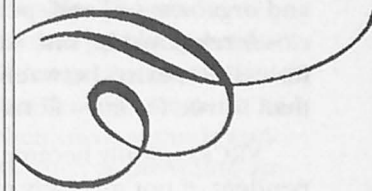# FROM LANTERN SLIDES TO IMAGE PRESENTATION SYSTEMS: A DISCIPLINE IN TRANSITION

by Eileen Fry

Few corporate announcements have had the effect on entire academic disciplines that Eastman Kodak's 2003 decision to stop manufacturing slide projectors had on Art History. The known world of side-by-side slide projection, large luminous images, well-organized institutional collections, last-minute lecture preparation, excellent commercial suppliers, and easy in-house production to support even the most specialized of topics seemed on the verge of sinking like Atlantis into a sea of unknown digital waters.

Some art and art history practitioners, perhaps already thinking about "going digital", saw Kodak's announcement as a positive incentive to tentatively or whole-heartedly embrace the potential offered by digital presentation technology, For many others, however, the inevitable demise of the simple, ubiquitous, slide projector seemed more like a death knell, ending an era of Art History as they had experienced it: as students themselves, as young faculty developing their repertoire of courses, and as researchers presenting their findings to their peers at home and abroad. Surely digital projection, with its single image format and pronounced pixilated boxes, could not do justice to a discipline so dependent on excellent visual content.

Visual content is crucial for many disciplines: Classics, Archeology and Anthropology, Comparative Literature, Interior Design, Theater and Costume Design, Education, and a wide variety of Cultural Studies. Almost all Studio art instruction also includes substantial image content as exempla or inspiration. For the discipline of Art History, however, images ARE the content. Without access to the right images, of good quality and in sufficient numbers, and to a reliable means of presenting them in a classroom or lecture situation, Art History simply cannot be taught.

Image Projection systems have, in large part, defined how Art History was taught. The "Comparative Method" of analyzing art by means of juxtaposing two images goes back to one of the pioneer's of Art History, Heinrich Wölfflin.[1] Since 1915, when his side-by-side comparisons of artwork were used to differentiate Renaissance from Baroque art, virtually all art historians were taught, and continued to teach, by means of dual image projection. "Two by Two" has become such a fundamental paradigm that it shapes the way material is organized and arguments are laid out. It has also resulted in standards for classrooms and lecture halls which universally require large projection surfaces, dual or triple high-quality projectors and specialized lenses, lighting controls, and trained projectionists or multi-function remote controls.

The predication of a discipline on the availability of appropriate comparative images also resulted in the creation of specialized collections to guarantee that availability. Many of the earliest, and largest, slide collections were founded by museums for the use of their own curators, and for the edification of the public.[2] Despite its proximity to the Metropolitan Museum, the Institute of Fine Arts has maintained an extensive surrogate image collection since the 1940s. The growth of departments and programs in Art History throughout the United States is directly linked to the wider availability of images, which allowed the world's cultural heritage, in its entirety, to be brought into the classroom and lecture hall. First with lantern slides, but much more so with the advent of 35mm film, image surrogates could be purchased or created for architectural landmarks, public sculpture, and didactic materials, in addition to all objects in all museums and private collections. Any image which had been published or made commercially available could, theoretically, become part of a classroom lecture. The possibilities were limitless, and subjects could be taught in their conceptual completeness, not just on the basis of locally available examples. Efforts and costs to individual lecturers could be pooled, specialists could be hired to manage collections of thousands, even hundreds of thousands of images, and the modern slide collection came into being.

From their beginning, slide collections, now commonly called Visual Resources Centers, or VRCs, have differed from libraries in a number of crucial respects: their organizational systems have always favored the needs of local specialists over a hypothetical general public; cataloging is done at the item level, and

describes the object depicted, not the object in hand; services place as much emphasis on the availability and effective delivery of the images as on their acquisition and organization; and, perhaps most importantly, a closer relationship, one based on daily pedagogical necessities, exists between VRC staff and their patrons than is true for most librarian/patron situations.

