapid March of the Allied Troops from Tien-Tsin to Peking.”



VICTORIOUS JAPANESE MARCHING INTO THE FALLEN CITY OF TIEN-TSIN.



THE GALLANT SIXTH INFANTRY ON THE MARCH TO PEKING—LIEUTENANT COLONEL COOLIDGE IN THE CENTER, AT THEIR HEAD.



WHERE THE BRAVE LITTLE JAPS FELL UNDER A RAIN OF CHINESE BULLETS.



SYDNEY ADAMSON, SPECIAL ARTIST FOR "LESLIE'S WEEKLY," ON HIS WAY TO PEKING.



JAPANESE BATTERY AWAITING THE ORDERS TO SHELL THE CHINESE TRENCHES.



IMPRESSED COOLIDGE CARRYING BAGGAGE FOR THE SIXTH INFANTRY.



MAJOR WALKER OBSERVING THE FIRES OF THE AMERICAN MARINES AT YANG-TSUN.



OFFICERS AND MEN OF THE SIXTH INFANTRY CHEERING THE WOUNDED AS THEY WERE BORN TO THE HOSPITAL AT TIEN-TSIN.



SIXTH INFANTRY, AMERICAN MARINES, AND ALLIED TROOPS, RESTING BEFORE THE CALL TO BATTLE AT YANG-TSUN.

RAPID MARCH OF THE ALLIED TROOPS FROM TIEN-TSIN TO PEKING.

IN SPITE OF A STUBBORN RESISTANCE AND LIVELY FIGHTING, THE INVADING FORCES MARCHED ON TO VICTORY.—PHOTOGRAPHED FOR "LESLIE'S WEEKLY" BY ITS SPECIAL ARTIST IN CHINA, SYDNEY ADAMSON

Figure 170. "The invading forces marched on to victory." Caption: Rapid March of the Allied Troops from Tien-Tsin to Peking. "In spite of a stubborn resistance and lively fighting, the invading forces marched on to victory.—Photographed for 'Leslie's Weekly' by its Special Artist in China, Sydney Adamson."

Leslie's Weekly, 1900. [leslies_1900_v91_3_012]

The final episode in the campaign to relieve the siege was launched on August 14 when troops awoke to find that the Russian contingent had left in the middle of the night in hopes of gaining the honor of being “first in.” Instead, the Russian contingent was pinned down for several days, drawing fire, while British troops walked in through a drainage system reaching the Foreign Legation Quarter without incident.

The mention of Sydney Adamson as the photographer in the caption will lead astute observers into another line of inquiry, since his work appears frequently in the Boxer Uprising data set. How his work was translated into drawings and dramatic scenes, and whether or not he was on the scene, reveals much about journalism in 1900 and military campaign narratives.



Figure 171. Images of the image-makers.

Caption: Sydney Adamson, Special Artist for "Leslie's Weekly," on his way to Peking. Leslie's Weekly, 1900 (detail).

[leslies_1900_v91_3_012_adamson]

The relief of siege of the Foreign Legation quarter, looting of Peking, and occupation of the seat of imperial power, the Forbidden City, are subjects of other visual narratives, each rich in historical ambiance and the pervasive themes of power and imperialism at the turn of the century. The use of visual media in the exercise of power is another widely researched topic.

Findings

The images in this point-to-point exposition present a rather benign view of a chaotic, violent, and grueling march to Peking, which was, by military standards in the West a virtually uncontested campaign. The mundane side of the endeavor comes across as a reminder that these men in uniform form an army with basic human needs outside of battle. The Chinese army and civilians encountered are largely absent from the extant visual record, except as coolies pressed into service and, along with photos of slain Allied troops, as corpses. The Chinese Weihaiwei regiment with some 200 troops under British command is pictured elsewhere, but not during the march. Several other images come to mind that counter the muted photographs, romanticized postcards, and maps made for public consumption. These graphics editorialize the aggression and bloodshed inflicted by the foreigners in China. It is unlikely that they represent the Gaselee expedition, since German troops turned back after the first battle, but rather the later arrival of German forces under the command of General Waldersee.



Figure 172. German image of the March on Peking.

Caption: *Marsch auf Peking.* “Wir deutschen Soldaten, wir ziehen daher, Den Ruhm, den müssen wir holen.”

Illustrierte Wochenschrift, c. 1900, Munich.

(March on Peking. We German soldiers, we draw, therefore, the glory which we must bring.)

[dh7023_e1429]

The blood red cartoon depiction of a missionary and international forces burning and killing civilians in China from the French publication, *L'Asiette au Buerre* comments on the overall impact of the prolonged occupation of China beyond the takeover of Peking. Note the 1902 date. This graphic by Théophile Steinlen receives extensive treatment in the visual narrative titled “Civilization and Barbarism” and represents a linking point or cross-section between the two visual narratives in the digital model.



Figure 173. Pivotal images linking between narratives.

From the issue titled:

“A Vision de Hugo, 1802-1902.” L’Assiette au Beurre, Feb. 26, 1902 (No. 47), Paris

Artist: Théophile Steinlen, Source: Bibliothèque nationale de France.

[cb72-245_1902_26Feb_pg05]

5.5 Looting and Other Suggested Narratives

Not all the visual narratives were built in full, nor can the full narratives be presented here. This section summarizes several of the other visual narratives that emerged from observation of the visual database.

Looting: Reporting the Good, the Bad, and the Ugly

The visual narrative, “Looting,” is a series of 26 animated slides highlighting themes found in c. 1900 imagery in the illustrated news, photographs, and cartoons. This visual narrative highlights illustrated newspaper reports on looting by Allied forces and Chinese civilians during the Boxer Uprising, including the pillaging of Beijing and the imperial Forbidden City. The many images of looting in the database, along with their prominent placement in period newspapers, suggest that the subject of looting was both titillating and controversial. Printed captions and adjacent news stories contextualize the images and, despite the digital form in which we view it today, revivify the complex connections that viewers of the time would have experienced, creating an associative historical memory.



Figure 174. Slides that make up the “Looting” visual narrative. Sebring, 2013.

[vn_loot_thumbnails]

The visual narrative opens with brief background information on wartime looting and the rules agreed upon by international powers at the 1899 Hague Convention. China, who had been victimized in the mid-19th century Opium Wars, did not sign. All of the nations that were to form an allied force and invade China in 1900 signed: Austria-Hungary, France, Germany, Italy, Japan, Russian Federation, United Kingdom, and the United States.

The eight nations who made up the Allied troops accused each other of looting while claiming to be innocent or, at least, less guilty by maintaining order and decorum in managing plunder. Most Chinese dwellings were fair game. Looters included soldiers, foreign diplomats and notably their wives, Chinese citizens, and Christian missionaries. The Qing government had fled the Forbidden City and the invaders couldn't or wouldn't control the pillage of the cities and countryside in the chaos that followed the advancing troops.

The cover of *Harper's Weekly* from November 10, 1900 begins with a list of contents, including "The formal entry of the foreign ministers into the forbidden city, Peking" and "The division of loot." The list continues with "the parade through Peking's Imperial Palace." Having taken Beijing, the Allied troops were looting, burning homes, and killing civilians. Beneath the list of contents, a photograph shows "The Division of Loot at Tu-Liu, September 11, 1900," taken in front of a pawn shop where "Hindoo Soldiers and Servants are waiting outside to carry away the Booty of their Masters."

The photograph suggests two historical themes—looting and colonial troops. We learn, not surprisingly, that loot was divided hierarchically with larger portions going to officers and the least to the colonial troops. The focus on Indian troops in the visual coverage of the Boxer Uprising, as in this cover photo, is a recurring theme that emerges clearly in the database. This visual narrative on loot dovetails with another visual narrative about the British colonial troops who fought many of England's imperialist wars overseas. Both themes are often minor subtexts in many histories. A two-page spread embeds photographs in a layout suggestive of Chinese architecture. In the center "The British General Dordard superintending the division of loot" appears calmly seated on a trunk surrounded by piles of clothing and paraphernalia.

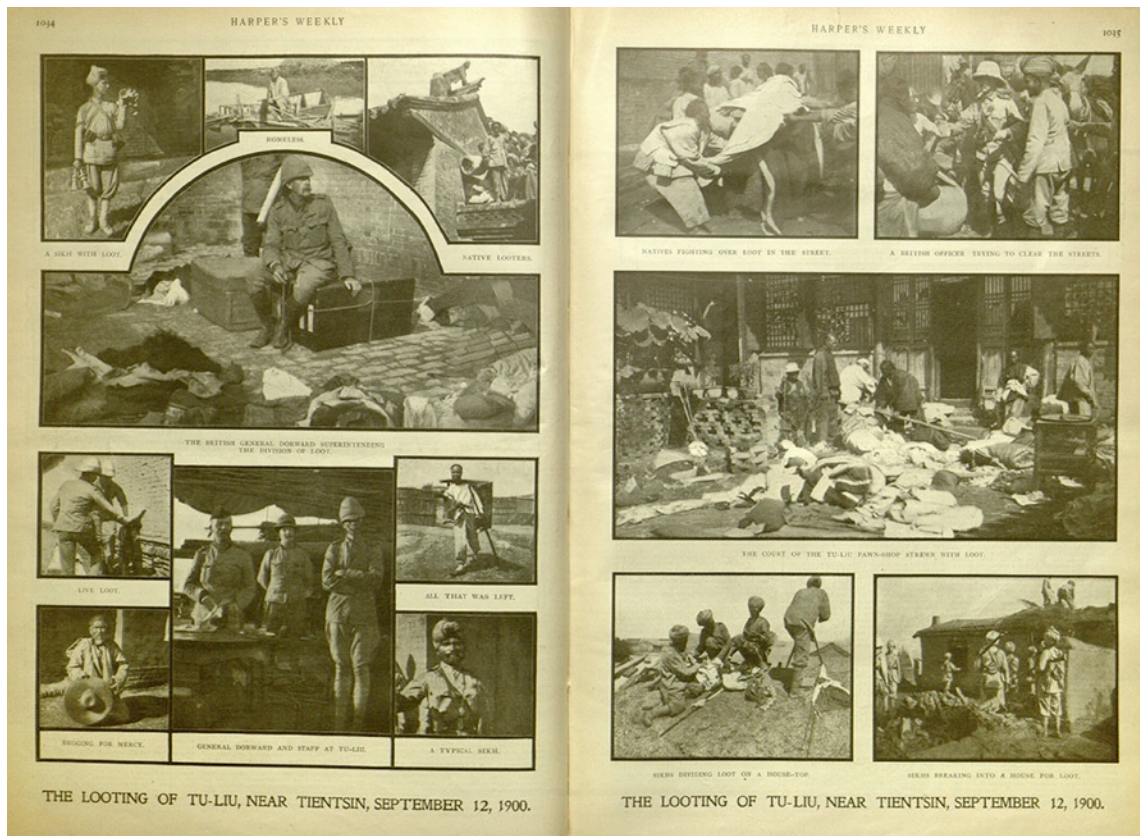


Figure 175. Collage of looting that adds detail to the term.
 Caption: "The Looting of Tu-Liu, Near Tientsin, September 12, 1900." 1900, Harper's Weekly
 Source: Widener Library, Harvard University
 [harpers1900_09-12_020]

Far from the finery we imagine, loot does not appear particularly impressive in these photos. Nonetheless, other photos show that China's treasures were taken, including famous astronomical instruments pried from the roof of the ancient observatory in Beijing. Another two-page photographic spread details the precious objects from the inner sanctuary of the Imperial family that found their way to into British museums. Some were legitimately purchased, but the provenance of many objects in Western collections traces back to foreign wars and loot. Themes of wartime plunder are inseparable from riches and power gained through the humiliation and despoliation of the conquered.

The photo-to-photo and caption-to-photo interplay in the layout deepens its reading as a source. For example, the photo captioned "natives fighting over loot in the street" is adjacent to "a British officer trying to clear the street" (with no mention of the Sikh soldier backing him up). The portrayal of the Chinese and Sikhs differs from that of white British soldiers.

The Chinese are described as "homeless" victims "begging for mercy." The British are photographed standing tall and looking into the camera, supervising and restoring order. The

Chinese and Sikhs steal and scavenge while the British officers and staff keep their hands clean, even though in the end they are the primary beneficiaries. In one photo “a typical Sikh” soldier looks into the camera, but by calling him “typical” the caption also dehumanizes him as a generic representative of his race. The question of whether a white British officer might be labeled at that time as “a typical Englishman” in either the Western or Indian press would shed light on the views of “the other” during colonial and imperial expansion at the turn of the century.

Looting was an equal opportunity enterprise and other factions are shown looting in the illustrated British press. Europeans “return to the city” pulling carts heavily laden with plunder, photographs capture average as well as ragged Chinese looters, Chinese students raid a temple carrying off an enormous bell, and one extraordinary shot shows “a Marist friar superintending the removal of spoil by converts.” Apparently Christian virtues did not censure stealing when it came to the spoils of war. Foraging, another aspect of looting, is shown in an image of Russian Cossacks on horseback, who brandish whips to force Manchu and Chinese prisoners to carry their stolen supplies back to camp. The image reminds viewers that large armies in foreign wars need to be fed and the bounty of the inhabitants is one way to do it. This topic intersects with the visual narrative, “March,” tracing the international expedition on its 10-day route to Beijing.

In a December 15, 1900 illustration in *The Graphic*, the British hold “an auction sale of loot.” Having determined that looting was inevitable they sought to create an orderly distribution of the property to attempt to reclaim the moral high ground. The caption, in a positive spin for the home crowd, clears the officers of complicity in looting because they paid for their spoils.

“When the International troops entered Peking, the city was looted by the men, but the British soldiers were not allowed to loot indiscriminately. All inhabited houses were respected, and so too was the property of all Chinese known to be friendly. The loot was put up to auction and the proceeds were given to the prize fund for soldiers. The auction sales are always crowded, people of all nationalities being present. British officers are among the principal buyers. Though prices are fairly high, grand bargains are made sometimes.”

Finally, cartoon commentary pilloried the looters. In German newspapers, a cartoon full of irony reads, “The fire in the far east. The ‘rescue’ begins.” The Chinese throw up their hands, helpless within a burning building as the Allied troops run off with artifacts and treasures. *Life* continued to attack imperialist aggression and the darkest side of destruction in a cartoon

captioned "soldiers three; or, why do the heathen rage?" British, United States, and German soldiers straddle bags of loot labeled "Swag, Boodle, and Loot," at their feet skulls, bones, corpses, and a canister of the explosive Lyddite. Their sashes claim a divine mandate with the mottos, "Dieu et mon droit," "In God We Trust," and "Gott Mit Uns."

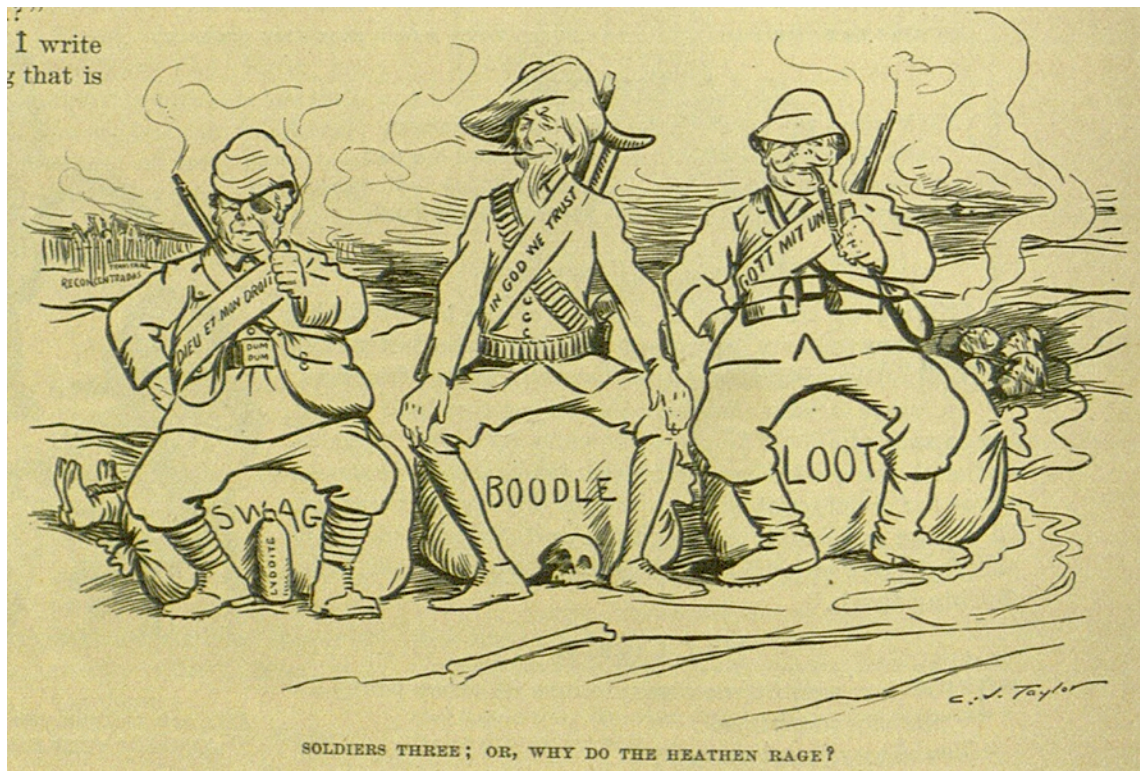


Figure 176. "Swag, Boodle, Loot" - anti-war cartoons.

