"A Heuristic for Visual Thinking in History"

David J. Staley

Note: The multimedia histories referenced in this article can be found at:

<people.cohums.ohio-state.edu/staley3/VisualHistory/VisualHistory.htm>

Thinking like a historian has traditionally meant thinking in words. Generally speaking, historians favor text-based primary documents and have only recently come to accept visual artifacts as useful primary sources. More importantly, after their research has been completed, historians generally believe that only a written account constitutes serious history. That is, when representing information and knowledge in history we tend to favor written works (books and articles) over other forms of representation. (Even when making oral presentations, historians tend to read papers to their audiences.) Visual images and other forms of multimedia representations are, perhaps, appropriate for history buffs, museum patrons, and amateurs, so this view goes, but professional historians consign these to the margins of our discipline. Indeed, it has only been in the past twenty years that historians have begun to take film seriously as a medium of historical representation (a few decades too late!), but this has largely been confined to the study and criticism of films made by others. Film is not a medium through which historians choose to represent the past.

Indeed, our image of the historian is that of a writer. What kind of writer is the subject of some debate among historians: those who wish to see history retain its narrative and literary roots see themselves as literary writers, and seek to write books and articles that appeal to a wider reading public. Historians who wish to define history as a scientific discipline favor a more analytical style of writing, as we see in our specialized monographs and journal articles. Whatever their orientation on this point, however, most historians see themselves as writers, and thus prefer to represent the past as a form of either literary or analytical prose.

This attitude has clear effects on the ways we teach history to our students. When we ask students to represent their knowledge of the past, history teachers often assign written papers, essays, short answer responses, and the like. That is, we teach our students to think of the past in terms of sentences, paragraphs, expository or narrative essays.

Historians reside within a "textual culture," and yet we live in a time where multimedia presentations—webpages, PowerPoint slideshows, Flash animations, even digital films—are ubiquitous, and indeed are beginning to find their way into classrooms. Many history teachers I have spoken to in the course of my research have expressed concerns over the quality of the multimedia projects they reluctantly assign their students, such as PowerPoint presentations and webpages. (Many others refuse to assign such projects, so concerned are they about the perceived lack of academic quality and content.) Students, these teachers fear, assume that flashy presentations that employ technical wizardry are a substitute for academic rigor, which historians believe can only be achieved through written essays and the analysis they engender.

What undergirds this attitude? One historian spoke for many, I think, when she said, somewhat defensively, "I have not been trained in multimedia; I am a writer, so how can I advise students on what is good in a multimedia presentation?" These teachers feel unqualified to assess these presentations; at the same time, they find it difficult to convey to students what they would prefer to see in such multimedia presentations. I understand this frustration: this historian was not talking about technical matters. Indeed, she complained that students assumed that technical wizardry was the goal of such multimedia displays, not academic rigor as she was preaching. This history teacher had valid stylistic concerns about multimedia presentations. By style here, I do not refer to decoration or literary affectation but rather to the kind of style in history explored by Peter Gay and preached in Strunk and White and other writing guides. Style here means the rules intended to organize and present information clearly and thoughtfully. What these teachers are missing is a set of guidelines for assessing visual and multimedia products in history, a kind of visual style manual comparable to the writing guides we assign to students.

Multimedia projects can be judged on their compositional style and academic rigor, but not in terms defined by written prose. This essay will detail a heuristic history teachers can use in assigning and evaluating multimedia projects in history. To use this heuristic successfully, however, requires more than simply following the steps in the list or stages in a recipe: in many ways, it requires a reorientation in what it means to think like a historian. This essay, as much as anything, is an appeal to historians to view themselves as more than just writers, to expand the range of media in which they work, to think of themselves as information designers. By design here, I mean "the conscious and intuitive effort to

impose meaningful order."[1] When they write, historians are engaged in a design act, in that they impose order on the past by arranging words, sentences, and paragraphs into a meaningful whole. When working with visual and other multimedia objects, historians might also learn cognitive tools for meaningfully arranging and designing them to create visual narratives and visual arguments. That is, we might learn to think historically using the affordances of many forms of media. Note that designers often work in several media: architects will design furniture and household objects; artists will work with paint and sculpt in clay and draw posters. That is, they are not confined to one medium, and are able to communicate in a variety of media. I would like to see historians similarly trained to work in a variety of media—not just the written word—when thinking historically.