VRCs typically became the nexus of several independent, if not mutually exclusive, spheres of activity: subject resources, projection technologies, and building maintenance. While all of these might have their own departmental identity in any institution, the time (and lectures) saved by having a central mediator and problem solver able to respond immediately to any disruption in image provision was crucial. When images themselves are the content, a blown projector bulb or a stuck label is as great a hindrance to effective patron use as are cataloging backlog, filing errors, or budget shortfalls. Image librarians consequently developed a wide variety of technical competencies in tandem with their subject specialization.

The digital transition has only heightened the dependence of image users on the broad technological competency, proximity and responsiveness of the VRC. While technology in general, and classroom technology in particular, is supported at the institutional level by multiple layers of IT departments, programmers, engineers, consultants, and trainers, the needs of the specialized image user are often poorly accommodated by these generic services. The VRC typically serves as a coordinating and/or mediating agent, selecting, supervising, or advising on all aspects of technology that impact successful image use: data projectors, color calibration, scanning equipment, imaging software, presentation software, courseware, digital cameras, flash drives, digital asset management systems, relational databases, MAC/PC issues, licensed resources, Google image searches, Picassa2, and a host of other patron concerns.

While VRCs and image librarians have done much to help assuage the technological difficulties and anxieties faced by faculty at the onset of the "Digital Transition", the challenges of shifting from the traditional comparative slide paradigm to untried and untested digital presentation methods was daunting. Neither the Art Historians, nor the visual resources professionals, knew what was possible, what was available, what might be in development. A few, brave pioneering faculty, like Dr. Kathleen Cohen (San Jose State University) and Dr. Kevin Glowacki (Indiana University) not only began to teach with digital images, but more importantly, began to attend conferences and give presentations that offered proof of the viability and didactic potential of digitization for Art History and related visual disciplines.

Microsoft's Powerpoint, with its suite of generic graphic tools, quickly became the default system for all text-oriented digital presentations, but attempts to create image presentation utilities tailored to the needs of visual disciplines focused on replicating the old comparative slide paradigm in the new technological environment. Whether produced by commercial companies (Luna's Insight), academic institutions (James Madison University's MDID and Princeton University's Almagest), or non-profit organizations (The Mellon Foundation's ARTstor), these systems all strove, first and foremost, to deliver two, side-by-side, high quality images into the classroom. In addition, they also tried to provide the types of visual review and testing materials that had always presented problems to students who lacked access to the slide images they had seen in class. Indeed, the creation and web-based delivery of such image study pages formed the first phase of many institutional digitization projects, and continues to be a primary activity of many VRCs.

While faculty at institutions adopting one of these visual presentation systems had to cope with new technological challenges, they did not necessarily have to think in new ways about how they structured the content of their lectures. In contrast, image librarians and faculty at institutions which did not buy into such systems, or those who chafed at the centralized controls imposed by such systems, looked out of necessity to Powerpoint. Exploration, trial and error, collegial sharing, and creativity led to the development of a growing body of knowledge on how to effectively use Powerpoint for image-oriented presentations. VRCs began to create handouts for their patrons, and those handouts were in turn shared. Initial, very negative reactions to the suitability of Powerpoint for visual lectures have been, to a great extent, ameliorated by the development of what can be called "Image Powerpoint."

If one learns to ignore the pre-designed layout styles and templates, the mind-numbing effects of which were noted in a 2003 WIRED article by Edward Tufte,[3] Powerpoint offers the visual lecturer a virtual 'tabula rasa', an empty space into which any combination of images, text, colors, fonts, graphics, media clips, animations, and other materials may be placed. It can, in fact, become a creative medium, as noted by artist David Byrne in the same WIRED issue.[4]

One outcome of faculty adoption of this generic "blank slate" presentation method for Art History is that, for the first time since Wöfflin, there is no preordained juxtaposition of images, and no necessity to confine textual content to an auxiliary presentation method such as a handout, a blackboard, or an overhead projector. Faculty are free to make their didactic points any way they chose, with intriguing results.