Caption: *Soldiers Three; or, why do the heathen rage?*

British, US, and German "soldiers" wear their mottos, "Dieu et mon droit," "In God We Trust," and "Gott Mit Uns" and straddle bags of loot labeled: "Swag, Boodle, Loot" amidst skulls, and corpses, and a canister of the explosive Lyddite. In the left background, the artist sketched in rough buildings labeled, "Transvaal Reconcentrados," British concentration camps where many civilian deaths occurred during the Boer War (similar camps were in operation during the turn of the century American wars in Cuba and the Philippines).

Here, the visual narrative intersects with the cartoon commentary in the visual narrative "Civilization & Barbarism."

Life, New York City, 1901.

Source: scanned at Widener Library, Harvard University

[life1901v1_013]

In the left background of the devastated landscape, buildings labeled "Transvaal Reconcentrados" refer to the British concentration camps in which large numbers of civilians died during the Boer war. The cartoon goes beyond the Boxer conflict in China to tie in colonial wars in other parts of the world. In addition, the caption, "Why do the heathen rage?" ridicules

the rhetoric of bringing civilization to the so-called heathen. Here, the visual narrative intersects with the theme of the “White Man’s Burden” in the visual narrative “Civilization & Barbarism.”

The visual narrative concludes with another *Harper’s Weekly* photographic collage artistically laid out in the shape of a pagoda and labeled "the occupation of Peking by the Allied forces." It is accompanied by an article called "Loot and the Man" which draws national characteristics from the ways in which soldiers from different countries were said to carry out looting.

“When it comes to looting, however, that culmination of war, that operation which follows successful attack, and for many soldiers seems the crowning art of their profession, the international army is especially worth watching, and each arm thereof shows its own peculiarities.”

The derisive factionalism presages the full scale world war between these erstwhile allies some 14 years later. The visual record is full of imagery that corroborates the bickering and distrust between the international powers sure to escalate once the joint mission was completed.

The pictures in this visual narrative reveal a critical aspect of the occupation of China, a topic widely debated at the time, and historical themes related to war that are often overlooked in favor of politics, military maneuvers, and key figures. Essays about looting during the Boxer Uprising describe incidents, quote written accounts and articles similar to those presented here, and recount the debates over what was happening. They also use statistics to add facts and figures and discuss the broader world stage. But the visceral visualization of loot and the way it appeared in the news is not conveyed by written accounts. The images selected for reproduction in newspapers showed the conflict through the eyes of editors and audiences at the time.

The illustrated news reveals much about contemporary world views, biases, concerns, and media itself as testimony. The Chinese, in particular, are depicted in these stories as the homeless poor, but first-person accounts of looting in cities like Tianjin and Beijing also discuss the riches found in homes. Needless to say, many Chinese were made homeless victims or worse by marauding Allied troops.

Relief of the Siege (August 14, 1900): a Revolving Media Moment

The relief of the siege in Beijing came on the afternoon of August 14, 1900. The 7th Rajputs were the first regiment to enter Peking in the rescue force. Their appearance here invites the researcher to further explore the story of the colonial soldiers fighting for Britain and their

view of China, a country that teeters on the brink of colonization. Lancelot Giles' ended his correspondence with his father, the basis of his published diary, with the relief of the siege though he continued to photograph the post-siege events.

The men were almost fainting with fatigue and thirst...It was magnificent that the British should be the first to relieve us! That afternoon I went with the party who cleared the wall to the Ch'ien Men. Some Chinese soldiers ran out in the yard below and started firing up at us. They were all shot.... Every day looting parties go out and get what they can. I have done some splendid looting already. You wait and trust to me, before you speak.... The students are staying on a bit, being useful. There is some talk of our being sent home on leave. Your loving son, Lancelot

The database has 28 images that depict the relief of the siege of Beijing. They converge in a fascinating array of depictions of the moment. Some romanticize it in handsome drawings where heroic soldiers meet the brave sufferers. Others capture the Chinese Christian population as the British forces walk through the water gate. There is triumph, celebration, fantasy, and photo evidence wrapped up in this single event as it was preserved in the visual record.

Rich Topics: *Nianhau*; Stereographs; Walls

It is tempting, but not practical to include many more of the visual pastiches. The Chinese *nianhau* tell a complex story, and need extensive study. I found one of the most interesting graphics to be recycled almost verbatim from a previous historical event, with Boxer identities tacked on. Such a discovery undermines readings of the image as a unique record. Many *nianhua* portray the flood of Russian armies into Manchuria, an often overlooked subplot that deserves inclusion as part of the wider scope of events, like a slow zooming out, including Russia taking advantage of the turmoil to launch an unopposed invasion; a massacre on the border; and the greater game going on between the world powers. In another visual narrative, I reconstructed scenes along the maps that came with stereographic card sets to show the armchair traveller the sequence of the virtual tour. The images became a coherent set, and details from the scenes could be correlated to the terrain by looking at the map. The ad copy that stereograph companies used to promote this technology claimed that stereography offered an immersive experience that constituted nothing less than a new type of knowledge. Judith Babbitts' article, "Stereographs and the Construction of a Visual Culture in the United States,"²⁶² discusses the pseudo-scientific claims that were promoted the parlor as "laboratory,"

²⁶² Judith Babbitts, "Stereographs and the Construction of a Visual Culture in the United States," *Memory Bytes: History, Technology, and Digital Culture*, (Durham, NC: Duke University Press, 2003).

and targeted the educational market. These new media fantasies parallel our own time. Not only does the visual narrative reconnect an image set, it visually simulates the path taken by the original artist, and places viewers in a hybrid role as they simulate an old media viewing process with new media technology.

“Walls: Non-Traditional Narratives with Spatial and Temporal Views” takes the visual simulation farther towards rendering artistic experiences. Suggested by the many bird’s eye vantage points that stereographers preferred, a visual narrative composed of these soaring views of Beijing and its many walls gives viewers the feeling of gazing upon the past from above. Beyond looking at maps or other earthbound perspectives, a navigable flight over the city as it was captured photographically, historicizes its geospatial design, with scenes that convey the ravages of war, death, destruction, triumph, and ceremonial processions.

5.8 Outcomes

The principles of visual narrative that can be deduced from the case study include:

- (1) Visual narratives link images in thematic, generally chronological, series. While history can be non-narrative and theoretically structured, image comprehension benefits from placement within a chronological and, secondarily, spatially organized field.
- (2) Each image leads in several directions and may be a nexus point where pathways intersect. Authors can follow multiple interpretations and directions suggested by images.
- (3) Readers follow divergent pathways that reflect the unresolved complexity of events. Less controlled than the single stream of expository writing, visual narrative using primary sources is also less filtered, making the reader's experience more ambiguous. Though the organization of the images invites readers into the story, images do not explicitly tell the reader what to think in the way that text can.
- (4) Ambiguous perception of visual stimulation counterpoints precise information gathering when reading texts as complementary media-specific views of the past.
- (5) Images offer direct evidence of moment-by-moment unfolding events as seen by different factions, witnesses, and reporters at the time.
- (6) The visual database of the Boxer Uprising expands continually as century-old images are found, vetted, and digitized. As with document research, visual sources lead to other archives and new materials are always coming online. Revisiting a topic that was written about on Visualizing Cultures in 2002, for example, in 2014 reveals many excellent new sources in museums and archives that have been digitized and become available to add to the arguments and understanding.²⁶³
- (7) Various media blend in the digital database that itself is a visualization of turn-of-the-century media. Contemplation of the visual database is an important way to see the themes that dominate, contrasts between national boundaries, widely different treatments in media such as photography and color prints, and intended audiences.
- (8) Viewing original sources digitally adds a contemporary layer to their medial transformation. Visualizing historical events includes the gaze between viewer and object. It is not possible for historians and readers of history to escape the filter of their own historical perspective. How these reactions are dealt with in response to visual texts as opposed to carefully argued written texts is a significant challenge for visual narrative.
- (9) The digitization of images changes how we see them, sometimes enhancing their color, brightness, size, and detail, or conversely, losing the scale and tactile qualities. Adding resources, such as videos of sources within the archives, would help communicate the physical dimensions of the sources.

²⁶³ I am referring to "Black Ships & Samurai" by John W. Dower. The unit was part of a MOOC online course "Visualizing Japan" (VJx) by our team at MITx in collaboration with HarvardX, initial run, Sept. 3-Oct. 22, 2014, and repeated in Fall 2015. Searches revealed new online sources that added to images already in the site, specifically, views of Private Williams' funeral in Shimoda from the British Museum. When I inquired about permissions the response came from the Account Manager at the British Museum that she was enrolled in the VJx course!

- (10) Next steps would include consolidating the visual narratives into an interface that shows viewers a graphical overview, points of entry, and points of intersection. A form of digital reading, the model hypothesized in Chapter Four grows out of the research in this case study.

Chapter 6: Conclusion

Theorizing Visual Narrative

When I started, I intended to build a visual historiography of the Boxer Uprising. Though there have been illustrated histories starting as early as 1904 with Henry Keown-Boyd's *Boxer Rebellion, The Fists of Righteous Harmony: An Illustrated History of the Boxer Uprising, China 1900*, these books are no more than illustrated textual accounts. The images drive neither narrative nor argument. During the task of building visual historiography, I found that a deeper shift in meaning lay in the way images communicate. Visual representations change how we come to know historical events, and our relationship to the past, even as we historicize our own lives through instant, ubiquitous, and shared digital photography.

The digital medium elevates visual images to a central position in modern communication. While scholars may not be aware of the primacy of visual rhetoric in digital platforms, media artists like myself who have been working with digital storytelling since the late 1980s realize its increased role in narrative and navigation. The digital platform displays images in multiple ways that books could not, signaling a change of era.

Having compiled a large database of the Boxer Uprising visual record, I experimented with different narrative approaches, and posited a workable model for visual narrative in the digital medium. To formulate this image-driven historiographic form, I read Boxer Uprising history, and theory of history, narrative, and visual thinking. I also looked at past examples of visual narrative, beginning with 17th century *Wunderkammern*, up through the emergence of visual culture studies in the 1970s. I developed methodologies for working with digital image data sets from multiple collections as part of the Visualizing Cultures project at MIT, and conducted interviews for this research with many of the scholars who developed historical units for publication on its website. While excited about the digital future, these scholars had training and jobs that kept their practice within traditional text-based forms. Library studies corroborated that there has been no increase in images in scholarly journals. Ways to increase usage remain a concern of archives as visual collections continue to be digitized and freely disseminated in staggering numbers.

By writing my own Visualizing Cultures unit based on my Boxer Uprising research, I learned first-hand about the methodologies of historians, and the challenges visual narrative

faces. Academic publishing protocols developed during the print era exclude much of what digital formats can do. Among the difficulties, authored image sequences require rigorous and time consuming research, but lack protection as intellectual property, and can't be cited, thus excluding them from academic discourse. I chose to turn my visual narratives into image-rich essays. The process revealed many differences between the formats. Computational rather than qualitative research can more easily be transmitted through text, not needing the visual immersion that changes the fundamental quality of historical experience.

Modeling Visual Narrative

I continued to pursue a digital publishing model to support narrative through visuals. Based on my research and experiments, I theorized that visual narrative takes a field-based form within a networked data field. Media scholars have pondered the contradictions between traditional linear text, and non-linear data since the 1990s. When images become the text, a radical shift in narrative structure takes place. But, a visual narrative mode had not been posited. Thinking had only progressed as far as the database, which is informational, but anti-narrative, being without a point of view, lines of discourse, and the author's voice. Authoring in such a non-linear, open format directly challenges hierarchical single-voiced narrative. The contrast between linear and non-linear narrative compares to the fixed structure of physical books, and the infinite branching of cloned content, constantly replicating and updating in digital space. The central question of how storytelling and data might forge a symbiotic narrative structure informed my research towards a developing a visual narrative theory and a practical historiographic model.

I proposed the Visual Narrative Field (VNF) model as a digital platform for authoring and reading in a visual narrative mode. The VNF supports multiple narrative pathways within a database, unifying three layouts evolved on Visualizing Cultures in a vertically-integrated software design. Vertical integration means that users can move seamlessly between narrative layers that are primarily textual or primarily visual. The design had to support these transitions by recognizing a shift in cognitive modes, between intellectual and sensory thinking. While traditional texts hold the reader's attention as they unfold linearly from beginning to end, non-linear interactive formats invite distraction. Supporting alternate cognitive modes helps viewers to go beyond spectatorship to heightened sensory immersion, and encourages the sustained

looking needed to create meaning. Readers immerse in the images that people of the time saw, gaze at the same scenes, conscious that in some way they mirror the readers of the past to subtly inhabit a bygone world.

Digital interactivity can be modeled on museum exhibitions in which curators choreograph visuals within a space, giving viewers agency over the direction, pace, and distance of viewing. Perception responds to the environment, including the dimensions of the room, lighting, wall color, that create a “stage” for the materials on display. Similarly, the software needs to not only show images, but create a framework for enhanced looking. Narrative thus expands to include an optical cognitive mode, in which the reader observes, interacts, and explores.

Historiographic Representation

Little has changed since Ivan Gaskell wrote about the reluctance of the field of history to adopt the visual record as a historiographic source and method in a 2001 essay titled, “Visual History.”

While I sincerely hope that historians will increasingly turn their attention to visual material, I regret that few to date have shown awareness of the issues necessarily involved or the particular skills needed to cope with such material.²⁶⁴

My research is positioned between two closely related fields: the practice of history, through the Boxer Uprising case study, and the theory of history, the medium through which history is represented. The current methodologies of historical discourse no longer satisfy the challenges and opportunities of the digital era of scholarship, particularly in regards to promulgating the visual record as a historical resource.

The visual record requires historiographic approaches that convey “sublime experience,” that support ambiguity and unresolved complexity, that allow archival sources to be seen in their raw state as well as in expert narratives, and that find empathy in visual connections between present and past. Ambiguity heightens readers’ investment in stories. Visual narratives with open-ended interactions makes getting lost in the visuals meaningful. The VNF model supports authors in arranging visual materials, and readers in experiencing sense-based learning that places visuality above textuality.

²⁶⁴ Ivan Gaskell, “Visual History,” Peter Burke, editor, *New Perspectives on Historical Writing*, (University Park, PA: Pennsylvania State University Press, 2001), 212.

The model doesn't diminish the power of texts, but rather makes space for the visual. Written history's long tradition as a narrative art form likewise evokes "sublime experience" which makes it widely popular to general readers unlike many other kinds of specialized academic texts. Far from reciting facts and chronologies, written history brings characters and conditions to life. This has been shown in this thesis when comparing texts by John Dower and Peter Perdue to images representing similar events. Raising the narrative status of images depends on a complementary role for text. The shared attributes of images and text can together contribute to a powerful model.

If history is non-linear, then we should in the future be able to describe the slice under the microscope in a virtual visualization that fully addresses the knowledge of the senses. In a staged race between an elite sprinter and a giraffe, the announcer summed up the stakes, saying, "First, the giraffe needs to know it's in a race." If historians don't know how to "sense" their way through images, they will miss an entire spectrum of understanding.

Future historiographic directions also point toward visual sources as being in step with history's movement towards transnationalism. Images naturally cross borders, conflating multiple points of view, cultural biases, and use cases. They appear regardless of language, making an impact without regard for the mitigating role text can play. They appear without regard for the culturally-centric assumptions that contextualize depictions, carrying a strong possibility for causing offense. Transnationalism should not only cross borders, but cross disciplines. A standardized mechanism for coherent visual display will go far in giving visual arguments the baseline of a common ground, like that text already enjoys, which will make global interchange and discussion possible.

Interdisciplinary Thinking: The Artist Speaks

The "digital humanities" field emerged on the premise that both sides would cross-pollinate and grow. In a 2013 interview, Kathleen Fitzpatrick said, "On the one hand, it's bringing the tools and techniques of digital media to bear on traditional humanistic questions. But it's also bringing humanistic modes of inquiry to bear on digital media."²⁶⁵ Yet, the dominant trend has been to add technology to traditional forms of scholarship. Few trained in the "digital" have ventured far into the "humanities" to understand the demands of scholarship

²⁶⁵ Kathleen Fitzpatrick, interviewed by Fred Rowland, Temple University Libraries, March 7, 2013.

in a deeply textual field. Specialists in the visual image such as artists and designers are not usually at the table in the practice of history. Likewise, it is rare for those in the media arts to enter or show interest in the protocols of the humanities. Besides myself, only one other visual artist, a filmmaker, was invited to contribute to the Visualizing Cultures project. As professionals who express themselves visually, artists and designers are perceived to be outside of academic, intellectual argument.

Humanities scholars often refer to media designers as technical wizards who can help realize their digital dreams. Conversely, departments dedicated to new media like the MIT Media Lab tend to deemphasize theoretical foundations. Artists work in the "dark world" of the image while art historians work in the analytical world of the word. Visual narrative originates at the nexus point where two expressive modes meet. Digitized images invite a new kind of expression that challenges the bifurcation between disciplines. Traditionally-trained academics struggle with intangible responses to images, looking for language to support what they see or feel. Historians are well aware of the large archives of visual sources opening up for research, but my interviews showed, address it with difficulty or avoid talking about it altogether.