This conceptual reorientation will make it easier for us to assign and critically assess multimedia representations in history. More important, the heuristic I propose helps historians expand the range of what we define as historical thinking. I envision a day when thinking like an historian means thinking about and representing the past not only as a one-dimensional sentence but also as a multidimensional visual space.

Defining Multimedia

To begin this discussion, I want to be clear about what I mean by a "multimedia" presentation. I do not mean a textual document that is supplemented by images or sound clips. A textbook filled with illustrations is not an example of a multimedia presentation, even if these illustrations are digitized and animated. Thus, the Gutenberg-e Project, where a textual document contains links to images, sounds, and videos, is not an example of a multimedia display as I would define it because the main carrier of the information is found in the text; the images serve as illustrations or as objects that support what is said in the text. Even many PowerPoint displays would not fall under this definition, especially those that contain long blocks of (usually bulleted) text with the occasional visual illustration or clip art.

Rather, a multimedia representation as I am defining it here means a display where images and other non-textual sources are the main carriers of the meaningful information. A multimedia display is the meaningful combination and juxtaposition of images to create a narrative or theme. The words in such a multimedia display—if they are present at all--play the illustrative role, in that they highlight or make

aspects of the visual image clearer, or they add information that is not immediately evident in the image itself, or they help to establish a wider context for the image.   In this formulation, we are in effect reversing the figure/ground relationship between text and images: in a true multimedia display, images are very much the figure and the text is the ground.

Given such a definition, we might look to preexisting forms of display to provide models for how we might evaluate multimedia digital displays in history. The best analogy I can think of are museum exhibitions. An exhibition is a space for communicating ideas, a space within which we arrange symbols (objects) to create meaning. In an exhibition, words serve as illustrations to the visual and non-textual objects, which are arranged and juxtaposed in a three-dimensional space. If we consider the formal communicative and representational properties of the exhibition as our model for evaluating multimedia digital displays, we can develop a means of assessing these displays in terms other than writing. A multimedia display might be understood as kind of a digital exhibition.

A Heuristic for Assessing Visual Displays in History

1) A "Big Idea"	l Is the display organized by a guiding principle or "big idea"? Does the title reflect this "big idea"?
2) Quality of the visual objects	l Do the visual objects advance the "big idea"? How? Are the visual objects information-rich? Are the visual objects metonymic, in that they stand for larger ideas or concepts? Are the visual objects high context or low context? How is the context of the object established? What sort of assumptions about the audience does the choice of visual objects make? Have these been previewed by representative members of the audience?
3) Relationship between objects: visual syntax	l Are the visual objects arranged in such a way as to yield new interpretations or insights than if the visual objects were viewed in isolation? Does the juxtaposition invite visual

	comparisons and contrasts? Does the juxtaposition invite visual analogies? Does the juxtaposition yield a sequential, linear narrative? Is the visual argument valid (accurate or defensible)? Is the visual argument fair? Does it support the "big idea"?
4) Words	ı Is there a need for words in this display or with this particular visual object? Do the words reflect the "big idea"? Do the words help to establish a context for the image? Do they help to draw the viewer's eyes toward the image? Do the words help the viewer to make associations with other images? Are the words interpretive, or are they merely a list of facts? Do the words invite the viewer to look carefully at and ask questions about the image? Are the words merely a "translation" of the image? Do the words both function independently and make sense within the organization of the entire display? Are the words appropriate to the audience? Are the words clearly chosen? Is the text too long or wordy, thus drawing attention away from the object?

5) Visual composition and style	ι Is the typeface appropriately chosen, sized and clearly readable? Are the reproductions of the images clear? Is the entire display clear and uncluttered? Are there distracting images or color schemes? Is it easy to navigate? How does the arrangement direct the viewer's eye? What sort of narrative pattern results and does this support the "big idea"? Is the scholarly apparatus (footnotes, references, etc.) clearly visible or accessible?

1. A Big Idea

"A big idea is a sentence—a statement—of what the exhibition is all about," exhibit designer Beverly Serrell says. "[It provides] a single focus *that unifies all its parts*."[2] For Serrell, this big idea informs the entire process of exhibition formation; it is there at the beginning before the first object is selected or the first caption written. Additionally, it helps to create the title of the exhibition. A visual display in history, similarly, should be organized around a "big idea" which should inform every stage in the process of its construction.