Image-oriented faculty have a number of choices for any given blank Powerpoint screen: image(s) only, text only, or image(s) and text. Images can be presented singly, in pairs, or in multiples, at equal or differing sizes and in asymmetric arrangements. Existing images, particularly didactic ones such as maps, charts, diagrams, and reconstructions, can be easily augmented, clarified, or illuminated by means of the Powerpoint graphic suite of arrows, lines, colors, textures, and transparency. Other visual formats, such as movie clips, can also be incorporated, as can hot links to web addresses. Scale, repetition, and reuse of previously created material are all easily achieved.

What do Art History faculty do when they are not restricted to side-by-side image projection? In 2005, I conducted a study of seven Art History faculty (both novice and experienced), eleven classes, and a total of 3,986 individual Powerpoint screens. A methodology was developed for analyzing the use of images on each individual screen, with the following results:[5]

- 85% of the screens combined images with text.
- 40% of the screens used single images, with multiple image use (27%) almost equaling comparative use (29%)
- 17% of all images shown were "didactic" material, i.e. plans, charts, graphs, maps, etc. not art objects or built works, the type of material common to slide collections, but rarely found licensed image resources.
- Up to 13% of the screens utilized custom graphic (arrows, lines, color, transparency, etc.) This is the only category that seemed clearly related to longer experience using Powerpoint.

These results are significant, in that when they were compiled (Spring, 2005), many other image presentation systems, while offering high resolution images, zooming and panning, and other desirable features, had little or no capability of allowing the user to:

- Combine images with text
- Present more than two (or four) images on a single screen
- Place images freely within the working space, rather than in predetermined frames.
- Create text-only screens
- Create user-generated text, rather than displaying the system-provided metadata
- Create user-generated graphics
- Combine images with video and audio formats
- Use didactic material or other images from outside the system.

Faculty who went straight from slide mode to visual presentation mode via one of the specially-designed systems seem to have accepted without question the continuation of the traditional, image-only approach, and seem to have given developers little indication that these capabilities would be desirable. Those who learned to adapt Powerpoint to their teaching needs, however, quickly went from "What goes next on the left and right" to "What best conveys the didactic point I want to make," They created their own methods and solutions to inherent problems, such as providing an effective comparison of two horizontal images in a single digital space. They developed their own styles of showing relation, progression, and derivation. They invented schemas using color, border, and pattern to indicate significance and required content. Most interestingly, they took pride in these discoveries and freely shared ideas, techniques, and tips with other colleagues. Some took their empowerment even further, acquiring their own scanners, learning Adobe Photoshop, mastering Google image searching and unlocking the wealth of visual material now readily available on the Web.

While the delivery of large, high-quality images, real-time lecture modification, and zooming are all desirable features lacking in the current Powerpoint format, the 85% image-text usage figure suggests that easy integration of images and text is the single most important factor in faculty transition from slides to digital teaching. In the year since the study was conducted, important, and surprising, changes have been implemented in the world of visual presentation systems. On one end, the opinions of the Visual Resources community on what features would be most desirable in an improved version of Powerpoint, were solicited and communicated to Microsoft representatives by Christine Sundt (Univ. of Oregon). On the other, the toolkits offered to users of ARTstor, MDID, and Luna's Insight have improved greatly and now offer some, though not all, of the functionality of Powerpoint.

The latest version of ARTStor's Offline Viewer (OIV), which will soon become publicly available freeware, now provides textboxes, multiple and freely-placed images, graphics, and easy inclusion of user-created materials, in addition to its standard and zooming templates. In addition, more image management software products (Picasa2, iView, iPhoto, NikonView, AdobeLightbox, etc), include "slideshow modules". Another year may see a variety of systems fully capable of sophisticated, user-dictated, multi-faceted image presentation.

Debate still continues, however, both in the Art Historical and Visual Resources communities as to whether a true transition from slide to digital teaching in Art History requires dual data projection, or whether the new paradigm is better served by maximizing the screen size and image quality of a single projector. As

the latter may require a specialized lens that is at least, if not more, expensive than the data projector itself, these are not easy decisions. Many times the choice is dependent on the existing physical facilities: schools which maximized the quality of their dual slide projection by installing large, but separate screens may find it difficult to switch to a single, central image. Art History and Studio departments may find that partnering with Classroom Technology and Instructional Services units may save them the cost of installing technology themselves, but limit the possibilities of such specialized installations as dual data projection.