From my perspective as a longtime collaborator with academic scholars, collaboration with visual creatives would advance both disciplines. Collaboration would help legitimize visual thinking, which is, after all, a methodology like any other despite being ocular and non-verbal. Currently, scholars in a brave new digital world seem only slightly aware of the resource those skilled in the language of images could be. Conversely, artists, designers, and media specialists rarely move outside of their own vocabularies to understand the methodologies of professions such as history. Both groups would benefit from increased interactions in the digital humanities.

Machine computation and data visualization will gradually transform how image data sets are handled. Working on the practical results, and the theoretical challenges brought by mechanized image recognition and networked data sets would be a valuable next step in this research. The narrative principles and framework elucidated here would provide a solid foundation for scaling up the number of images observed, and the automated authoring of narrative pathways. As data mining changes the face of source-based research, historiographic and narrative structure is needed more than ever.

A Final Image

At every juncture of this research, I looked to images for guidance and direction. I conclude with a vision I had at the onset of the research, that comes surprisingly close to describing the learned outcome. Intuitive insights occur in all fields of study, and nurturing latent visual intuition will help bring us closer to new landscapes of both the past and future.

You stand at the top of an unfinished skyscraper at night and step off into darkness defined only by a grid of girders. As you float slowly down, illuminated islands of ribbon-like images undulate, inviting you to land and explore—images of past cultures suspended at their fragile moment in time, not fixed, but linking with flows of other images around them. Stepping onto a colorful scene, you explore the images connected to it in horizontal space, walking a path of images, like stepping stones, each revealing its own story. You discover notations left behind for people like you, grab on to one and find yourself lifted through space to another image-island. You begin to grasp the stories at each platform in time through their interstices and intersections.²⁶⁶

²⁶⁶ Ellen Sebring, research notes, 2010.

Appendix: Scholar Interviews

Approach

Complete transcripts of the interviews appear here. The format varied. Several scholars typed their answers into the questionnaire provided, either in conversation together or separately by email. Most interviews were recordings that used the questionnaire as a guideline.

List of Participants

Christopher Capozzola
Associate Professor of History
Massachusetts Institute of Technology

John A. Crespi
Professor of Literature
Colgate University

John W. Dower
Ford International Professor of History, Emeritus & Director of Visualizing Cultures
Massachusetts Institute of Technology

Christopher Gerteis
Senior Lecturer in the History of Contemporary Japan
SOAS, University of London

Allen Hockley
Associate Professor of Art History
Dartmouth College

Justin Jesty
Assistant Professor, Asian Languages & Literature
University of Washington

Lillian M. Li
Sara Lawrence Lightfoot Professor Emerita of History
Swarthmore College

Peter C. Perdue
Professor of Chinese History
Yale University

James T. Ulak
Senior Curator, Freer Gallery of Art and the Arthur M. Sackler Gallery
Smithsonian Institution

Jeffrey Wasserstrom
Chancellor's Professor of History
University of California, Irvine

Gennifer Weisenfeld
Professor of Art History and Visual Studies
Duke University

Text of the Questionnaire

As an author who has written units for Visualizing Cultures, could you share your thoughts on the project, the use of the visual record in historical inquiry and the impact and future of image-driven scholarship in the digital humanities? Your input as historians is vital in thinking through the ways the digital medium can change the practice of history and in identifying the goals of image-based research and publication models.

1 - VISUALIZING CULTURES

How did you experience your collaboration with Visualizing Cultures?

Did you work in new ways?

What did the digital publication format offer?

Did you make new historical discoveries?

2 - TEXT VS IMAGE

How does working with texts compare with working with visual sources?

Can meaningful historical research be published using primarily visual images? Why or why not?

3 - DIGITIZED VISUAL RECORD

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

4 - TRAINING

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

What changes would you recommend?

5 - INTERDISCIPLINARY

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)?

Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

6 - NEED

Is there a need for new models of historical representation (versus the traditional text-based model)?

What would you like to see develop in digital history using the visual record?

What is on your wish list or dream scenario?

7 - VISUAL THINKING

Do you think there is visual thinking and sensory knowledge as opposed to rational cognitive reasoning?

If so, does it have a place in historical representation, especially in new digital forms?

8 - OTHER THOUGHTS?

Any other comments, “ah ha” moments, impressions or anecdotes you would like to add?

Figure 177. Interview Summary Grid, 1

Question	Capozzola	Crespi	Dower	Gerteis	Hockley
Affiliation/Position	MIT	Colgate/East Asian Languages and Literatures		SOAS, University of London/History	Dartmouth/Associate Professor of Art History
1	VISUALIZING CULTURES				
1a	How did you experience your collaboration with Visualizing Cultures?	Collaboration made VC "the most novel way of doing historical scholarship", takes more time	2010 VC conference, learned material over sabbatical year	"high degree of professionalism", "Writing for JWD was a thrilling, terrifying, frustrating, mind blowing experience."	
1b	Did you work in new ways?	"image driven" writing, collaborating with non-historians, hearing a range of ideas, emphasizing ambiguity of images, "...collaboration requires you to think at various points about outcomes and how people will engage the final product"	"I'd never worked primarily with images before", images don't require translation, unlike Chinese literature	no, other than having the "freedom to publish an unlimited number of images"	
1c	What did the digital publication format offer?	"...the ability to reproduce an enormous number of images", "...allow[s] for close investigation and juxtaposition", images can be easily manipulated (repositioned, rotated, resized, etc.)	"freedom to show rather than tell", wider audience, greater availability	"More images, mass audience."	
1d	Did you make new historical discoveries?	"...the more time we spent with the images, swimming around in the images, the more I realized that there was more going on in the [photos]...a more complicated history needed to be told."	learned the history spanned by cartoon images in order to better understand what they were referring to	No, similar to textbook writing, which "[honed] my understanding of...a fairly well understood period of history."	

Figure 178. Interview Summary Grid, 2

<p>2</p> <p>TEXT VS IMAGE</p>	<p>How does working with texts compare with working with visual sources?</p>	<p>not very different</p>	<p>"visual sources rely less on translation", but you have to provide a certain degree of interpretation</p>	<p>the two are complementary</p>
<p>2a</p>	<p>Can meaningful historical research be published using primarily visual images? Why or why not?</p>	<p>yes, "...visual images will always require the sort of curation and narration into an argument that is what a historian does", "there are definitely times when the images are making the argument and not just illustrating it"</p>	<p>didn't really answer the question</p>	<p>yes, of course - whole disciplines "are premised on this sort of analysis", Art History and Film Studies for example.</p>
<p>DIGITIZED VISUAL RECORD</p>	<p>Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?</p>	<p>yes and no - visual material is now easily accessible, which makes a big difference in teaching, but "it matters how you tell the story and not just what the point is", "digital history is good when it's good; it's not good simply because it's digital."</p>	<p>No response</p>	<p>yes, "digitization...enhance[s] our ability to work with, and perhaps manipulate... historical understanding"</p>
<p>3a</p>				

Figure 179. Interview Summary Grid, 3

Jesty	Li	Perdue	Ulak	Wasserstrom	Summary
University of Washington	Swarthmore	Yale/Professor of History (Asia, China)	Smithsonian/Senior Curator of Japanese Art	UC Irvine/Chancellor's Professor of History	
"I was asked to write a narrative for an image archive that Linda Hoaglund had gained access to."	creative team, innovative project, new methods and materials	used Japan units as model		"let me combine in unexpected ways the ideas I'd been exploring in print but with having images lead the way."	
Not really	Yes, using visuals for digital publication, collaborating	Collaboration		worked in much larger team, with people of different skill sets	collaboration, working digitally
"easier to have a lot of images", "systematic approach"	"creative and flexible way to create a teaching medium that could be widely disseminated", easily revisable			"ability to manipulate images" (zooming)	large audience, images can be manipulated easily
"Not huge ones."	"...seeing materials juxtaposed in new ways did/does provide additional perspectives and insights."			Not really, "finding novel ways to communicate ideas"	

Figure 180. Interview Summary Grid, 4

<p>"I don't think there is a coherent distinction to be made between visual and written sources... I think VC could be improved by attending more systematically to the vast differences among the sources being used."</p>		<p>usually, text makes the intention of the writer more apparent, while images require more interpretation.</p>	<p>"There is a little more integration between the two media than there used to be."</p>	<p>there are parallels between the two media, like zooming in, "the line between texts and visual sources blurs, such as when you have pictures that have words across them"</p>	
<p>visual material needs accompaniment, "It's almost impossible to use that material without some attendant account of where it has come from and when."</p>		<p>"Yes, but. It seems to me that text always needs to play a role."</p>	<p>"yes, we have already done this with visualizing cultures."</p>	<p>definitely, "instead of having a lot of words illustrated by some visuals, a lot of visuals accompanied by a gloss of words...the web allows for many more than the usual ways of doing this."</p>	<p>some text is still essential</p>
<p>"Yes, by making more things more available" and portable</p>		<p>"Yes it is - certainly with respect to teaching," new generation of students are also accustomed to more images.</p>	<p>makes lots of things accessible, changes research technology</p>	<p>"biggest change in my research may be simply the ability to do new kinds of digital searches...if/when more sophisticated searches can be done in large visual repositories, that will be another big shift."</p>	<p>makes teaching better, research easier</p>

Christopher Capozzola

Associate Professor of History, MIT

Interview by Ellen Sebring
June 6, 2013 at the Department of History, MIT

1. Collaboration with Visualizing Cultures

How did you experience your collaboration with Visualizing Cultures?

Collaboration. Historians are not trained to work collaboratively—we are trained to do individual work, and our professional success depends on putting forth a very individual vision. But this is a project where no one person has all the skills needed to do the job. So for me, the collaborative aspect of Visualizing Cultures was the most novel way of doing historical scholarship. It's also worth noting that collaborative work takes longer than working on your own because you need time for the give and take and back and forth of collaboration.

Did you work in new ways?

I started my work on the Philippines unit by diving into a large database of photographs taken by Dean Worcester at the turn of the century. This was a new way of working for me—rather than starting with the written record or the secondary sources, I took to heart John's charge to be "image-driven," to work from image to image, rather than looking for illustrations for ideas that had been formed through reading and thinking about texts.

What was new in collaboration was having multiple sets of eyes on these visual images, which makes you realize the range of ways that people can see an image and made me emphasize the ambiguity of the images I was presenting. The tone and argument of both units are much more ambiguous in their final versions than they were when I started out.

And then collaboration requires you to think at various points about outcomes and how people will engage the final product. Different people in the team knew different things about how the site would be used, and this was a much more self-conscious undertaking than in writing a historical essay.

What did the digital publication format offer?

The simple fact is that the most valuable opportunity is the ability to reproduce an enormous number of images, compared to the 12 illustrations in my 346-page book. You also have the opportunity to include a range of images in different sizes and scales, to allow for close investigation and juxtaposition.

The digital format allowed for more manipulation, but in the sense of movement. I also found that the process made me more careful with images and how they are handled, because they are the crucial raw material of the project, and need to be carefully dated and authenticated and considered than when most historians put illustrations in their books. So the images in the Worcester collection appear in nearly every book about the colonial Philippines, but doing a visual history project forced me to handle them with much more care than most people tend to do.

Did you make new historical discoveries?

At first glance, the Worcester images could easily tell a simple story that's a horror story of domination and cultural misrepresentation. But the more time we spent with the images, swimming around in the images, the more I realized that there was more going on in the photographic encounters between Worcester and his subjects, and a more complicated history needed to be told.

2. Text vs. Image

How does working with texts compare with working with visual sources?

In a lot of ways, the methods are not fundamentally different. If you immerse yourself in print sources, you can have the same challenges and breakthroughs that come with surrounding yourself with the visual. But most historians tend not to do intense visual research.

Can meaningful historical research be published using primarily visual images? Why or why not?

Of course. I think visual images will always require the sort of curation and narration into an argument that is what a historian does. Much of that, even in *Visualizing Cultures*, happens through text or through caption. But, take for example, the last chapter of the Worcester unit, where I made a point in the text, but then we set up a run of images with no commentary at all, and let the images make the argument. So there will always be a back and forth between text and visual, but there are definitely times when the images are making the argument and not just illustrating it.

3. Digitized Visual Record

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Yes and no. There are now vast archives of visual material that are easily accessible, and so historians are able to tap into these for all kinds of purposes. It's certainly having a difference in teaching, where I think it's quite rare to teach without a lot of images—professors have been looking for ways to liven up the lecture format and often assume that students are more “visual” because they are younger, even though of course the professors are just as immersed in that world too. And students may be more comfortable with the digital world, but are not particularly well trained to move through it as a humanities scholar would do.

The core of history is the narrative art, which for me is part of what I think makes historians unique and what allows us to straddle the boundaries between the humanities and the social sciences and reach large popular audiences. For good historians, argument inheres in narrative—it matters how you tell the story and not just what the point is. There's no reason that compelling historical narratives can't be told in visual, digital, or multimedia realms. But I think we are still figuring out what those are. Digital history is good when it's good; it's not good simply because it's digital.

4. Training

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

Yes. 25 years after social and cultural historians starting coming on the scene, this scholarship is very much part of the mainstream. And so to the extent that graduate students are reading in the field, they are definitely going to encounter cultural histories, at least some of which will have a visual component. And more and more students are working with these materials in their own research.

That said, the expectations are somewhat different in history than they would be in a field like art history. Historians are encouraged to use visual sources, but they aren't really trained in the technical vocabulary of the visual.

What changes would you recommend?

I certainly wouldn't require historians to be trained in the visual—the appeal of our field is that it is so methodologically diverse, and some people are just going to lean in other directions. But for those who are interested, it would be good to have the support and encouragement to develop these skills (whether in visual analysis or digital production).

And it is absolutely the case that the profession needs to think about how collaborative work is evaluated within our field, whether for tenure and promotion or more generally. The fact of the matter is that I would never advise a graduate student to do a project like *Visualizing Cultures* as his/her dissertation, nor tell a junior person to make this the core of (rather than a side line of) their research. So unless that changes, collaborative projects like VC will always be add-ons to the profession rather than the center.

5. Interdisciplinary

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)? Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

No answer provided.

6. Need

Is there a need for new models of historical representation (versus the traditional text-based model)? What would you like to see develop in digital history using the visual record? What is on your wish list or dream scenario?

Collaborative digital history projects are expensive—both in time and money. And given the constraints on the humanities in particular and universities in general, I think we need to think carefully about the contributions that they are making to teaching and learning and scholarship—and be sure to think critically about evaluating their impact, figuring out what would be good metrics for knowing how they are changing students' thinking and writing and looking skills. And make sure that we are creating projects that will be sustainable in the longer term as technological forms evolve. We need to be putting resources in this direction because great ideas are there, but I would start to worry if I felt that the money for these undertakings was crowding out those aspects of teaching and learning that are “old-fashioned” but which (again, after evaluation) we know work.

VC does that, by being a big project with multiple authors and designers and users, it will necessarily have a longer life than if it had been a one-topic site, or if it had really been distinctively John Dower's project or something like that.

7. Other Thoughts?

Any other comments, “ah ha” moments, impressions or anecdotes you would like to add?

When you are working with visual sources—particularly photographic or documentary film images—there is a path toward the historical imagination that's different from immersing yourself in text. I remember doing research one day at Smith College and poring over albums of photos of the town during World War I. Then at lunchtime, I walked down the hill into the town and really had a sense of it as a place and what it might have been like in 1918 that the images gave me.

I think this is especially important in a site such as the Philippines, where the people that we write about very often left no written records, and the records about them are written by colonial officials. The distances of time and culture and power are very hard to overcome, and photographic archives (even if they are fraught in their own ways) have been crucial to me to understand the people I'm writing about.

The danger in a very controlled visual narrative is that it would encourage those who encounter it to do so passively. We are accustomed in the world around us to be spectators or consumers of the visual. But reading, researching, are things that are more intellectually engaged and active, and so there has to be a way for visual history projects to make it possible—even necessary—for users to be thinking their way through the site.

John A. Crespi

Luce Associate Professor of Chinese; Director of Asian Studies
Department of East Asian Languages and Literatures
Colgate University
Interview submitted by answering questionnaire and emailing to Ellen Sebring
August 1, 2013

1. Collaboration with Visualizing Cultures

How did you experience your collaboration with Visualizing Cultures?

I was assigned the unit after presenting at the 2010 VC Conference. The decision was more or less immediate to commission it, with John asking for it on the spot. I then, fortunately, had a sabbatical year to learn about the material, which was quite new to me, as I'd worked mainly in literature—modern Chinese poetry—before that. The Colgate library found funds to professionally digitize the entire collection of *Modern Sketch* during the fall of 2010, and sent me on a full set of medium-res files of the collection to work on in China, which was fantastic. I spent Fall 2010 finishing other projects and doing background reading.

Did you work in new ways?

As noted above, I'd never worked primarily with images before. I found it quite liberating knowing that I would have wide latitude to display images alongside the text. I think it was refreshing to get away from describing words with words, which I'd been doing previously with literary research. Also, writing about Chinese literature requires translation to take on the original text. This is less the case with cartoons—though there are captions, of course.