A big idea is not the same thing as a topic. "Topics, such as swamps, sharks, imaging tools or Western art, are incomplete thoughts; whereas a big idea tells you what about sharks, whose myths, or what imaging is good for." "Sharks" is a topic; "Sharks are not what you think" is a big idea.[3] A big idea is like the thesis of a written work, the guiding principle that gives shape and form to the argument or the narrative. Another way of thinking of the "big idea" is as the "plot" of the visual narrative. The title of the presentation should reflect this big idea, as a way to provide the audience with a context for how the visual objects should be viewed and understood and to indicate to them how those objects will be related to one another.

I once taught a course on visual thinking and had students compose visual essays on a topic of

their choice. One student selected "Chicago" as her topic (she had just returned from there.) Her visual essay was made up of nice pictures she had taken of the city, but the essay lacked a "big idea" in that the images, taken together, did not seem to be organized around any specific idea. After viewing her display, the class and I were all left wondering what about Chicago are we supposed to take away from this display (aside from the rather broad, ill-defined topic of "Chicago" or the trivial idea that "I visited here and saw all these neat places.") The student might have focused on the varieties of Chicago's rich architectural history, compared Cubs fans versus White Sox fans, or drawn distinctions between wealth disparities, and then selected and arranged her images with this "big idea" in mind.

In contrast, consider *"*An Associative Assemblage of the History of Globalization," a visual essay I composed on the theme of globalization.[4] The "big idea" was that, despite the obvious differences in the technologies used, twenty-first-century globalization looks very similar to nineteenth-century imperialism. Every one of the images I used was centered around this big idea: I juxtaposed images alongside each other with the goal of drawing attention to the structural similarities between them. (I should note that my title was not as helpful to the audience as it should have been; the title I chose looks too much like a topic rather than a specific big idea.) Perhaps I should have titled it "History Doesn't Repeat Itself, But It Sometimes Rhymes: A History of Globalization." Or consider the sequential narrative composed by Bruce Fehn, "Power Point and Privileging the Visual in Teaching American History: Lynching, Racist Collectibles, and Abu Ghraib Prison Photos."[5] The big idea here is clearly evident: to draw visual analogies between lynching and the torture at Abu Ghraib. In *"*A Visual History of Germany, 1938-1962," my visual essay on twentieth-century Germany, I depicted the rise, decline, and rebirth of German society through the metaphor of the Volkswagen (again, with an ill-chosen title).[6]

A big idea is another name for a visual argument. In formal rhetoric, recall, "'to give an argument' means to offer a set of reasons or evidence in support of a conclusion."[7] Visual arguments, then, are "propositional arguments in which the propositions and their argumentative function and roles are expressed visually, for example by paintings and drawings, photographs, sculpture, film or video images, cartoons, animations, or computer-designed visuals."[8] Therefore, in assessing any multimedia display in history, a "big idea" must be clearly present and must be clearly demonstrated in the choice of visual objects, in the title and any captions attached to the objects, and in the arrangement of those objects.

2. Quality of the Visual Objects

Designers should choose images that contribute to the big idea.   In selecting an information-rich image, the student designer should decide on visual objects that advance the big idea. That is, the image should already be embedded within the larger argument or visual narrative and be ready to contribute to that argument or narrative. This already assumes that the image will be a part of a larger context and will have a relationship to the other images in the display. If it is not clear what role the image is playing in advancing the big idea, then it should probably not be included.

Why is this image included in this display? Especially with images in PowerPoint displays, I will often tell my students that, as a useful rule of thumb, if they cannot spend at least a few minutes drawing attention to an image or if the viewer's eye is not invited to deeply consider the image, then it is probably there for mere decoration, and it should not be included in the display at all. When an image is information-rich, nearly every mark conveys meaningful information and serves as visual evidence, as a visual primary source. Information-rich images can provide details as to how individuals chose to represent themselves (as in a portrait), can demonstrate how power was displayed and reinforced (as through political symbolism), can show details of material culture and everyday life, and can chronicle events (as through photographs or videos) among many possibilities.[9] An information-rich image conveys more than a thousand words; indeed, we might think of such images as like visual paragraphs.

The images selected for the display—or at least most of the images selected-- should not be merely denotative, but metonymic. In classical rhetoric, metonymy means a word or figure of speech that stands for another thing of which it is an attribute. So "The White House" is a metonymy for the president, his staff, and his policies. A visual metonymy, then, is an image that can stand for a greater whole, a visual idea or concept that extends much further than the specific elements of the image. The famous photograph of Rosa Parks sitting on the bus in Montgomery is an excellent example of a metonymic image. The literal meaning of the photograph is a picture of a middle-aged African American woman on an empty bus looking out of the window, perhaps at the end of a long day. And yet, the image has much greater meaning beyond these surface details: the photograph has come to mean or to represent segregation, resistance to oppression, an act of non-violent protest and peaceful civil disobedience.

Metonymic images, rich with meaning and context, are excellent objects from which to build visual narratives and arguments and are the most effective images for building the big idea of the display; clearly, these images do not merely illustrate or support arguments made in textual form but can stand alone as containers of meaning.

There are three ways in which the metonymic meaning of the image can be established. First, the meaning could be evident in the object itself. The burning Twin Towers on September 11 is an image most viewers are familiar with, not requiring many words to convey the meaning. Such an image has become deeply metonymic, making reference to the global war on terrorism and the vulnerability of American homeland security, among others. Second, the meaning of the image can be established by having illustrative text around it. Especially for less familiar images, the designer may have to resort to words to help establish meaning and context. Finally, the meaning of the image can be explained by placing it in relationship to other images, a process we will explore in the next section.

It is especially important here to draw a distinction between high-context vs. low-context images, applying the anthropologist Edward T. Hall's definitions of high-context and low-context communications.[10] A high-context image is one where the meaning is contained as much in the mind/understanding of the viewer as in the explicit code of the image. The Rosa Parks image or the 9/11 image are, for many viewers, high context, in that they are familiar and readily understandable to the audience. A low-context image, in contrast, is one where the bulk of the meaning of the image is contained in the explicit code, meaning there may not be as much shared understanding between designer and audience. An unfamiliar image may require explanatory text, for instance, before the audience can see its metonymic properties or how it relates to the big idea. That is, the image might be information-rich, but the meaning of that information might require explanation or some other form of contextualization; the designer cannot rely on shared understanding with the audience. There is no hard and fast rule for the amount or ratio of high or low context images in a visual display, for there are advantages and disadvantages to using both. Balance is an appropriate strategy here; the student designer should choose a suitable mix of high/low context images for his presentation.

Clearly, the status of an image as either high or low context depends on the audience.   In selecting visual objects for the display, the designer must know the audience and determine if the visual

object is appropriate for those viewing it. I had intended my visual display on the history of Germany for an audience of other historians and thus assumed that many of the images I selected did not require much in the way of explanatory text given our shared understanding. To an audience of historians, most of the images were high context. But to an audience of high school students, those images would require more explanation and would probably be viewed as low-context. Just as in museum exhibitions, audience reception is a crucial component in the successful communication of the big idea. In choosing images for the display, the designer should take the step of testing the image out on a representative audience member, a kind of visual rough draft of the display. A useful rule of thumb is this: assume all images are low-context until proven otherwise. In selecting images, the designer must pay attention to audience reception and to the demands placed on the audience.

3. Relationship between Visual Objects: Visual Syntax

A multimedia object in isolation can convey meaning and information and can represent the big idea of the display. But the relationship between the visual objects is an even more important consideration, for it is here that the big idea truly unfolds.

Placing two words together is the simplest form of syntax. In linguistics, syntax means the rules for arranging words together to form larger constituents such as phrases, clauses, sentences, and the like.   An emergent property of syntax is that, in so arranging words together, the meaning and function of each word is altered from if the words were read alone. Consider the word "record." Alone, the word has many possible meanings and connotations, but when I place other words around it, its meaning takes definite shape: "The musical group is in the studio to produce a record." But an interesting property of syntax is that by changing the arrangement, by altering the larger linguistic context in which a word is embedded, the meaning and connotation of the word is changed. "The musical group will record a new CD," or "The track star set a new record at the meet" all use the same word, but because of the differing arrangement of words, the meaning and function of the word "record" is different in each case. The word itself has not changed, but by altering its placement within an arrangement of other words, we have altered the way we think about the word in question.