What did the digital publication format offer?

Great freedom to show rather than tell when dealing with the primary texts. I was also able to reach an almost unlimited audience. It is great to know that the whole unit is available to anyone who cares to access it, and especially that teachers can assign it freely in their classes.

Did you make new historical discoveries?

I was compelled to really learn about history myself, as so many of the cartoons refer to very specific historical figures, events, and even everyday items. To discuss them accurately required a lot of detailed historical information. Thanks to the historians for providing so much of it in their books and articles! Learning this history broadened my knowledge of the field significantly. I made historical discoveries on almost every page of *Modern Sketch*. It offers an angle on China of the 1930s that had never been explored in depth before.

2. Text vs. Image

How does working with texts compare with working with visual sources?

As noted above, visual sources rely less on translation; on the other hand, you have to decide how much interpretation to provide so that your audience is able to understand the context of the images, that is, to help them set aside preconceived notions that they would otherwise use in interpretation. But at the same time, you need to let the images speak for themselves.

Can meaningful historical research be published using primarily visual images? Why or why not?

This is hard to answer for me since I'm not an historian, but rather trained in literature/culture. The answer here depends on what "primarily" means. What ratio of text to image? Also, who is the audience? Shouldn't we think of visual images as "primary sources," meaning that on their own they don't constitute "meaningful research", since "research" implies scholarly interpretation and contextualization?

Writing the *Modern Sketch* unit was especially interesting and challenging because I needed to address both the general audience and China experts. Luckily these cartoons are so little known that I could satisfy both with lots of new findings. At the same time, I embedded responses to existing scholarship in there in ways that the general reader would not detect.

3. Digitized Visual Record

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Not sure I can respond to this, since I don't follow the practice of history much.

4. Training

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

I can offer something here. My impression from seeing social scientists talk about cartoons at conferences is that they use a primarily area studies approach that pays less attention to the internal and historical features of genre in visual artifacts, not just cartoons but also film. All these are artistic genres with a specific history of development and specific techniques of representation. They are not all just "about" historical personages and events, or aids to reinterpreting history in such and such a way. One of my goals in writing the Modern Sketch chapter was to use the unit not so much to talk about historical events in 1930s China, though some of this was necessary, but to help the viewing/reading audience understand the internal dynamics of the Chinese cartoon, that it has its own history as an independent visual genre. In that sense historians as social scientists have something to learn from the humanities.

5. Interdisciplinary

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)? Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

As suggested above, history and the humanities need to work together when it comes to dealing with visual sources. As for design, that can be important, too. I've recently been reading a book on the history of Euro-American graphic design and finding that art-historical approach very important to understanding where my Chinese cartoonists were coming from. Many of them were deeply involved with international trends in commercial and industrial design. One could argue that that is where Chinese cartoons came from, to a degree.

6. Need

Is there a need for new models of historical representation (versus the traditional text-based model)? What would you like to see develop in digital history using the visual record? What is on your wish list or dream scenario?

I spend a lot of time keywording my digitized cartoon magazines. It is exhausting and time-consuming, but gives me almost magical powers to search among my own image database of cartoons. I can see how and where a particular artist's work has evolved. I can look at representations of everyday objects and behaviors, like smoking cigarettes in cartoons. Just recently I've found it intriguing to see who smokes cigarettes in 1950s socialist era cartoons as opposed to in the 1920 and 1930s. In that sense the "word" (keyword) supports the image in important ways—cataloguing and searching. To have all available cartoon magazines keyworded in a consistent way on one database would be an amazing resource. Maybe search software will advance to where it can find and match images, like with face-recognition programming. But that still seems like pie in the sky for artistic works, which are so often distorted.

7. Other Thoughts?

Any other comments, "ah ha" moments, impressions or anecdotes you would like to add?

I would love to do another unit. It has catapulted me to some prominence as an "expert" in Chinese cartoons in that I've been invited to do related peer-review work. On the other hand, the units in VC are not peer-reviewed themselves. Having expert colleagues go through and comment on them would be

great, not just to improve the units, but also for that all-important imprimatur of “peer-review” on it as a publication.

John W. Dower

Interview videotaped on October 2, 2014. Please contact author for transcript.

Christopher Gerteis

Senior Lecturer in the History of Contemporary Japan
SOAS, University of London

Author, Visualizing Cultures units:
Political Protest in Interwar Japan I
Posters & Handbills from the Ohara Collection (1920s–1930s)
Massachusetts Institute of Technology © 2013 Visualizing Cultures

Interview submitted by answering questionnaire and emailing to Ellen Sebring
12 Sept 2014

1 - VISUALIZING CULTURES

How did you experience your collaboration with Visualizing Cultures?

I enjoyed the high degree of professionalism experienced with the whole VC project. Much better than many publishers I've worked with, especially in regards to editorial detail. Writing for JWD was a thrilling, terrifying, frustrating, mind blowing experience.

Did you work in new ways?

No particularly. I think the freedom to publish an unlimited number of images was new, but everything else was a very finely oiled publishing machine.

What did the digital publication format offer?

More images, mass audience.

Did you make new historical discoveries?

No, this was more akin to textbook writing, which is a great opportunity to hone my understanding of secondary and primary sources around a fairly well understood period of history.

2 - TEXT VS IMAGE

How does working with texts compare with working with visual sources?

Hmm, I always work with both, and see each as complementary.

Can meaningful historical research be published using primarily visual images? Why or why not?

Yes, of course. What kind of question is this? Oh, right, this is still thought 'cutting edge' and of questionable value by some of my senior colleagues. Phooey. Besides, the whole disciplines of Art History and Film Studies, for example, are premised on this sort of analysis.

3 - DIGITIZED VISUAL RECORD

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Oh yes, take a look at WikiLeaks or similar digital archives that mass-release all sorts of sensitive documents for public consumption. The digitization of other documents, like images, will only enhance our ability to work with, and perhaps manipulate, which is an unhappy byproduct, historical understanding.

4 - TRAINING

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

It depends on who is doing the training. Historical training is highly individualized, and a student may seek out new sets of tools not available via their primary supervisor.

What changes would you recommend?

Workshops perhaps? I learned to do what I do by reading, but got interested via a one hour seminar given by Jennifer Robertson that I attended sometime in the late 1990s.

5 - INTERDISCIPLINARY

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)?

I think these so integrated that I can't even begin to answer the question.

Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

Again, PhD training is highly individualized. Students need to be encouraged to seek out the tools they need. Perhaps then the trick is to offer international workshops for them to attend?

6 - NEED

Is there a need for new models of historical representation (versus the traditional text-based model)?

History is what we make of it as a profession. If this is the direction we are going, then this is what we do. I publish this sort of stuff, so I think it's worth pursuing.

What would you like to see develop in digital history using the visual record?

More. Who knows what can be done with this material. I would like historians to get more training in math, statistics in particular. That could alter our understanding of digital records considerably.

What is on your wish list or dream scenario?

Unlimited server space and a staff to publish with.

7 - VISUAL THINKING

Do you think there is visual thinking and sensory knowledge as opposed to rational cognitive reasoning?

Yes, most definitely.

If so, does it have a place in historical representation, especially in new digital forms?

Yes, so long as it is guided/complemented by logical, rational thought.

8 - OTHER THOUGHTS?

Any other comments, "ah ha" moments, impressions or anecdotes you would like to add?

No answer provided.

Allen Hockley

Associate Professor of Art History
Chair of the Asian and Middle Eastern Studies
Dartmouth College
Hanover, NH

Author, Visualizing Cultures units:
Felice Beato's Japan
Places: An Album by the Pioneer Foreign Photographer in Yokohama
Massachusetts Institute of Technology © 2008 Visualizing Cultures

Globetrotters' Japan
Places: Foreigners on the Tourist Circuit in Meiji Japan
People: Foreigners on the Tourist Circuit in Meiji Japan
Massachusetts Institute of Technology © 2010 Visualizing Cultures

John Thomson's China
I: Illustrations of China and Its People, Photo Albums (1873–1874)
II: Visual Narratives
III: Albums & Galleries
Massachusetts Institute of Technology © 2010 Visualizing Cultures

Interview by Ellen Sebring
Recorded June 18, 2013 via Skype, Cambridge, MA

[Recording Hockley01]

Writing about Pictures

When you work with pictures sometimes an outline is problematic, because once you start writing around a picture or several pictures you'll find that most of your thinking gets done on the page when you're writing. I always start with an outline, but I get a little into it and I realized later second later, there is something here I didn't notice and I'm going way off. Writing takes a long time. My brother is an environmental engineer and he can think through a very complicated project from beginning to end with every detail and then just write it. But once I start writing I think, wow what about that, I didn't think of this, I could write this better or wait a second I said that two chapters ago.

Ellen: I think visual people think in circles. They see it all at once. It's very hard to write that way.

Allen: I agree. It's a lot of stopping and starting. For example, I have two versions of the book I'm writing but I don't like them and I'm writing it again. If you think of Visualizing Cultures, the difference between what I did with Thompson and what I did with Beato and Globetrotters is night and day. The Thompson unit is incisive and critical with a big picture framework. With Beato and Globetrotters I was just trying to deliver basic ideas about these cultures. With Thompson I wanted to make an argument. I needed terminology that no one had to explain the concepts. I'm looking at Japanese photographs, but I'm really interested in what they meant. If someone bought a photograph, what did it mean to them? I read nearly 200 travel diaries written by people who were in Japan and what I discovered is that the study of travel literature is a discipline unto itself. Nobody has done Japan. The book I'm writing is about photographs, but it is also the first major work on travel literature in Japan. The photographs led me to this topic.

Ellen: While we see the photographs selected by photographers, curators, and those who purchase and publish photographs, the less perfect images often give us historical information. What are examples of the terms you've invented?

I'm using the term now called "discursive sites." A discursive site is any place where a photograph acquired meaning. I use the term site loosely. A site can be a studio, but a site can also be a price list. The site can also be a person who sees someone else's photo album. The site is any place you encounter photographs, but it is also discursive and that's where you personally make meaning from that encounter. It's a loose construction, but it allows me to discuss how meaning is made. "Pre-photographic icons" is another term I'm using. Many things you see in early Japanese photographs appeared in writing 100 years before. A written text or a description can have an image, and what happens is that photographers knew that writing and were taking pictures to match it. I call that pre-photographic icons, which is a helpful

term to explain it. Once I explain these terms I can use them throughout the book. Others may have better terms, but I need them to make my points.

Ellen. I was reading an article where the author used the term "digitalities." It is not really a word but it describes the an sense of being digital.

[Recording Hockley02]

Allen. In terms of the historical theorists, who are you reading?

Ellen. Keith Jenkins, David Staley, ... I keep coming back to the practical digital picture part.

Allen. Theory can be a black hole. In your thesis, theory is used to set your reader up and explain what you are trying to do. You explained it very succinctly at the beginning of this conversation. You are looking at at visual narrative and how visual narrative can tell a story. Now that were moving into the digital realm, it is possible to tell stories in a different way, that requires less text. You need theory to explain that there are other people out there who thought of different ways of narrating history.

Ellen. The book *Theatres of Memory* by Raphael Samuel argues that there are many kinds of history, particularly history that is outside of the elite academic paradigm. It helps to change the idea that if you don't have written text, history itself doesn't exist. There is a dichotomy between the past and history: these are two separate things. Keith Jenkins wrote about this.

Allen. I like the idea that you've got a case study. You and I are alike in that we require a practical application to make this meaningful.

Ellen. Working on Visualizing Cultures over many years with many different image sets, I've become very familiar with the gestures of looking and the immersion that gradually conveys knowledge unique to each image set through your senses. I would hope that people viewing digital applications have a similar experience.

Allen. Are you going to use your Visualizing Cultures experience as part of your thesis?

Ellen. Yes, the Visualizing Cultures body of work is a valuable source of information. My case study on the boxer uprising advances the study a next step. It allows me to do things that I can't do when producing units for publication on the web now.

Allen. Digital humanities is becoming a big thing. We created a chair for digital humanities several years ago. The person we hired is focused on non-competitive gaming. You compete for a social goal that everybody realizes instead of competing with each other. The hardware she designed gets people to compete physically as well as digitally.

Ellen. Digital humanities is often about big data. At our last Visualizing Asia in the Modern World Conference at Yale we had people from many different disciplines who were interested in working together and working with visuals in new media environments. Interest is high.

Allen. The Newcomb Institute here at Dartmouth brings in people interested in the humanities and computing. It is data oriented. They want to bring quantitative analysis into the humanities.

Ellen. The work at Visualizing Cultures and in my thesis focuses on the content rather than the metadata and quantitative data of pictures. It relies on and reinvents classic observation techniques digitally. Visualizing Cultures built up a block of content that has meaning and tools can be developed around that to extend usage and find new digitally based insights.

Allen. How does Lynn Parisi feel about the future of Visualizing Cultures? She wrote much of the valuable curriculum for the site. I feel the pedagogical side is very important. Digitization allows you to do things you cannot do with text. This is the whole attraction of Visualizing Cultures. Suddenly I can use 500 images. I don't have a publisher telling me I have to choose five black and white pictures. Digital has opened up that whole world. If you publish an art history journals it is difficult to work with the editors and limitations of adding visuals. For the photography book I'm working on, publisher will tell me if you want all these images in the book you're going to have to pay for them. If I want color I have to come up with \$6000. I have to use my research funds to reproduce the images the way I want them.

Questionnaire

1 - VISUALIZING CULTURES

How did you experience your collaboration with Visualizing Cultures?

Did you work in new ways?

What did the digital publication format offer?

Did you make new historical discoveries?

Allen. I thought the collaboration was very useful because I was working with a professional designer like yourself. With books there is a designer but it is not very interactive. You might get to choose fonts or the header on the page. With digital presentations there are so many more variables, ways to bring out the visuals, which I found interesting and that forced me to work in new ways. It's an entirely different platform, which makes you rethink how you deliver it. For example, how much scrolling do you want between images or do you want to have a click on to look at details of an image? Digital lets you do these type of things that you can't do otherwise. In terms of new historical discoveries, when you're writing books, text are your primary concern. You incorporate images into texts, but you don't get the image-to-image dialog that you get in the digital realm. In the digital realm you can show image to image dialog, it is right in front of you. In a book you have to explain it. Having a chance to do those type of comparisons in the digital realm is where you can make new historical discoveries. The platform encourages you to think about things differently than if you are preparing an illustrated text.

Ellen. When you say "think," do you believe that visual thinking is different from textual cognitive thinking?

Allen. It depends on what type of writer you are. I do 90% of my thinking on the page. Once I start to write, I get my ideas. The difference in the digital realm is that I'm thinking with the pictures as opposed to texts. I'm thinking of a sequence of pictures as opposed to a sequence of arguments and explanations. It's conceptualized differently. Some people argue that there is visual thinking. Most studio art departments promote themselves proponents of visual thinking: "some people think in texts or language but we think visually." But we are a text-based culture.

2 - TEXT VS IMAGE

How does working with texts compare with working with visual sources?

Can meaningful historical research be published using primarily visual images? Why or why not?

Allen. There are historians, there are art historians, there are people who do visual culture studies, and there is a vast difference between the three. Historians, as you know, are primarily text-based. For them, the written document is most important. They use the word "document" loosely, for example, a social event such as a riot or a political rally is considered a document as well. Art historians, on the other hand, are looking at visual works, and in the classic sense, the moment of creation. What was going on in an artist's world, in an artist's psychology, in his mind and heart, when he or she was creating a particular work of art? They look at a work of art and try to figure out the parameters surrounding it that brought it into existence. Visual culture studies are different. While it is still important, they are less interested in the moment of creation and are more interested in the moment of reception. Who sees this work and what affect does it have when they see it? I'm setting this up as a hard distinction, because art history and visual culture studies crossover, but that is the primary way to differentiate them. Visual culture doesn't stop in essence, because an image might have a certain meaning at age 50 and might mean something different 50 years later.

Visual culture studies have an an ongoing open-ended parameter. The other difference is that art historians tend to work with "high art." Famous sculptures and paintings on gallery walls, for example. Visual cultures will consider anything visual. If you think about Visualizing Cultures, for example, look at the sources we used. With this ever make it into a gallery? No. These are newspaper illustrations, cartoons, and what ever so the realm of visual culture studies is very much bigger than art with these history. These differences between the historian, art historian, and visual culture studies person were evident the participants in the Visualizing Cultures project.

How does text compare with working with visual images is a tough question for me to answer because it comes naturally to me as a visual culture specialist, although I was trained as both an art historian and a historian in graduate school. As a visual culture specialist, the image is the primary document. The Visualizing Cultures model forces you to use the visual as the primary document. If any the units I wrote for VC were for publication in a book they would have been written totally differently. VC forces you to think visuals first.

Ellen. Would you say that your methodology of working with visuals is anything like observational or collections science? You assemble sets of images and study them for patterns?

Allen. You are describing the visual equivalent to big data. The visual culture specialist will look at large numbers of images and do exactly that, look for patterns and trends. If we have 100 images and 20 show geisha, then we know that's representative of something in the culture that supports these images. Between 1700 and 1950 some 300 million Japanese prints were made. They haven't all survived. Maybe 5 million survived, so Japanese prints are always about "big data." You can focus on one print, but that's not what's interesting. Probably of the 5 million surviving prints, 40,000 depict Mount Fuji. That's interesting. Why Fuji 40,000 times for a 250 year period? Because you're allowed to use more images in the final publication on *Visualizing Cultures* you naturally think about this body of works as a data set and ask "what am I going to extract from this data?"