A visual syntax, then, refers to the way we arrange images to form larger, meaningful

constituents. As with linguistic syntax, placing two images alongside one another is the simplest form of visual syntax. And like linguistic syntax, arranging images alongside each other has the emergent effect of changing the way we understand each isolated visual object. I once conducted an informal experiment to see the effects of visual syntax on the way we understand isolated visual primary sources. I asked my subjects to look at an image of a nineteenth-century textile factory.[11] The image was a painting of girls and young women attending to looms and other equipment. The subjects tended to make denotative statements about the image, noting the way the women were dressed, the apparent dreariness of the work, etc.   Then I placed a second image alongside the first, this one of an early nineteenth-century shoe factory. Unlike the color painting, this image was a black and white drawing of young boys sitting at benches scrambling at their work, under the reproachful glare of a supervisor. The subjects immediately altered their interpretation of the first image upon seeing the second (many reported that something switched on in their minds as soon as they saw the juxtaposition). The first image looked much more bucolic than the second, the work appearing not so dreary. Some subjects concluded that the first image must be a public relations image, the painter making the industrial labor more attractive than it probably was.

When the second image appeared, silences in the first image were made apparent to the subjects. For example, many of the subjects did not initially notice that the young women did not have an overseer. That is, the second image made high-context portions of the first image more readily apparent; upon seeing the first image in isolation, they would not have had any reason to look for such an overseer.

As a final step in the experiment, I replaced the second image in the arrangement with yet another image, this one a photograph depicting Chinese women in a contemporary textile sweatshop. Once again, the subjects reported that their understating of the first image was altered by this new juxtaposition. What had initially appeared to them to be a relic of an unfortunate past—the hard life of industrial labor—is perhaps not a relic, but seems just as prevalent in today's world. Once again, the meaning of the first image was changed by the new juxtaposition. New interpretations and meanings are an emergent property of visual syntax, this simple act of placing one image alongside another. Thus, in creating visual narratives and arguments as a multimedia display, great care must be given to the quality of the juxtapositions and arrangements of the visual images.[12]

To be clear, the purpose of this experiment was to show that the placement of images alongside other images unleashes information, interpretations, and meanings that are not as readily apparent than if the images were viewed in isolation. Thoughtful visual syntax creates a larger context within which we understand each individual image.   This is the nature of visual syntax: the arrangement and juxtaposition of images creates an idea or theme or argument that would not be present if the images were looked at in isolation. Like notes in a chord, images arranged alongside other images create a sound not present in any of the images alone.[13] With visual syntax, the whole really is greater than the sum of the parts. It is through such thoughtful juxtapositions that larger themes, arguments, and big ideas can be established.

Many art museum displays create new narratives and new interpretations by juxtaposing works of art in novel ways. Art museum patrons have been educated to see such juxtapositions simply as chronological arrangements of similarly styled works of art, or thematically grouped works by the same artist. The critic Victoria Newhouse lauds the 2003 exhibition *The Stage of Drawing: Gesture and Act* at New York's Drawing Room. The exhibition included over 140 works from the Tate Britain and Modern collections, and "were organized according to philosophical concepts rather than by iconography. None of the four divisions imposed a visual category, such as the nude, but instead encouraged viewers to think about relationships between certain works."[14] "The installation," she concludes was "determined solely by the visual links between the drawings," and in her estimation, "revealed relationships that would have been less apparent had the works been conventionally isolated on the wall."[15] These new meanings and interpretations were created not by adding words but solely by the visual juxtaposition of the images. A well-crafted multimedia display in history should have a similar effect.

Visual syntax is at work when we look at comics, or sequential art as its practitioners call it. Consideration of sequential art can help us in our assessment of multimedia displays in history, in that it helps us to understand what is at work when we are looking at juxtaposed images and how they can be so arranged as to produce visual arguments and narratives. Scott McCloud defines sequential art as "juxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer."[16] We can understand the narrative resulting from this juxtaposition of images because the mind often engages in "closure," the act of "observing the parts but perceiving the whole," or more precisely "mentally completing that which is incomplete."[17] In the physical

and conceptual space between images—what comic artists call "the gutter"--the viewer makes connections in his mind between the images, filling in those elements that are not physically present in either image, amounting to a kind of Gestalt process. "By creating a sequence with two or more images," concludes McCloud, "we are endowing [the images] with a single overriding identity, and forcing the viewer to consider them as a whole."[18] Comic artists call this mental process "closure in the gutter," and I believe it is similar to what occurs when we view objects in a museum exhibition environment, and what occurs when we are creating narratives in a digital multimedia environment.

In sequential art, there are a number of different types of transitions between images, different types of closures that again prove useful for thinking about multimedia displays.

1. moment-to-moment: where the differences in the images are very slight and show the passage of a very short span of time, like movie stills.

2. action-to-action: this transition shows slightly longer passages of time between frames and is meant to show more action.

3. subject-to-subject: while remaining within a specific scene or idea, the images move between different scenes within the same narrative space. As McCloud observes, unlike the first two examples, this form of closure requires more viewer involvement in making the transitions between images meaningful.

4. scene-to-scene: the transitions between images "transport us across significant differences of time and space," outside of the scene or the subject. Such transitions require much more in the way of viewer closure.

5. aspect-to-aspect: the images each reflect "different aspects of a place, idea or mood." While the whole narrative might stay within a specific scene or idea, the viewer witnesses different viewpoints and perspectives within that narrative space. Even more closure is required of a viewer in these cases. The Drawing Room exhibition noted above makes aspect-to-aspect connections between the art objects.

6. non-sequitur: there is no logical relationship between the images (and should not be used in a multimedia display).[19]

I would contend that most of the closure transitions that occur in historical multimedia displays are scene-

to-scene or aspect-to-aspect transitions. Unlike the comic artist who can compose his own images, the historian has to choose from a relatively small number of visual primary sources, and these sources rarely line up in moment-to-moment or action-to-action form. Rather, most displays will instead point to transitions between different subjects or between different aspects of an idea, not unlike the kinds of connections drawn between objects in an art exhibit. For example, in the short digital film *This is the Enemy* concerning the history of Japanese internment, Gretchen Jahn Bertram juxtaposes a sequence of (metonymic) images in aspect-to-aspect fashion.[20] These images alternate between derogatory posters of the Japanese enemy with images of Japanese-Americans (usually children). Within the temporal and conceptual space of the early 1940s, Bertram's sequence of images leaps between different aspects of that space in order to develop her big idea. In focusing on scene-to-scene and aspect-to-aspect transitions, the historian is able to explore visual comparisons between different images, creating a new whole for those images. Historians can explore visual analogies as well between images separated in time and space, where analogy means similarities in the midst of apparent difference, as Bruce Fehn does in his lynching/Abu Ghraib composition.

As both the art exhibit and sequential art examples illustrate, the audience for visual displays plays a vitally important role in creating the meaning, perhaps a more important role than the reader of a text. In Keith Kenney's understanding of visual rhetoric, "understanding the intentions of the communicator is less important because meaning is now the result of an audience's efforts as much as, if not more than, whoever created the message. The effects of the message, therefore," he concludes, "are not always judged from the perspective of the message maker."[21] Clearly, I am not suggesting that the designer plays no role or even a less important role in the creation of the meaning of the multimedia display; I am suggesting, however, that the designer must be mindful of the active role the audience plays in creating and establishing meaning. Because the act of closure is heightened in a multimedia visual display, audience reception is a critical variable in the creation of the big idea.

4. Words

In a true multimedia presentation, words should be unnecessary. Thus, the first question a designer should ask is whether or not there is a need for words in the display as a whole or with any

particular visual object. In some cases the answer is yes, but these words should be used in a very circumscribed fashion: to be used only to illustrate the images. A multimedia display should not be confused with a visual aid. Remember that in a multimedia display the figure/ground relationship has been reversed: it is the image that is the main carrier of the information and meaning of the display, with the words serving as the textual aids.

The display should have a title that helps to establish the big idea. A multimedia display can also contain a brief introductory text that helps to establish the big idea by preparing the viewer to see the images within the context of the main themes. In an earlier version of my globalization visual essay, for example, I included a quote attributed to Mark Twain that said that "History doesn't repeat itself, but it sometimes rhymes." By including this brief quote, I intended to shape the viewer's interpretation of the images that made up the essay, to see the juxtapositions as pairs of visual rhymes.