Ellen. Your goal is to extract something about the history of that time, correct?

Allen. Yes. What I'm trying to extract from this data set is what are the conditions by which these things came about and if you have a data set of 1000 images they're going to tell you something about the market for these images. Think about it, anyone who's in business producing anything, your potential consumers drive what you produce. What does the consumer want? In commercial photographs and prints the consumer is always there as a factor. In looking at the big data set of images, it tells you for example, that in 1855 people wanted images of Commodore Perry and his ships. The idea is, what did people want? This formula works for commercial art but not so much for high art which has more of a psychological basis of origin.

Ellen. People were interested in events, but does this go beyond events and attitudes?

Allen. It is less about attitudes of the artists, because these artists are commercial, and more about attitudes of the market. We've often described *Visualizing Cultures* as image driven scholarship, but for me underneath that is market driven images. Image driven scholarship and market-driven images so for me it is market-driven scholarship. There is a school of historians in France in the early 20th century called the "Analysts" who looked at the micro data of objects and printed materials and at people's behavior interacting with them to try to understand what they were thinking. I subscribe that type of historical practice when I work with images.

Ellen. So that differs from documentary history, what happened and why, but more towards what was it like.

Allen. Yes. A historian might look at 10,000 letters sent to Pres. Lincoln. There are big data sets in history, but by and large the documents historians use are more pointed toward specific events.

[Recording Hockley03]

3 - DIGITIZED VISUAL RECORD

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Allen. First of all, it's made more widely available to more people. It made it convenient. I don't have to go to an archive and spent three months living in a seedy hotel that I can barely afford just to go to the Library of Congress to look at 10,000 photographs, because they're all online now. It allows you to see a broader array of material far more conveniently. There's a text-based equivalent to this too. When I first started working on Japanese photographs, I spent a lot of time bringing travel diaries in on interlibrary loan. I would photocopy it. I would read it and make notes, for example, tracking the words "Japanese women," but now I do that by searching Google books. It highlights all uses of these words, and further, all related phrases. That's the text-based equivalent of what visual databases are doing.

Ellen. What is the difference between going into an archive and touching the objects or sources and the digital experience?

Allen. That is an interesting and important question. Digital allows you to see things differently especially if we get very high resolution tif files. We can zoom in and see details that we never could've seen with the naked eye or we would see them and not notice them. The fact that we can blow images up forces us to see things that normally we would see but our eye might pass over. But at the same time, I devote an entire chapter in my book to the materiality of photographs. Photographs are things we look at, but they are also things we hold. They are pieces of paper. They feel like something in our hands. When we hold a photograph or an album in our hands and turn the pages we become aware of how it choreographs our movements. We dance around the material object in a way that we would not around a digital version on the screen.

Digital images are doing interesting things, but depending on the kind of objects you're working with you cannot ignore their material existence and the somatic or body experience they give. Think of stereoscope viewers. You pick up a stereographic card. You put it into the viewer and hold it up to your face, look at it, and adjust it. A series of motions are involved in looking at an image. If you look at the cards carefully you see the grime of 100 years of people's fingers in the corner where they held the card. You see the wear on the card where they inserted it into the stereoscope viewer. These are material qualities of images that are important. The digital does many things, but seeing and handling the object also offers critical information. I can look at a Japanese print, for example, and see that it is a beautiful print, but if I touch the paper I can tell if it is an early 20th century reproduction or fake just by the feel of it. Digital opens up a whole new world, but we cannot lose the material object.

Ellen. Can the tactile quality of sources experienced by historians when visiting an archive be conveyed digitally? Sensory cues from individual sources, the sense of immersion and discovery in raw source materials are forms of affective knowledge that researchers gain through physical contact with sources. Might the experience of archives be more closely replicated in digital publications than through traditional publications like books?

Allen. It depends on the sense. Digital images will not communicate the sense of smell. Digital images will not communicate the weight of an album, for example, as I hold it in my hands. Digital imagery can be used to simulate material qualities such as the roughness of paper, so a digital image can record the tactile. There has been a lot of writing recently on the senses and how the West has privileged vision, but in other cultures there are different priorities. In some cultures there are seven senses. There are cultures in Africa where one of the senses is balance. An anthropologist sites that this culture has both Western, modern products and traditional products. In a kitchen you can pick up a British made teacup and drink, but interviewees said it didn't feel right because the preferred method of drinking was with a gourd, using two hands. There was a symmetry to the way they hold a drink. In that culture this was a sense, in the same way we consider vision a sense. Digital imagery might broaden what we define as a sense in the same way.

4 - TRAINING

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

What changes would you recommend?

Allen. Having many friends and colleagues who are historians, they have a lot of anxiety about working with images. We've seen this at the Visualizing Cultures conferences as well. There are technologies of using images, analytical technologies of how to use images effectively and most pure historians are not trained in these. I have the training but I see others struggling. I've given public talks and had historians, up afterwards and say "is that what art historians do?" It's not what visual cultures specialists do, because when I talk to those kinds of audiences I try to show them how history could benefit from images and they are stunned to see the possibilities. Most historians when they publish books throw a couple images in to make them visually interesting, but they never analyze them. For example here's a book about railroads in China, let's put in some pictures of trains. The images are not discussed. You need training. You don't need to be fully trained, you can focus on the part of analysis that will work for you, but some training is required to be an effective communicator with images.

Ellen. How will they respond then to the large numbers of digital archives that are opening up visual archives?

Allen. Who will make the change? Will you convince history departments in this country to begin teaching about images? I don't think so.

5 - INTERDISCIPLINARY

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)?

Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

Allen. Digital humanities and art history are already interdisciplinary by definition. Art history has been interdisciplinary since the 1970s. History has issues to deal with as far as being interdisciplinary. Anthropology is also very discipline-specific in many ways, but there is a new branch of anthropology called visual anthropology that considers things like displays in museums of artifacts, for example. Pitt Rivers Museum at Oxford University has one of the leading programs in visual anthropology. Theory of history because it has theory in front of, is very philosophical and will consider much broader models for history.

Interdisciplinary collaboration and training is very productive. Putting a historian together with the visual culture specialist will be very productive. MIT Visualizing Cultures is a perfect model for that. Many historians were helped by John [Dower] to think visually.

6 - NEED

Is there a need for new models of historical representation (versus the traditional text-based model)?
What would you like to see develop in digital history using the visual record?
What is on your wish list or dream scenario?

First, we need new models. That's an easy question to answer. Visualizing Cultures moved us in an important new direction. I don't think we've exhausted that model. The digital world is evolving so fast and allowing us to do so many things that there is quite a difference between the first VC units and later ones. How much evolution has gone on there. As the digital world evolves there are many more links and other things within the model that also evolve.

In terms of the future what do I want? I want more collaboration, like Visualizing Cultures. Let's continue to experiment.

END OF QUESTIONNAIRE

[Recording Hockley04]

7 - OTHER THOUGHTS?

Ellen. Do you think there is a visual lexicon? Is there something about the grammar of text that makes written history more linear than it needs to be? Could a visual lexicon allow for more ambiguity, and more complexity? Does the language of communication change what is communicated?

Allen. I would think in terms of the customary forms of academic argument rather than lexicon. In the West we propose the thesis in our opening chapter, we prove it or disprove it. I've read histories, for example, where people keep looping back to particular topics from different perspectives. Here's how the King saw it, here's how his first minister saw it, as a nonlinear way to write history. What text-based histories can't do is create what I call a "delta" effect. A river comes down, hits the sandy plain, breaks into millions of streams, and spreads out. It is hard in text to think in those terms. It is hard to run down all those threads and the implications of those little tiny streams on the large flow of the history you are writing. Digital models may be able to do that. What I'm thinking about are options. For example, at this point in history what are the options for the King and you click the button to see his options, the many many choices you might make. It is multi-tracked linearity. Visual images lend themselves to that because there's so many things going on in them. For example, let's write the history of a particular building. What about the person standing in front of the building? What about the thing the person is holding in his or her hand? The image opens itself up to nonlinearity.

Ellen. People read actively. But many times in our culture images are viewed as entertainment passively. Does that mean that on a project like Visualizing Cultures people have difficulty reading online with the same kind of active involvement?

Allen. What you are talking about is the difference between passive reading and critical reading and the same thing, passive looking in critical looking. We are all guilty of being passive. Every night I can't fall asleep unless I read a novel and I don't want to read one that is complicated. I just want plot because I don't want to think at that point. I'm tired. And in the morning I don't remember what I read, so it takes me forever to get through the novel. I read contemporary Asian fiction voraciously and have more than 1000 novels, but I can't remember 90% of it because of passive reading. Similarly, many times when I watch a movie I just want to be entertained. We need passive activities as a release. To think critically, to read or see critically all the time is a lot of work.

Can Visualizing Cultures inculcate critical thinking? The answer is yes. Have we been attentive to the inculcation. That's a question for you and me. Have we been attentive to that inculcation, of forcing people to think critically about images? It's difficult because we can tell them to look at details in an image and try by example to inspire critical looking. I've always wondered if there is a more interactive way to create critical looking, so a reader has choices.

Ellen. Are you familiar with the art historian Aby Warburg? Is his work similar to Visualizing Cultures in any way, in terms of image connections?

Allen. Warburg is an important theorist. In our undergraduate program we have a course on theory and method that includes Warburg. Most of the theory in that course is predicated on the knowledge of

European or American art. When you're asking where does Visualizing Cultures start, where does visual culture studies start? It starts in the early 1970s with the feminist critique. Famous female art historians are asking why there are no great female artists. It is a very basic question that opens up the possibility that the canon of what we consider to be good art is restricted in some way. It's always white males that were considered good artists. The feminist critique opened the door and then everything came up for grabs. We could talk about female art or art done by women, we could talk about art from other cultures, we could talk about art that people don't think is art like advertising or graffiti. That is the start. If you look back at the history of visual studies as opposed to art history, it starts in the 1970s. All the books in my office on visual studies start at that point.

Ellen. I was thinking about the idea of meaning coming through connections which is part of brain studies.

Allen. There were other art historians that were ahead of their time, thinking about art in different ways, in ways that we still use today. But the shift happened with visual culture studies.

Ellen. Are there images that you as an author would not be comfortable with putting online? Given the history of the 2006 incident in Visualizing Cultures where controversial images were taken out of the essay and circulated on the Internet creating drastic responses in viewers, or in my Boxer Uprising research where, for example, there are large numbers the images of beheadings. Because the web is so open and images travel, how would you handle something like that?

Allen. I would opt for openness, but I recognize the dangers in that because the web is accessible to everyone and that includes children, that includes the people of the heritage or ethnicity of the violence that's being represented and sensitivity must be involved. It's a complicated issue. For example, in the courses I teach I show some awful images. In my syllabi I note in large print that there will be graphic images of sex and violence. If you are sensitive to this material do not take this course. But that is a very controlled environment. When I get to that lecture I tell the class that in the next lecture we are going to look at things that are problematic and that I am not going to test it, so if you feel uncomfortable with this, you don't need to come to the lecture. When I show it and talk about it I'm very careful about what I say. It is more about teaching students how to look at this stuff, various ways we can approach material like this.

When you put difficult images on the web you lose all control. You could have a picture that is horrific and show it with many pages of explanation as well as caveats all over the place, but once the image is there it can be downloaded and emailed by anyone. It's a philosophical quandary. I am not an American, so I don't understand how free speech laws work in the digital environment. But I also believe we need to put the blame where the blame lies. If you've done your duty and put up a difficult image and warned people of it, explained it in an academic way, and made it useful, when someone else uses it for their own purposes it becomes their responsibility. That is the person who is spreading harm on the web by reconfiguring it. I wasn't very involved in the Visualizing Cultures controversy, but I thought a lot about it.

Ellen. When I worked on the Visualizing Cultures unit that John Dower wrote on survivor drawings of Hiroshima I was immersed in these horrifying images for several months. I found over time I became very depressed. There didn't seem to be any upside. My solution as a designer was to not make them large. I'm not sure why, but it seemed less overwhelming, especially as there were many of these images and they were very graphic. In a book, reproductions are often small and grainy, but digitally images seem to expand in size, color, and detail, which multiplies the impact the picture can have. Images have a visceral impact and can hurt.

Allen. We read more critically then we see critically. Vision is such a powerful all-consuming sense experience, and we don't have the split-second where we pause and say wait a minute: what am I seeing and why am I reacting this way? We just tend to react. Again, it's complicated.

[Recording Hockley05]

Ellen. You are an expert in stereographs and there are many Boxer-related related stereographic cards. The original tour books have maps that you unfold and study as if you were on a real tour to a foreign land. Marks indicate the location of the photograph, and show where you should stand and what direction you should face while sitting in your armchair going through a box of stereographic cards. I had seen many of the images before, but the guidebook and map change the way I saw them entirely. It showed how individual images related to each other, which helped explain each picture and why it was taken. It also tracked the physical route the photographer, James Ricalton, took through China. The publishers of these cards and guidebooks targeted the education market. They claimed that the stereographic experience

was a form of new knowledge that surpassed even being at the site yourself, since you would not stand in the optimum position to see the optimum view.

Allen. I come it stereographs in two different ways. First of all, as I said earlier, it's about the somatic, bodily experience of handling them. The most interesting part of it is, when you put the machine up to your face the rest of the world disappears. It covers your eyes and you enter into that world alone. It blocks off all your other senses. When the three dimensions come into focus there's a spark that creates both sensory deprivation and sensory overload which makes the stereographs viscerally effective.

When I teach my course on Asian photography I bring the stereographic viewer and I pass it around and everybody has a dramatic reaction when they look into it. These are students that are raised in the digital environment. Young students, but they get the impact of the stereographic machine. With everything these students have seen and done and the rich visual world they live in and yet this little machine still has a remarkable effect.

The second way I come at the stereo graphs is through the writing on the back. It is graphic and sometimes gruesome, but what I find interesting is a whole set of stereo cards. I have stereo cards of Japan. You can buy a set of 400 images, a set of 100 images, and a set of 50 images. Each card has a number on it. Number 139 of a set of 400 or number 32 of a set of 50, this type of thing. The idea that you can take a country like Japan and reduce it to 50 images and put those images in order, we call it "essentialize." They essentialize a whole nation and a whole culture and a whole race and put them in order. What is sinister about it is the ability to archive, organize and control the perception of a country, culture, and people, combined with with such a powerful visceral experience.

How does a horrific image such as corpses were beheading get into a group of stereo cards showing scenes like the Great Wall, the summer palace, and places of interest. It is purely the prerogative of Western viewers. Violence done by other people on their own people is also a testament to how uncivilized they are. The whole idea of stereo cards is to tour the world, you hold the world in your hands and you control it through the cards. When you get to a horrific card you can point the finger at the foreign person and think how awful they are and reinforces the notion that you yourself are civilized. Here in America or England, for example, we have justice, we have courts and would never do this sort of beheading. Those sorts of images, when embedded in a larger visual narrative reinforce particular ideas in viewers.

Ellen. It is also not uncommon to see articles in turn of the century illustrated newspapers about lynchings. When these episodes appear in pictures, they have a more immediate shocking effect, although if you choose to read the articles they are also quite disturbing.

Allen. Here you're moving into a visual culture mode: what purpose does this serve, who are the readers, what ideology is this promoting in the end users of these images.

[Recording Hockley06]

Ellen. In terms of new models for digital, visual history I think designs can be templated. Designers can go in and clean it up. The design component can bring things to life. That's what designers do that's what they're good at. They are good at visual thinking. We are trying to bridge intellectual and visual thinking. The menu for Visualizing Cultures is the big grid which confronts viewers with visual images right away. They are asked to move into visual thinking. The menu conveys a sense that all the units, image collections, and time periods represented in the project are interrelated in a very different way than would the table of contents for a journal. The menu builds a visible knowledge space in which elements are interrelated.

Allen. Unfortunately a lot of the digital world is like a dumpster. Content is simply moved there in an already existing format. But Visualizing Cultures, because it is about one area of the world and a particular time period, gains an identity through the visual menu.

Ellen. The menu functions in a similar way to a map. We approach it and use it in the same way. Interestingly, a map as an interface blends spatial, visual, and textual information. Facebook is also interesting for the way in which we represent ourselves. We have developed our Facebook poses. There can be many pictures but we generally smile to look presentable. It is far from documentary or casual photography. I'm not saying anything new, but there is self presentation in the Facebook pose.

Allen. It is similar to the way we look back at 1930s portrait photography. People look the same because of the conventions of portrait photography at the time. The difference is that that was determined by professional photographers. The look of Facebook photographs is determined by the people who use it.

The Facebook pose has a quality of anonymity, correct? It's the same pose on the London Bridge or the Eiffel Tower.

Ellen. The anonymous pose in a way protects us. We are not revealing anything and if there is a picture that actually gets deeper, the person becomes uncomfortable having it on Facebook.

Allen. Well, I don't even own a cell phone.

Justin Jesty

Assistant Professor, Asian Languages & Literature
University of Washington
Written questionnaire: October 3, 2014

1 - VISUALIZING CULTURES

How did you experience your collaboration with Visualizing Cultures?

My inclusion in VC might be a bit unusual. I was asked to write a narrative for an image archive that Linda Hoaglund had gained access to. I viewed the task as primarily one of writing (as opposed to designing and realizing a project from scratch, which includes writing at its end). This was quite new and appealing. Using images was not new; my work as a cultural historian uses a lot of images.

Did you work in new ways?

In terms of working with images, not really.

What did the digital publication format offer?

The digital platform makes it much easier to have a lot of images, which is nice. This difference is fundamentally one of quantity, but it makes a more systematic approach to visual culture possible: with digital publication you can realistically open questions that involve entire archives or classes of image, rather than selecting a handful of representatives to be included in a book.

Did you make new historical discoveries?

Not huge ones. I hope the unit is an accessible resource though.

2 - TEXT VS IMAGE

How does working with texts compare with working with visual sources?

I don't think there is a coherent distinction to be made between visual and written sources. Within visual sources, you can have cartoons, graffiti, photographs, films, prints, painting, written accounts of visible phenomena, and possibly all material culture. Each has material and institutional considerations that far outweigh their commonality as being visual. Within written sources, things like court records, tabloid articles, personal letters, hardly constitute a coherent class of items.

I think VC could be improved by attending more systematically to the vast differences among the sources being used.

Can meaningful historical research be published using primarily visual images? Why or why not?

I'm not sure what "primarily" means. Archival material (including images) usually needs some kind of attendant writing to be properly understood by the person approaching it. There's a lot of "orphaned" material in archives (and in the non-archived world of things). It's almost impossible to use that material without some attendant account of where it has come from and when. It's also of little value to the audience to simply present primary documents (images or otherwise) without some account of why they're important or what the point of looking at them is.

Another question that comes up: there's a lot of work being done creating visualizations out of large data sets and using standard scientific visualization techniques to do environmental/climate history. Would you class such visualizations as visual or written? As you can tell from above comments also, I don't think the visual/written distinction holds much water.

3 - DIGITIZED VISUAL RECORD

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Yes, by making more things more available. I think a rough parallel might be the effect of photography in the late 19th century. (Arguably) photography made art history and physical anthropology possible as disciplines by making the visual record more available and portable. Digitization makes a similar leap.

4 - TRAINING

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

I don't know much about this.

What changes would you recommend?

First, I would say they need to be trained that "visual record" is incoherent as a category of documents. Whenever anyone approaches a document they need to pay attention to basic questions: how was this made, when, by whom, for what purpose, etc. The answers to those questions will necessarily involve them in discovering the institutional, material, technological factors that come to play in shaping the reality and significance of a particular document. Because of the fragility of many kinds of painting, photograph etc., arguably the institutional account of how a document became possible and how it survived are more important in the case of visible evidence.

Lillian M. Li

Sara Lawrence Lightfoot Professor Emerita of History
Swarthmore College

Written questionnaire: October 7, 2014

Visualizing Cultures units: "The Garden of Perfect Brightness," ([I](#), [II](#), & [III](#))

1 - VISUALIZING CULTURES

How did you experience your collaboration with Visualizing Cultures?

It was a wonderful opportunity to work with a group of creative scholars on an exciting and innovative project using materials and methods that were new to me.

Did you work in new ways?

Yes, of course. Using visual materials in such a manner was new. Digital formatting and publication were new. And working in collaboration with a team was new.

What did the digital publication format offer?

It offered a creative and flexible way to create a teaching medium that could be widely disseminated. Unlike a book which can be changed only through the publication of a revised edition, the digital format also allows for change.

Did you make new historical discoveries?

Not in any fundamental way, but seeing materials juxtaposed in new ways did/does provide additional perspectives and insights. What I hope is that students will make new historical discoveries when they use these units.

2 - TEXT VS IMAGE

How does working with texts compare with working with visual sources?

As someone who customarily deals with texts (as most historians do), I would be more comfortable if the sentence was reversed: "How does working with visual sources compare with working with texts?" I am sure others have studied this question and written about it formally (please send me some references!), but a few thoughts come to mind:

(1) Texts *appear* to be more straight-forward with the intention of the writer more apparent. Of course appearances are deceiving or mutable – historians would be out of work if they did not argue about intentions, meanings, contradictions, etc. (2) Images are "in your face" literally and can get your attention immediately. However, the intention of the artist/author demands more interpretation (except in the case of your political cartoons particularly when accompanied by writing [captions and text]). (3) As with texts, it is important to subject images to interpretation and critical analysis, and to ask-- [a] what was the intention of the auth/artist? [b] for whom was the author writing/painting/collecting? [c] what was the context, and [d] how is/was the text or image received by its likely readers/viewers? What is/was its impact? Is an image timeless or universal in its impact, or does its meaning change over different periods of history?

Can meaningful historical research be published using primarily visual images? Why or why not?

Yes, but. It seems to me that text always needs to play a role.

3 - DIGITIZED VISUAL RECORD

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Yes it is – certainly with respect to teaching. The almost universal use of Power Point in the classroom invites a wider use of images, and stimulates a curiosity about images by teachers and students.

Students in the last decade or perhaps longer are very accustomed to viewing images since they have grown up in the digital age. In the classroom I found that they often saw things in the images that I had not noticed. So the potential for incorporating visual records into history writing is quite bright..

4 - TRAINING

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

Not now, but hopefully in the near future.

What changes would you recommend?

Haven't thought about this.

5 - INTERDISCIPLINARY

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)?

Interdisciplinary work is very widespread, but each discipline in the humanities and social sciences exercises strong centripetal tendencies exist, i.e., wanting to adhere to its fundamental premises and practices. But this is controversial and differs somewhat with each discipline.

Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

Yes, where relevant.

6 - NEED

Is there a need for new models of historical representation (versus the traditional text-based model)?

Yes, change is almost always good, but as far as *historians* are concerned, texts will always be fundamental.

What would you like to see develop in digital history using the visual record?

Not sure.

What is on your wish list or dream scenario?

Not sure.

7 - OTHER THOUGHTS?

Any other comments, "ah ha" moments, impressions or anecdotes you would like to add?

Since working with MIT-VC I have often pondered the meaning of the slogan "Image-driven scholarship," and wondered what an example of original image-driven scholarship would be – i.e. scholarly research driven by images. All the wonderful units in VC are certainly scholarly, but they seem to be examples of wonderful and powerful "Image-driven pedagogy." Perhaps I am interpreting "scholarship" too narrowly as the kind of original and path-breaking work that gets recognition as a publication, either as an article or a book.

I would love to hear your views, and those of everyone else, on this question. I need to be educated!

Peter C. Perdue

Professor of History (Asia, China)
Yale University

Author, Visualizing Cultures units:
Rise & Fall of the Canton Trade System
I: China in the World (1700–1860s)
II: Macau & Whampoa Anchorage (1700–1860s)
III: Canton & Hong Kong (1700–1860s)
IV: Image Galleries
Massachusetts Institute of Technology © 2009 Visualizing Cultures

The First Opium War: The Anglo-Chinese War of 1839–1842
Massachusetts Institute of Technology © 2011 Visualizing Cultures

“The Cause of the Riots in the Yangtse Valley”
Missionary Commentary on an Illustrated Anti-Christian Chinese Pamphlet (1891)
Massachusetts Institute of Technology © 2014 Visualizing Cultures

Shanghai’s Lens on the New(s)
Unit II: Dianshizhai Pictorial Issues from the First Year (1884)
Introduction by Peter C. Perdue
Massachusetts Institute of Technology © 2014 Visualizing Cultures

Interview by Ellen Sebring
Recorded June 10, 2013, by video at Visualizing Cultures, 14N-238, MIT, Cambridge, MA

[Recording Perdue01]

Questionnaire

1 - Visualizing Cultures

How did you experience your collaboration with Visualizing Cultures?
Did you work in new ways?
What did the digital publication format offer?
Did you make new historical discoveries?

Peter. For question one, how did I experienced my collaboration with Visualizing Cultures, Visualizing Cultures began with Japan units written by John Dower and others and then we needed to add China units. I had seen all the Japan units that have been developed, so I had a model to follow. The Chinese units we agreed had to start at least with the opium war or earlier. I quickly discovered that the visual record for China is very different than that of Japan. In the case of the pair unit, for example, there was a balanced record from both sides in the Japanese prints and American illustrated volumes on the Perry expedition. In some ways, the Perry and counter was a more equal encounter, at least in the early stage, where as in the Chinese unit nearly all the material comes from the western side or the Canton trade. It was hard to find Chinese visual materials. That was one of the first things we learned. Each place and time period has a very different visual record.

In the case of the Canton trade system, we relied on Chinese export art. Whereas with the Japan units we had moved more towards using a single source rather than trying to gather a huge number of different sources because getting collections together is very time-consuming. It is more convenient focus on a single source about one event.

Most historians usually work alone. The fact that this was a collaboration made it different from what most historians do. I've done other collaborative work that was about quantitative data. In certain fields of history, like quantitative history or demographic history, it is more common to collaborate. You build up a database and different people use it for different purposes. That's the type of collaboration where you have a single source that everybody refers to. There are different types of collaboration because you need people with other technical skills. Rather than a group of historians working together it might be working with a media person or someone else who add different skills.

Ellen. What about the output?

Peter. The output being a website makes the project completely different than a typical historical publication. It is somewhere between a museum exhibition and Museum catalogue. In art history a catalog is an accepted form of publication, but in other forms of history that isn't generally the way people publish. Usually there is a lot more text and very few images. In *Visualizing Cultures*, there is a much higher percentage of images and as a writer you have to follow the images with the texts.

Ellen. In terms of historical discovery, did anything different come of using visual sources?

Peter. I'm not sure if they were new discoveries. In the Canton trade the facts of the trade have been covered in memoirs in many different degrees, but the visual record highlights things that are not necessarily covered in texts: the floating brothels of Canton, the flower boats that you see in almost every Canton picture. They are mentioned from time to time in the memoirs, but you can imagine that young men writing home to their sweethearts and mothers wouldn't feature this. The banquets that were held at the Comprador's house, the exchange of portraits between Western traders and the Chinese traders shows that there was a lot of interaction between the two monopoly traders on both sides. Again, that is something you don't get so much from the written record.

2 - TEXT VS IMAGE

How does working with texts compare with working with visual sources?

Can meaningful historical research be published using primarily visual images? Why or why not?

Working with visual sources wasn't something I was very familiar with. Art historians are familiar with this, but many of them look at fine art. Popular art is sort of blurring this boundary now and art historians have moved in a social historian direction I believe, including the economics behind the production of the art, the markets, the audiences, so in that way, there is more convergence. People who work with visual sources and text sources have made some efforts to work together to share common approaches. But still, the visual image is not the same as a text, it doesn't speak for itself. A text doesn't either. You have to interpret the text too, but you can cite a text as you are writing about the text. They are in the same medium. Citing a picture is not the same. Now with digital methods it is much easier to insert images as a citation or link so that you can go back and forth very quickly between the picture and text, so that is quite different from the way it used to be. There is a little more integration between the two media than there used to be.

Ellen. Can meaningful historical research be published using primarily visual images?

Peter. It's not a philosophical question, because in principle, yes, we have already done this with *Visualizing Cultures*. How far can you go in existing history journals and publications in this direction and do we really want to go this far in printed materials anyway?

Ellen. What are some of the pitfalls in doing that?

Peter. There was and still is a prejudice by publishers against having too many pictures. They see it as expensive, but beyond that there are intellectual resistances. People think that a book with a lot of pictures is just a picture book. It isn't a piece of historical analysis or narrative because people still expect a long story and a lot of writing in a book. It's only in the genre of, for example, museum catalogs that you see that sort of thing. They still aren't considered major kinds of historical work. But online there is a lot more you can do because there are not as many inherited prejudices or constraints.

[Recording Perdue02]

Ellen. If you are going to make a historical point could you do it through pictures or would you need text?

Peter. It is time that we explore different genres. Typically an author would insert a picture followed by several paragraphs of written discussion. This approach doesn't work well for looking at many pictures especially to see things that run through all of them. Then, it would be better to have a string of images with short captions and have the reader look at the images in a row, not unlike what you would do in writing if you had a series of short quotations from a text. That approach would reduce the amount of text and increase the amount of images in a way that would be more familiar to people: small thumbnails with captions.

Ellen. Do you use visuals in your teaching?

Peter. I use many more images in lectures than in writing. I'm not a big fan of bullet points in PowerPoint except as a basic outline. I insert many images and discuss them. I think professional history writing is still biased against images. Journals don't encourage it, publishers don't, and peer reviewers often tell you to take them out because they don't contribute enough to justify including them. However, images make

strong impressions on students, but professional journals are not generally directed at students, but at other researchers.

Ellen. Is there a drop off in seriousness between these uses for images?

Peter. Yes, though strangely enough we advise graduate students giving job talks to use images, which they all do now and they make an impression of course. They are there but kept on the periphery. There is a tradition of this.

3 - DIGITIZED VISUAL RECORD

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Peter. The first digital medium was online text and I think that has a lot more influence than digitized images in what historians do. The fact that you can find so much online now makes lots of things accessible that don't require going to archives and spending months or years there. That's changed a lot about how history is done, though again it is slow to change. It means that research technology is actually more important than what we call *sitzfleisch* technique, the ability to just sit in a chair for a long time staring at microfilm. That was a key requirement for a historian. The patience to sit there. That is starting to change: a little less archival fetishism. The idea now is to first see whatever is online before you go to the archives and use the archives for supplements.

Ellen. Does digital research promulgate inaccuracies?

Peter. The first objections were that the digitized version of a text might not be totally accurate when it was scanned and often it is true. Ideally a good digital database will have an image of the text as well as an OCR version so you can compare them. This is important for Chinese databases. You have to compare the characters they put in with the original to make sure they are correct. Beyond that I think there are bigger questions, not so much about whether one individual source is correct where several researchers find different results in the vast sea of available data. In the old days you might think someone could read the entire corpus and then would be able to make a judgment as to what was representative. But now databases are far too large for anyone to read them all, so in some ways you are judging who has picked out the most plausible, reliable version. It is cherry picking for the argument they want to make. The point was in the past that the whole ocean of reality was already filtered by the existing source, say, if you'd just had one national newspaper for the United States available – the New York Times gave you anything you wanted to know and that's all you could know, but now if you have all the provincial and local newspapers online also you don't just have the New York Times version you have a much broader, diverse, and complex version of what was reported. The newspapers are just a small part of the entire universe of things that happened. It's the same problem in a way, but now we have more ways of dealing with it.

Techniques for summarizing at a high-level, maybe the Google Ngram, the counting of words, and counting of topics are ways of addressing the massive database problem. GIS techniques, graphing, where certain items come from our other ways, but ideally you want to be able to drill down to the original text, too. If someone wants to check on a general statement about a place they are able to go to the original source also.

Ellen. What do you think about how history is filtered by when it is written as when histories are written one year, 50 years, or 100 years after an event?

Peter. There is more interest now in historical memory, historiography, and the rewriting of history over time than there used to be. That's another area where ingrained prejudices have changed. Publishers and reviewers often said to not include the historiography. We tell graduate students that might fit in your dissertation but don't put it in your first book. Reviewing the literature of previous people who have written on the subject, you don't want to do a lot of that. It slows the whole thing down. The graduate student should tell her story first and then maybe work and references to how it relates to others, but not get too bogged down in what everybody else is said about the subject today and in the past. It is a separate field of historical memory studies, which is a way of reviving that historiographical tradition in a different way. It's not that we want to say other people said all of this and I have the right story that will fix all the errors from the past, but rather following how people have told the story differently over time is in itself a kind of history. History itself is memory except for those in particular moment who experienced it. Memory studies have become much more popular.

Once, historiography just the books written by professional historians, books by popular historians, and textbooks that made their way into institutions and state educational systems. You can go beyond that to

popular media, oral histories and how stories are told and retold by families and individuals and turned into new directions. There are a lot of different ways it can evolve.

Ellen. Do you think that the fact that digital images are available changes historiography?

Peter. Yes, because the digital image makes a much more immediate impact than the text source. It hits a different part of the brain and has a very sharp emotional impact that the text source doesn't. That is especially true when you have texts in foreign languages that have to be translated. You get closer to an immediate experience. The reader today can get a better sense of the visceral quality of experience at the time. There is another interesting new trend in history, to look at the sensual experience of history, the emotions behind historical events, instead of assuming that everyone behaves rationally all of the time there is the sense that people are affected by also to the emotions which come through all the senses not just reading that sight and sound and smell.

Ellen. One would assume that a good writer could convey this also.

Peter. A writer tries to evoke all of the senses, but an image can hit you in the face with it.

Ellen. Is there an affective experience in archival research?

Peter. This is what we may be losing, the sense of eureka in the archives, where you spend a long time digging through obscure materials and finally, ah ha, you find something that does seem to have a lot of life to it and tells you about someone's personal experience, or an exciting event or some sort of revelation. You could experience that in a digital archive also, but it might not have quite the same impact of touching the old documents. That in itself has physical experience, to touch the document that somebody wrote. I've been asked to write for the AHA-HR article about what is lost in some of these new historical trends, so I've been thinking about this. You lose the tangible contact with the paper in the archive.