In general, the objects in a multimedia display do not require captions to establish meaning: a good rule of thumb is that more words draw the eye away from the image. If words are to be used as captions or labels for the images, they should help to establish a context for the image. When words are used in this fashion, they should draw out information and meaning from the image; this is especially important for low-context images. However, the words should not be a translation of the image into written form; that is, the caption should not simply render the image into a thousand words. The designer should ask himself if the words are an redundancy of information and meaning that can be established by the image itself.

The use of words in a multimedia display is analogous to the captions found near objects in a museum display. "It is a museum exhibition, not an encyclopedia, not a library," Beverly Serrell reminds us, "and visitors should be allowed to feel they are there primarily to look…not to read. Select the number of words accordingly," she advises.[22] This is a useful way of thinking about the role of written language in a digital multimedia display: the viewer should be made to expect that they will be looking, not reading. If a caption becomes excessively wordy, it may be because the designer has not selected an appropriately information-rich image to convey his meaning.

The caption should help to draw the viewer's eye to the image, helping the viewer to see the metonymic qualities of the image or to aid him in drawing connections and associations between the

images. Words in a caption should serve an interpretive function, inviting the viewer to look carefully at and ask questions about the image, rather than serving merely as a list of facts. The viewer should be able to read the captions independently of any other object, but these captions should also make sense within the organization of the entire display.[23]

As with the images selected, the words used in a multimedia display should be appropriate to the audience. And as with any other form of written composition, the text should be clearly written.

5. Visual Composition

As with a written composition, visual composition matters should also be taken into consideration when assessing a multimedia visual display. For example, the designer should avoid clutter in his presentation and aim for a visually clear presentation; the images used in the display should be of high quality reproduction and should also be clear to the viewer. My rule of thumb for all visual displays is that every design choice—even if that choice is unexamined or is made unconsciously—conveys a message, thus the designer should be very careful to "mean what you show." Thus, if an image is reproduced smaller than the other images, suggesting a less important image, is this the choice the designer intended to make? If there is great deal of negative space in the display, what effect does the designer mean or hope to achieve? If the images are imbalanced, is this intended as a narrative statement?   Do these small images and wide areas of negative space and imbalanced images contribute to the big idea?

The overall spatial arrangement of the images is itself a factor in establishing the argument or big idea of the display. How does the arrangement direct the viewer's eye? Again, museum exhibitions are a useful analogy here. Some museum displays are very linear—this object, then this, then this—guiding the viewer along a rigidly defined path. Other displays arrange objects around the four walls of the gallery space. This implies a linear direction but allows the viewer the opportunity to begin his viewing path anywhere along the four walls (such an arrangement also allows the viewer to step back and take in the whole). Some contemporary displays use the entire three dimensions of the gallery space, not just the walls, inviting the audience to view the objects in any order they choose, and from different angles or perspectives. How much is the viewing path controlled by the designer, meaning less choice for the viewer? How does this decision add to or help establish the big idea?

The background colors should not detract from the images, which should remain the central focus of the display. The color of the background can also affect the way we understand the meaning of the images and is a critical part in establishing the larger context surrounding the images. For example, in my multimedia history of Germany, I selected a black background, which I believed gave the display a heavy, grave, serious, even noir quality. (Compare the effect on the display were I to have chosen a bright yellow background.) Wall color and texture is an important consideration in museum exhibitions and should be a similar consideration with digital multimedia displays.[24]

There should be no distracting images in the display, especially clip art or pointless animations. Animations, like rotating flags or moving objects or talking faces, were a common design theme of late 1990s Web sites (and might be a source for the frustrations experienced by history teachers who eschew technical flash). Clip art, especially, most typically serves a decorative fashion, as opposed to advancing the big idea. The main problem with clip art is that it is designed to be non-contextual, to be placed in a variety of situations. Clip art is rarely denotative for a history display nor metonymic; there are very few instances where clip art serves a valuable role in a multimedia history display. Likewise for animations; students often assume, especially when making PowerPoint displays, that their images must fly into the screen, that the text must similarly move about in order to make the presentation more interesting. If, on the other hand, the use of animation helps to create the kind of switching on moment I described above, then animation would be appropriate. In general, however, these technical tricks very rarely add any meaning to a display; unless animation plays a vital role in advancing the big idea, it should not be used at all.

The words that are used in the display should use an appropriate typeface.   Because the words should play an illustrative role in the multimedia display, the words should not upstage the images. Thus, all facets of the design of the words should compliment the images and should advance the big idea. As a rule of thumb, the typeface should be clear and legible and easily read by the audience. A simple font works best (standard fonts like Arial or Times New Roman are usually all that is needed.) An exotic font might be more cumbersome to read, or might be at odds with the big idea; Fehn's lynching display, for example, probably would not be advanced by using Papyrus, for example. That said, a typeface is a visual element, and as such can be part of the effect design of a multimedia display if chosen well by the

designer.

The scholarly apparatus of the display must be clearly represented. This is a point that is often lost on students (and many professors, I have discovered). A visual image used in a historical multimedia display is a primary source and must be accorded the same attention to scholarly reference that we attend to written sources. I have encountered far too many historians who, like their students, will add an image to a presentation without attribution, saying only "I got it off the Internet." Images are sources too, and they require proper footnoting and citation. Where this citation belongs in the display is up to the designer: I have placed footnotes and other references at the end of a presentation, like credits in a film, and I have placed these as captions below images. Whatever the method, the scholarly apparatus has to be clearly accessible.

Conclusion

Assessing a multimedia display in history requires that the history teacher think like a designer, not like a writer. These displays cannot be judged using the writer's habits of mind: visual syntax is different from written syntax; visual composition is not written composition; visual argument is different from written argument. At the same time, creating a multimedia display demands from students not just technical ambition, using three-dimensional modeling, sound clips, and animation, but more importantly, rhetorical ambition, that is, driven by the goal of persuading, arguing, and creating a compelling narrative. "Our goal," as Michele S. Shauf wisely observes, "is to foster not technical invention but rhetorical invention."[25]

NOTES

1. Victor Papanek, *Design for the Real World: Human Ecology and Social Change* (Chicago: Academy Chicago, 1984), 4.

2. Beverly Serrell, *Exhibit Labels: An Interpretive Approach* (Walnut Creek, CA: Alta Mira Press, 1996), 1.

3. Ibid., 4.

4. See <people.cohums.ohio-state.edu/staley3/VisualHistory/VisualHistory.html>. Original at <mcel.pacificu.edu/jahc/JAHCVII1/ARTICLES/staley/staley.HTML>

5. See <people.cohums.ohio-state.edu/staley3/VisualHistory/VisualHistory.htm>

6. See <people.cohums.ohio-state.edu/staley3/VisualHistory/VisualHistory.htm> Original at <mcel.pacificu.edu/JAHC/JAHCV2/ARTICLES/david/david.html>

7. Anthony Weston, *A Rulebook for Arguments* (Indianapolis: Hackett, 1987), xi.

8.   Anthony Blair, "The Possibility and Actuality of Visual Arguments," in *Visual Rhetoric in a Digital World: A Critical Sourcebook*, ed. Carolyn Handa (Boston: Bedford/ St. Martins, 2004), 348.

9.   For the primary source information revealed from visual sources, see Peter Burke, *Eyewitnessing: The Uses of Images as Historical Evidence* (Ithaca: Cornell University Press, 2001).

10. Edward T. Hall, *Beyond Culture* (Garden City, NY: Anchor Press, 1976), 85-103.

11. See <people.cohums.ohio-state.edu/staley3/VisualHistory/VisualHistory.htm>

12. On the importance of juxtaposition to the establishment of the meaning of an image, see Blair, 353.

13. When making his famous film montages, Sergei Eisenstein referred to this process as XXXXX.

14. Victoria Newhouse, *Art and the Power of Placement* (New York: Monacelli Press, 2005), 259.

15. Ibid., 260.

16. Scott McCloud, *Understanding Comics* (New York: HarperPerennial, 1993), 9.

17. Ibid., 62-63.

18. Ibid., 73.

19. Ibid.

20. See <people.cohums.ohio-state.edu/staley3/VisualHistory/VisualHistory.htm>

21. Keith Kenney, "Building Visual Communication Theory by Borrowing from Rhetoric," in *Visual Rhetoric in a Digital World*, 332.

22. Serrell, *Exhibit Labels*, 125.

23. Ibid, 24-25.

24. Newhouse, *Art and the Power of Placement*, 215-33.

25. Michele S. Shauf, "The Problem of Electronic Argument: A Humanist's Perspective," in *Visual Rhetoric in a Digital World*, 367.