[Recording Perdue03]

4 - TRAINING

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training? What changes would you recommend?

Peter. Are social/cultural historians trained in the use of the visual record as historical sources? The simple answer is no, there is no systematic training in typical graduate programs in history. There is still a huge bias towards the textual record, of course. To be fair, graduate programs are shorter than they used to be and to achieve efficiency they focus on the key things that matter. If you're learning foreign languages, then that is the focus. There just isn't time to fit it in, it seems to me.

Ellen. What is the historical method in which students are trained?

Peter. There are two kinds of seminars. One is textual reading. You have a primary source or series of sources, you read the sources, and interpret and discuss their meanings. That is the classical seminar style we inherited from the Germans who set professional training in the US. It is still what they do in Japan and China a lot of places: close reading of textual sources. The other kind is the conceptual, historiographical reading of monographs by other historians about a topic or related topics and you critique what they've written. Students take a problem that was in one of the monographs and investigate it in more detail in the primary sources to see if the author omitted something or if there was a misleading story, or unsolved puzzle. Some of the students simply find an interesting source that they want to work on and see what they can make out of it. It's working from the top down and the bottom up.

Ellen. If they were to go after a visual source what would be the pathway?

Peter. They can do it if they are encouraged to do it. Right now the most practical method is the bottom-up method because there's very little in the way of monographs or secondary literature written about visual sources, at least visual sources of the kind we use, so they have to start with the source itself and get a collection of images in some form and read through them and see what story they can make out of it, which is more or less what we do with these units I think. We don't deal a lot with history and theory of visuality. We start from the base.

Ellen. What is the difference between how historians and art historians would handle this?

Peter. I think art historians are more theoretically oriented than a lot of other historians. Within art history in certain fields they have an inherited tradition of how they talk about artistic themes like realism, representationalism, formalism, and how styles change in time. It's a vocabulary they are trained in: theory of the image. The conference at Yale this year attracted many people from different areas such as art history, film, and visual studies. Since we requested that they provide concrete materials – they had to start with concrete sources – that's why we didn't get a lot of theoretical papers. An art history or cultural studies conference might start the other way around. Many of them start with a theory, formalism, for example, and people address an abstract concept from various angles, whereas we told them to start with their sources.

5 - INTERDISCIPLINARY

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)?

Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

Peter. Interdisciplinary training and collaboration isn't something we have really done much, that is specifically having two people from different disciplines teaching students how to look at things from two different perspectives rather than one. In the summer, I did an interdisciplinary workshop with an anthropologist. The SSRC [Social Science Research Council] is sponsoring interdisciplinary workshops now. That workshop was focused on ecology and environment, not so much visual images, but you could certainly imagine having people do that, a media person and a historian, and try to produce a new field in some discipline that combines perspectives from both.

6 - NEED

Is there a need for new models of historical representation (versus the traditional text-based model)?

What would you like to see develop in digital history using the visual record?

What is on your wish list or dream scenario?

Peter. Yes. There is definitely a need for new models of historical representation. There has been a lot of discussion about this, but mostly about new kinds of writing. Most history writing is still a 19th century form. It is a narrative form like the 19th century novel, or it is an analytical form, let's say the Germanic or social science type of analytical writing. Now there are people who want to do modernistic kind of writings, impressionistic, 20th century literary forms, for example. One thing that just occurred to me is after all some of the things they talk about as 20th century modernism are actually more visual forms than narrative forms. Some of the historical writing, still a marginal trend, is what some people call pointillist writing where you just give flashes of images, that is, imagistic writing without trying to connect it all together in a narrative. It is modular in form. Nobody publishes a book this way, but arguably you could jump from one image to another through the text instead of having to read it all the way through.

Ellen. Is there a way of seeing history that a modular, impressionistic approach supports?

Peter. Well, the other point is getting out of the national history form. Almost all history writing is still bounded by the nationstate, written by people from one country for the people in that country and it tells a national narrative. Now, even in American history, people realize that transnational history, international history, things beyond the nationstate are the new way to go. There is a lot of talk about it, but how to do it is the problem. Some versions of international history, most of them, are updated diplomatic history with political economy included, so it is about globalization and relations between 20th century states, European and American, mainly, some China and Japan.

Ellen. Does that change the role of the author in terms of presenting multiple perspectives?

Peter. Perhaps the author doesn't have to be responsible for writing every segment, yet is still choosing the writings and in that way supports a particular point of view. When we write about the past we didn't live in that past either. All history is a projection of yourself into a different place. The error we make is to project our preconceptions on to 19th century thought. If you pay attention to what they actually said and surrender your own point of view to the viewpoint of your source and respect that person's point of view, first, that's the way to get closer to what it was like at that time. The image can do that even better than text, the image made by people at the time for people at the time.

Ellen. Are there dangers in trying to convey through images how people saw things?

Peter. There are dangers when they are not mediated by text. They create emotional reactions and it's very easy to just react the way we would react today. You see a racist image from the past and react with horror to it or the other way around you might say isn't it funny, but it wasn't either in the past. It was not funny or may have been a joke to some of the people, but it was no joke to the people who were demeaned in

that way. It is hard with images to get detachment. However, I'm a strong believer that everything should be out there, but it depends on how it is done. It doesn't mean that everything that is put on the web is done properly, but whose responsibility is that? I don't think self-censorship is what historians should do. We have to argue for and respect the professionalism of our craft. You do learn some things and teach them things that are the right way to do it and you have to tell people that. You can't take that for granted. Otherwise they confuse you with everybody else to put something up on the web and it's not all the same. Not everything on the web has the same intellectual, moral quality. You have to do everything you can to frame it in such a way that the viewer gets the right interpretation. I don't think every interpretation is equally valid. That is part of what craft is about, making judgments as to how to interpret things appropriately, professionally. You can never stop somebody from directly downloading a picture and misusing it in some way. If they want to, willfully misunderstanding and misusing it.

The same thing is done with text. This is not new. People quote texts out of context all the time. That has always happened. Anyone can write a book and someone can pull out something from it and distort what you said. The basic issues aren't any different. You do the best you can to frame and explain your use of the image. If someone misuses it, that is their responsibility, it is not mine, the author.

Ellen. Is there such a thing as visual thinking, cognitively?

Peter. I don't know about the neuroscience side of it, but you can look at a lot of images and have a sense of visual themes, for example, that might be hard to put into words. You get a kind of impression of things that can't actually be phrased in text the same way. I think that's true. It has historical value, because people in the past to see those images also processed them that way as well as the textual way. With illustrated newspapers, their circulation was far wider than people who could actually read the text, so there is a different visual effect.

7. Other thoughts?

Ellen. Is there anything else you would like to add?

Peter. I think that the whole challenge of using images is very exciting. Our students are much more embedded in images now than in texts. They read a lot less. We know that as a fact. What are you going to do about it, resist it or go along with it? I guess you have to partly go along with it, but use images in a responsible way. We can't just ignore this phenomenon. We have to work on integrating images into more traditional historical teaching and production. There are other examples of this, the use of diagrams and graphs is extremely powerful. Professional physicists find that things have to be put in graphic terms before they really understand them, although the formal mathematical equation might be the way of proving it, the actual insight came from a picture. You see how scientists get their insights. Maybe you can try to stimulate visual insights by arranging images in a certain way and letting people look at them. There isn't a single, final way to do it. That is an advantage of the web that we can go through things in different ways and follow different paths.

James T. Ulak

Senior Curator of Japanese Art
Freer Gallery of Art and Arthur M. Sackler Gallery
Smithsonian Institution, Washington, DC

Author, Visualizing Cultures units:

Kiyochika's Tokyo

I: Master of Modern Melancholy (1876–1881)

II: Tokyo by Night

III: Tokyo by Day

Massachusetts Institute of Technology © 2014 Visualizing Cultures

Tokyo Modern

I: Koizumi Kishio's "100 Views" of the Imperial Capital (1928–1940)

II: Koizumi Kishio's "100 Views," Annotations & Gallery

III: "100 Views" by 8 Artists (1928–1932), Image Galleries

Massachusetts Institute of Technology © 2009 Visualizing Cultures

Interview by Ellen Sebring

Recorded July 15, 2014 at the Freer Gallery of Art and Arthur M. Sackler Gallery

Smithsonian Institution, Washington, DC.

[questions in bold type]

My name is James Ulak and we are recording from the Freer Gallery of Art in the Arthur Sackler galleries on July 15 at approximately 4:30 PM. I'm responding to Ellen's questions about my experience with Visualizing Cultures, visualizing history, and using visuals to teach history.

1. Collaboration with Visualizing Cultures

How did you experience your collaboration with Visualizing Cultures? Did you work differently? Did you make new historical discoveries?

I've actually worked on a couple of units with Visualizing Cultures, most recently the Kiyochika unit and in the past the Koizumi Kishio unit. I would say that working with the team was very stimulating. It was a creativity driven team, open to fresh ideas and, with the team, I struggled, in a positive way, to articulate what it means to enter into history through images and, if you will, objects, rather than texts, because traditionally, academics and educators think of images as ancillary, supplementary, and illustrative.

If you have a history book and you are discussing the history of the Edo period in Japan and you have a chapter on transportation, it's perfectly logical to enter into a print done by Hiroshige or Hokusai on the 53 Stations of the Tokkaido, the main highway, and the educator can draw out various things, such as ethnographic information. What did clothing look like? What sorts of things were they transporting? What can we learn about history through the elements of this image? That's a perfectly valid approach, but it treats the image as supine, malleable, and at our service as a piece of data like a text is. It doesn't treat the image as something that has to be entered into on its own terms with a vocabulary that's beyond content information, such as this is a boat, this is the ocean, and so forth. Visual art, plastic art, has its own terms, its own vocabulary and way of communicating. I think what the Visualizing Cultures project has done and continues to do is to refine the understanding that if we are going to teach primarily using the image—to take the leap and let interpretation flow from the image—you need a different sensibility. I don't know that the corner has quite been turned, but it's very close.

As an art historian, it's very interesting to look at an image with a straight social historian because it is startling what isn't seen or overlooked by a person not trained to look. This relies on questions of technique and all these things don't revolve around, is it beautiful or is it not beautiful, but there are within the art history rubric, ways of determining the relative effectiveness of an image, as an image. That kind of perspective or training still needs to be drawn out more in the program.

2. Power of an Image

You're talking about the effectiveness of images as an art historian. Can you elaborate on the criterion for that? [Recording Ulak02]

I don't know that this is written down in any one place, but it seems to me, that when I'm examining an image whether it's a Buddhist painting from the 12th century or whether it's a 19th century woodblock

print, beyond understanding the authenticity of the piece, what I should be asking is, what was the intent of this production and, given that intent or goal, how successful is it. If you take, for example, a print by Kiyochika describing a nocturnal scene in the city of Tokyo, it takes a while to discern his intent. We studied this a long time. What was he trying to do? What was his conscious and unconscious aspiration in describing the city? If his aspiration was to show a new time and place under new lighting conditions and to make a commentary that expresses ambiguity about the processes of change, how does the artist do that? It is through the mood of the print.

Then I examine the technical effectiveness. Technique should always be in the service of the greater goal. For example Chinese latticework globes were very popular. I've heard people comment on this exquisite technique, but technique in the service of what? What Kiyochika does with his prints is to marshal the high techniques in woodblock carving to create waves and layers of clouds and dark night. The total effect is one of ghostliness and floating.

Looking at a work of art you establish the use of the piece. For example, the use of religious iconography is clear in most cases: to create a feeling of transcendence, awe, and things that remove you from the present. A 13th or 14th century Japanese Buddhist sculpture shows a revolution of hyper-realism where suddenly come from carving one block. If you're carving from the chunk of the tree, you create a static, imposing image. But if you carve a hand or finger and a forearm or a foot and put it together, you have much more control over the dynamics of the shape. If you insert crystals into the eyes and put paper behind them you have the ability to create reflections in candlelight. You have a goal in the 10th century sculpture, based on the limitations of technique to create this big behemoth thing. In the 14th century you have the ability through better techniques to create an almost paranormal experience. They are both works of art, but the art historian looks at the goal and how technology helped achieve that goal.

3. What is new in digital realm?

Does the digital turn offer something new in how we look at and work with images in the digital realm?

In the toolkit of digitization, there are many obvious tricks: detail, and large, zoom, all of the standard things one can do with the image. All these techniques help the user to look and look more closely. If the enlarge click does nothing else, it invites the viewer the naïve viewer to play and suddenly they see my goodness this guy went to the trouble of carving every hair on the head, then when they disengage and go back to the one on one ratio you keep that in your mind thinking about this. You realize that the image you're looking at is really an aggregate of very carefully thought-out pieces brought together. The technique of digitization itself allows a manipulation of the image that wasn't manipulable before. That gives the viewer greater intimacy. There are a whole host of things that digitization allows you to do. Compare images on the screen. In the same way you have in large type for people of poor eyesight I think the tricks the digitization with images opens up a vast possibly interconnected visual library for you, cross reference that allows you to look more deeply at an image. All of these things are for the good in being able to familiarize you with the image.

4. Text vs. Image

That leads to the next question about text versus image. Images are as easily accessible as texts on the screen. Rather than writing about images, can we communicate our thoughts and analysis with the images themselves?

I think we've been communicating with images themselves for a long, long time without the imposition of words. In the 20th century, the best example of that is the celluloid film, which is one cell after another—single shot, single shot, single shot—in an edited narrative, with or without voice or sound. Obviously we went through a period of silent films. Sure we can do this. We can speak with just images. We can create a whole cognitively coherent narrative with images. Where the stumbling block comes in our current mode of thinking is granting a primacy to visual narrative over text.

If you put together a visual narrative of a hike west of Boston, around Walden Pond, you could put together an interpretive vignette: I arrive at Walden, park my car, and so on. As an editor, you select the images and the sites you want to shoot and in the end put together "My Day at Walden." You can interpose those images with almost anything you want, such as, 19th-century sketches of Walden, and make your own memory of it. A critic would say, unless we see in writing what you wanted to get across, we can't really be sure. How we look at your film is subjective. But if for that same day, you wrote out a diary called "Walden," somehow those words are more believable in conveying your intentions. That's how our minds work. I think we give words more credence.

Why, generally, in our culture is word more trusted than image? This goes as far back as Plato, where distrust of the visual arts is manifest. We are a culture based on word. The Judeo-Christian God is a word personified. That's been said for 2000 years or more. Giving a primacy to the word is important in our culture. The iconoclast controversies of the early church where images were smashed as idols, but were in part because of their unreliability and their allowance for a broader interpretation than orthodoxy wanted. It's harder to draw boundary around an image than a word. Images are extremely powerful. The history of our culture could be written in the dance around images. I think you are right, that curators are provocateurs in placing images or things as primary and providing some context and interpretive text and allowing that interplay.

5. Exhibition as Visual Narrative

When you design an exhibition are you creating a form of visual narrative, an arrangement of visual images contextualized with short texts?

That's exactly right, we set the stage. Every exhibition is different. There are monographic exhibitions about the work of an artist at a particular period or retrospectives of an individual artist. There are exhibitions about themes. There are exhibitions about almost everything imaginable. Each requires a different way of thinking in greater or lesser degrees of interpretation.

The exhibition we spent some time with today, "Kiyochika: Master of the Night," features an individual who created, over a period of six or seven years, 93 different views of the city of Tokyo in its new clothing of modern gadgets and geegaws and buildings. The artist assumed a style that had never been seen before in the Japanese print. If I'm creating an exhibition, we know this and are picking it apart and have talked about it for months and months, so how much of it do we want to show? What do we really think the artist is saying? We are involved in this dance, if you will, with the artist. What was he getting at? What was different? How do we tell the audience how this was different from things that went before and came after? We edit severely. A completely agnostic way of doing the show would be a long black wall and pinning all 93 prints up in the sequence they were produced.

6. Chronological Order and Choices

Is putting images in chronological order a first step in understanding the images? How do you make choices?

Yes. One of the first things we do is the raw exercise of determining when was an image made as best we can determine. You look at them and begin to identify patterns. This is the nature of bits and bytes, actually. The eye identifies what are strong pieces and pieces that have similarities, for example. A strong visual creation has a fairly immediate impact. It imprints on the brain and you keep going back to it. It's not an exact science. It could be the softness of the rendering. It could be a striking and unusual subject. It's a combination of fascinating subject matter and skill in rendering. You know it when you see it. But then you're running into the problem of elitism. I don't have a problem with elitism. If we pin those 93 images to a wall and I picked 10 people off the street, my hunch is, based on experience, that I or one of my colleagues here at the Museum will be able to assemble a stronger package more quickly than other people in this polling group, because we're confident in our eye and our choices. Training is part of it. We've just done it a lot. We are visually trained. I'm not sure training is the only skill involved. Some people are simply more attuned than others. You can learn, but I don't know if it is training that takes me to the piece or instinct.

Many text-driven scholars or scholars with a thesis will look to images that amplify their thesis or are related somehow to their study. If you're a historian of early modern technology, you may go into great detail and show great interest in a visually mediocre print of an early locomotive. Whereas I would say if you want to show a locomotive why not show one that's got all the goods—it's a powerful image, it's well conceived—many people are happy to have the parts of the locomotive shown and are not concerned about good, better, or best in aesthetic terms.

7. Power of Many and Borderline Images

Yet, if I collect 10 images made at a single location, I'm not necessarily interested in the best aesthetic image, as much as seeing the differences and similarities of all 10. Aesthetically poor images might have historical value in what they reveal through mistakes. Comparing 10 images, digitally, might evoke the historical moment in the way you see beyond the frame of a single image.

It's extremely useful in archiving all facets of things left on the cutting room floor. One of the exercises we do here is the charrette. For example, our posters and banners are created in a process of about three

meetings. At the last meeting we narrow the choice down to three. Through this process, the eye begins to see what is a stronger and more effective image. Can the image convey the substance of the exhibition? Maybe not, but it might draw people.

There are many choices in the industry of image selection. With a project like Visualizing Cultures the founders recognized this disjunct and sought to redress it through this important project. The participants who joined the project are all over the block in terms of visual acuity. Some are chained to images as illustration versus, at the other end, people who work in the snake pit of the venomous image every day. They know what an image can do. At the end of the day you need both, but it is still the word, certainly since the middle ages, that has been the primary vehicle of knowing.

8. Art Historian and Spectrum of Image-Text

As an art historian, you encompass the full spectrum of image-text relationships. You mount an exhibition with images, create visually-rich catalogs, and write books about images. You create in an image-led environment, but at the other end of the spectrum when you write a book, you use words to describe the images and your insights. Can you talk about the experience of image versus text primacy?

My profession, as I have tried to practice it, is schizophrenic. There are few things more pleasurable than what we did today: going to an exhibition that I had a hand in designing and reliving and rethinking it, and making constant visual discoveries. Every day that I go through an exhibition that's been up for two months, something I worked on for two years, there's always something new that you see. That's a huge pleasure.

There's also an intellectual pleasure that comes from collecting interpretive data and writing about it. For example, in the Kiyochika exhibition there is a very haunting image of a Shinto shrine in a state of disrepair. You see the Shinto torii and gate, looking from inside of the shrine onto a barren rice field. Having studied the map, you know exactly where this shrine is. It's right on the edge of the largest brothel district in the city. You know the particular deity who was revered at that shrine. These shrines were found all over the pleasure quarters in Japan. This is where the ladies went to pray for good fortune, health, and all the things that any human being prays for. I asked the question why this place in this state of disrepair.

The Meiji government came into power in 1868 and one of their first policy acts involved Buddhism. Buddhism was viewed as an overreaching, corrupting ecclesiastical influence over the body politic: drunken lecherous monks, let's rid ourselves of them, tax them heavily. The Meiji government in Japan broke the back of Buddhism and had to reinvent itself for the 20th century. Shinto, which was the indigenous religion represented by this shrine—mind you, I'm writing all this, I'm making an intellectual argument—and I'm thinking, wait a minute, Shinto didn't even have a name until Buddhism came along. It was just what you did. The contrast with Buddhism required it to create a stronger self-identity that by the 18th or 19th century evolves into a philosophy and it becomes a very nationalist philosophy. This is the nation's belief. Soon you have the volks faith, really, not unlike Germany, that pins up a highly nationalistic Japan that's emerging.

So Shinto and its shrines, one would expect to be depicted quite beautifully. Lo and behold in Kiyochika's vision of the new city you have nice Shinto shrines that are shown, but then you have this beat up old shrine. One wonders how it was received and what kind of a risk the artist was taking in saying "I'm going to show Shinto in a state of disrepair." These ideas are things I'm writing about. This is an idea and I'm carrying it forward. I find documentation for it and set the context.

While it's very useful, I also find that words, once written and heavily invested in, upon return, can prejudice the way I look at things.

9. Visual Knowledge

You said you always see new things, so visual knowledge seems somehow open-ended. How do you describe visual knowledge? Is it more emotional?

Written texts can be revisited numerous times and have new revelations, more typically, fiction and poetry than otherwise. It's harder to analyze words, because they're in a page by page sequence that you'd have to take apart and put on the wall to "see" the intent of the author in terms of pattern, rhythm, and flow. With images you see that in one shot. Images are dense and complex. Your mind might not be predisposed to see a certain thing at a given time, but nested in there in a less ordered way than with text. It allows for slightly greater serendipity.

10. Intangible Knowledge

Is there a divide between intellectual reasoning or discursive knowledge and the sensory or sensual knowledge? The shrine image you described was a window into the past, not just offering information about the artist, but about human experience at that historical moment. Do we value intangible and sensory knowledge as much as intellectual or informational knowledge?

We probably do not give it the same value. Conversations among academics particularly at a formal level always need more honesty. This has nothing to do with me as a professional art historian, but I was born and grew up until I was 17 in Springfield, Illinois, where Abraham Lincoln spent his adult years, from his early 20s all the way to the White House. My childhood was permeated by Lincoln. You could not not trip over memorabilia, some of it hokey, some of profound. I regularly visited Lincoln's home, even before it was a national park. I went to the village he lived in some miles outside of the city. It was part of my sensory experience—visually, the aroma—everything created a flood of memories of people and things. I am completely unable nor do I want to jettison that mix when I pick up a new biography of Lincoln. Those memories, feelings, and textures infuse everything I read.

I am fascinated by German history in the 19th century and into the 20th century. I've traveled to Germany a number of times. I love to walk the streets of Berlin. I love to look at the skies and I imagine these are the same skies that people saw 60 or 70 years ago. I find myself as a human being seeking that connection, so when I read the history of Kristallnacht or some horrible event that occurred in 1933 or 1932, I've stood there, I've smelled the air, I've seen the skies. That invariably influences what I read. What I read is, this is why this happened, this is who participated, these are the outcomes, but that visualization, not necessarily an image, but the experience of a place is deeply informative.

I remember where I was in particular library stacks, holding a particular book, what the time of day was, and the feeling of the light, when I first read such and such an author. When I'm saying is that no text is studied without a context. It's personal, it's emotional, it's a combination of reverie and memory— you bring all that to it. For people to declare a sacrosanctity of text is pretty naïve and it's true of images as well.

11. Accessibility and the Original

Since your work deals with artifacts from the past—touching them, organizing them—and not many people get to do that. Digitization has opened the vaults to many more people. We don't experience the size, shape, and smell, nor have a sensuous interaction with the original source, but we have accessibility. As we move into an increasingly digital world where visuals can be reproduced easily, do we need to deal with this shift toward ocular visuality?

The digital is a marvelous technology, because it puts literally at your fingertips a universe of things. In my experience it is suddenly both rare and beautiful and very quotidian. I've seen instances where you see an exhibition advertisement blasted from a billboard to come see something for the first time in 500 years and you go and it might be as big as a dime. You're startled, thinking is this what everyone's getting worked up about? When I was a kid, the issue arose of what to call your friends parents. For me it would be Mr. Patton and Mrs. Patton, not Ray and Lily. The huge breakthrough into adulthood came when they said "please call me Ray." The underlying modality was familiarity breeds contempt. I heard that phrase 1000 times when I was a kid. I think that can happen visually to if you're not careful. Yet it can create tremendous intimacy. When people have seen something digitally but never in the flesh, and finally have that opportunity, they always say this is the best. Seeing the real thing is the best.

12. Skills for Non-Verbal Knowledge

I imagine that curators who design exhibitions have very good ideas about the abundance of images and nonverbal knowledge. Could you talk a little about the skills you need?

My experience in touring a group of scholars, not art historians, through an exhibition, I'm always amused and interested in their discomfort. They'll run to the label. Years of being with books, discursive writing, and unfamiliarity with the possibility of what the visual can bring and a lack of trust in the visual explains it.

Specific to the project that you've been involved with for so many years and I have been tangentially, what the next great step in that program I think would be—and there is so much more to do in that program—is a more systematic training offered by the art historians and curators in the group for the social historians. I'm not saying social history is easy, but the tools are more straightforward and, I think we had this discussion one time in one of our committee meetings, why do we say not any image will do

to express this. How do you arrive at good, better, best? What constitutes an acceptable image as an entrée into a concept. Our anecdotal experience tells us that certain kinds of historians are more prone to the pragmatic choice rather than to, well I don't want to call it the aesthetic choice, but let's call it the better choice of what's out there. If you're going to proselytize about the value of image driven history, training is required to become comfortable and to know how to work with images.

13. Directing the Gaze

I've noticed that the impulse, for example, to show a portrait of the person being discussed can dilute the visual narrative. Visuals used sparingly direct the gaze and choreograph the exposition.

Speaking of portraits, I go to the book readings and am very often disappointed. I'd rather have the illusion created through the work then confront the real person and that's how it should be. So your thought that I've mentioned this person so let's show the portrait makes sense to me.

Kiyochika in his portrait looks like a Japanese James Brown. When he was old he had a long flowing white beard. You are seeing all these sophisticated ideas and vision you look at this guy and think is this the man who created these? It's like Facebook, too much information.

14. "Good, better, best"

In his book on the Boxer Uprising, James Hevia writes about a series of five execution photographs in an album in London. The book only shows one of the five images. I wanted to see the other images to consider his commentary. I wanted to see for myself. In this case, it is not the single image that is aesthetically "good, better, best," but the series. Sometimes it's the bad image, the image that shows the tripod of another photographer, for example, that conveys more about the scene.

What we know about new technology and art is that a well-versed viewer can never be a naïve viewer. The French philosopher Paul Ricard has this phrase "second naïveté" the possibilities of belief. What you are saying is very important and is one of the potential values for a project like Visualizing Cultures. An art historian named Rick Bartel (?) working in the United States treats mainly 19th-century French paintings has a lecture where he went to the trouble, and it must not have been easy, to locate the great iconic scenes painted by the masters in Paris in the 1880s and 1890s. Keeping in mind that Paris was a city under construction for at least 60 years during the 19th century, rolling construction to get where we are now, what he showed was painting of a dandy with a beauty on his arm. Bartel (?) located photographs of the city at that time. He found photographs that showed everything around the couple. His point was that the artist was sanitizing and creating a beautiful view of something that was a construction site.

What you're talking about with this execution photo is similar, so it provides evidence. A banal image is not always a beautiful image but an instructive image. If were talking about an execution scene, in my mind in all of the art I've ever seen there are multiple brilliant images of crucifixion, which was an execution. Caravaggio's crucifixion of St. Peter. And then you have Goya's firing squad, and Monet's Mexican revolution. Those are classic images in the West of execution. Is this execution photograph compelling compared to these? The news photograph taken during the Vietnam war of an execution has entered the iconography of greatest photographs of the 20th century.

15. Images of Atrocities

There is a question around images of atrocities that are vivid, searing, and immediate. Is it okay to show such images in a publication online where there is no sustainable bounded framework? How can a very old image still be deeply emotional today?

We are dealing right now with the issue of children pouring across the border of Texas. What image are they bringing to the border? Our lady of Guadalupe, one of the most powerful images for an entire continent. It conveys feelings that are both reassuring and threatening depending on which side of the border you stand. The images of the passion and death of Christ are absolutely wrenching. These are not little holy cards, if you start to look carefully they are powerful and disturbing for someone who is looking. Some parents don't let their children look at those. It's an interesting kind of censorship.

Then you get into the more controversial parts of the Visualizing Cultures experience, the reaction to images of the Sino Japanese war. You see this all over the place. You see them here in terms of images of the extermination of Native Americans. That is standard fare. I did an exhibition of Buddhist paintings here that were exotic and weirdly violent. There's one long-hand scroll called "seven fortunes and seven misfortunes" that shows an execution. What is the execution? A man is pulled apart and it is a very

skillful painting. I said to our director, "what do you think?" We decided not to show it. We live in an age of what I call unlimited sensitivity sensitivities.

16. Ocular Dominance

What about the dominance of the ocular aspect of digital images and digital scholarship?

There is a documentable phenomenon of a hand-mind connection. If I'm sketching something on a piece of paper, the nerves in the tips of your fingers connect to the brain in a unique way. But increasingly, there is a disjunct, for example, in architecture between people who use CAD and people who do drawings in the feel of doing things. There's a book called *The Hand* that describes this phenomenon. The articulating movement, whether it's to do it design or a book, feeds my brain in a different way than using a computer program. There is a crisis in education now in Japan where kids are losing the skills of doing calligraphy. They are losing the feel of the flow sense patterns in the brain. We are being changed and is it for the better?

Jeffrey Wasserstrom

Chancellor's Professor of History, University of California Irvine

Written Questionnaire: September 16, 2014

1 - VISUALIZING CULTURES

How did you experience your collaboration with Visualizing Cultures?

I found it a fascinating form of collaboration, which let me combine in unexpected ways the ideas I'd been exploring in print but with having images lead the way. I'd done some related things, such as consulting on a documentary film, but this felt much more of an integration between my normal writing mode and a visual medium, rather than

Did you work in new ways?

Yes; I often collaborate with others, but usually only one or two people at a time, but this involved a much larger set doing different things and bringing different skill sets to the project.

What did the digital publication format offer?

I'm used to publishing digitally, but this specific format's major special attraction for me lay partly in the ability to manipulate images so that, in a sense, by zooming in tightly on details in a complicated visual document to make a point, I felt as though I were quoting a particularly revealing sentence from a long written text.

Did you make new historical discoveries?

Not really, the pay-off for me as a researcher lay in clarifying things I was already thinking about, and also finding novel ways to communicate ideas.

2 - TEXT VS IMAGE

How does working with texts compare with working with visual sources?

I see lots of parallels between them including the analogy of quoting and zooming in mentioned above, but I was also intrigued by how, with this project in particular but also some others relating to China (and perhaps other places), the line between texts and visual sources blurs, such as when you have pictures that have words across them (something that also struck me when working on a museum exhibit of Cultural Revolution posters).

Can meaningful historical research be published using primarily visual images? Why or why not?

Definitely—and I've seen examples both on VC and in other contexts that show this. I do think that words are needed, but the balance between words and visuals can be reversed from the norm to good effect, if done carefully—that is, instead of having a lot of words illustrated by some visuals, a lot of visuals accompanied by a gloss of words. In a sense, we've long known this could be done, as there are documentary films and museum exhibits that are at the heart visual arguments, but the web allows for many more than the usual ways of doing this.

3 - DIGITIZED VISUAL RECORD

Is the digital medium changing the use of the visual historical record in the practice of history and if so, how?

Personally, while the digital medium is changing the way I use and think about the images, thanks in part to my involvement with VC, the biggest change in my research may be simply the ability to do new kinds of digital searches, including full text word searches of vast newspaper archives and Google books troves that let me find out new things about connections between topics and shifting uses of particular terms. If/when more sophisticated searches can be done in large visual repositories, that will be another big shift.

4 - TRAINING

Are social/cultural historians trained in the use of the visual record as historical sources? If so, what are the strengths and weaknesses of this training?

I still find many of the best people working in this area are at least partly self-trained, or peer-trained, that is, rather than going through a formal course of study, they pick up tips from people who've done impressive work by the seat of their pants. I would love to figure out how to help my graduate students get sophisticated guidance in using visual materials; maybe there are programs out there, but it is still hit or miss.

What changes would you recommend?

Perhaps some sort of short term boot camps in digital and visual methodologies for historians, as it is hard to integrate training into regular courses of study.

5 - INTERDISCIPLINARY

What is the role of interdisciplinary inquiry in historical research today? (for example between history, art history, anthropology, theory of history, digital humanities, design)?

This is a funny question to me, as every historian I know thinks of himself or herself as doing interdisciplinary work, whereas in the past it might have been a choice to be interdisciplinary or not. The issue is really what sorts of disciplines are being combined and fused. There's been a rising interest in some (e.g., visual studies), a declining interest in others (e.g., economics), and a steady interest over a long stretch in still others (e.g., anthropology).

· Do interdisciplinary training and/or collaboration affect working with visual images and digital publishing?

I would say collaboration now tends to be more significant than training, though that may change.

6 - NEED

· Is there a need for new models of historical representation (versus the traditional text-based model)? Perhaps, especially given how visually minded the current generation of students is--and the next likely will be even more so.

· What would you like to see develop in digital history using the visual record?

Some way to search for elements in images, though this is very tough to do, I can see, perhaps some kind of visual equivalent of key words, or key words pegged to visual elements.

· What is on your wish list or dream scenario?

Being able to search visual collections the way I do digitized print ones, so that I could say look for images of China in books that use dragon motifs or cityscapes that have unusually tall buildings.

7 - VISUAL THINKING

• Do you think there is visual thinking and sensory knowledge as opposed to rational cognitive reasoning?

I don't know.

• If so, does it have a place in historical representation, especially in new digital forms?

Again, not sure.

8 - OTHER THOUGHTS?

Any other comments, "ah ha" moments, impressions or anecdotes you would like to add?

I keep coming back to the question of whether there's more of a flow in Chinese materials (and maybe other Asian ones) between words and images and what to make of that; what I mean is the frequency with which Chinese paintings have poems on them and those poems are written in a calligraphic style that is itself an art form. It's not a "western" vs. "eastern" thing as there were illustrated manuscripts in the west and political cartoons combine words and images, but there just seems some sort of difference there worth teasing out, and working with VC in various capacities has brought that home in new ways.

Gennifer Weisenfeld

Interview recorded on Skype on June 10, 2013. Please contact author for transcript.

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