Whatever the presentation system, practitioners of Art and Art History are still dependent on access to vast numbers of images, whether licensed, created, or harvested. Therein lies another digital dilemma. When images ARE the content, they can't be just any images, they have to be the ones that best make the didactic point. Unlike other users from other disciplines, who may need "an image" of Napoleon, an Art Historian teaching 19th century Romanticism will need access to all the paintings, plus drawings, sketches, and historic documentation, in the oeuvre of Gerome, Delacroix, David, and many others. The generic user of an image of Napoleon is well-served by Google searching; the specific art historical need is not.

Image collections serving such specialized needs must not only be large, they must be metadata-intensive, as will be apparent to the wider library community when the long-awaited Cataloging of Cultural Objects is published by ALA later this year, coinciding with the release of the Visual Resources Association's Core Categories for Works of Art, Version 4.0. Many large image resources can now be licensed for secured institutional use. Some, like ARTstor, AP Archive, CORBIS for Education, RLG Cultural Materials, and the various continuations of the now-defunct AMICO image base (CAMIO, Wilson, ARTstor and AMICA) are self-contained, monoprotocol searching utilities offering thousands, if not millions of images on an annual subscription basis. Others, like Scholar's Resource, license digital images in perpetuity for inclusion into an institution's own DAMS. Neither type can guarantee inclusion of the specific image needed by the specific instructor to make the specific didactic point, necessitating that each institution also provide some means of securing the additional material needed by faculty to teach their individual subject areas. The digital equivalent of the institutional slide collection is still required, even with multiple licensed resources; something many university administrators seem to have difficulty comprehending.

Immense image repositories, whether licensed, collaboratively shared, or locally created are vital, if expensive resources. They do not, however, either suffice on their own or work well together, leaving the user to inevitably begin creating private folders of images to meet specific instructional needs. The modern young art historian, equipped with scanners, digital cameras, and a wide range of portable storage devices, in now likely to have a large, well-organized, highly personalized image collection gleaned from all available resources by the time they leave graduate school. With inexpensive equipment, and free software, many art historians are trying to "go it alone", making the digital transition without institutional resources or support.

A lengthy exchange on the Consortium of Art and Architectural Historians listserv (CAAH) in February, 2006 served to illustrate just how frustrating going it alone can be for faculty, and how time-consumptive. Acquiring and organizing large numbers of digital images is labor intensive, but nothing compared to what is required to acquire and organize the image metadata. We do not yet have the seamless resources and systems that would allow users to easily acquire both excellent images and scholarly words, from multiple sources, correct and enhance them, organize them in privately meaningful ways, socially code them, efficiently use them, safely archive them for later reuse. Nor have most of the world's museums switched their collective thinking from "ownership" to "stewardship" in a way that would promote the accessibility of all works of cultural heritage now in public domain as a part of their mandate. Not until the images, the words, and the presentation method become as ubiquitous, as visually effective, and as dependable a system as the 35mm slide, the well-organized and cataloged image collection, and the Kodak slide projector can we truly say that the digital transition in Art History has been accomplished.

ABOUT THE AUTHOR

Eileen Fry is Fine Arts Image Librarian at Indiana University - Bloomington. Her email is (fryp@indiana.edu).

ENDNOTES

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2 Irvine, Betty Jo. *Slide Libraries: a Guide for Academic Institutions, Museums, and Special Collections.* Second Edition. Littleton, Colo. Libraries Unlimited, 1974. p.27.

3 Tufte, Edward. "Power Corrupts. PowerPoint Corrupts Absolutely". *WIRED*, Issue 11.09 | September 2003. Available: < http://www.wired.com/wired/archive/11.09/ppt2.html>. 3/29/05.

4 Byrne, David. "Learning to Love Powerpoint". *WIRED,* Issue 11.09 | September 2003. Available: <http://www.wired.com/wired/archive/11.09/ppt1.html>. 3/29/05.

5 Fry, P. Eileen. "Image, Text, and Graphics Usage in Art History Powerpoint Lectures at Indiana University: a Preliminary Study". Presentation at the 23rd Annual Visual Resources Association Conference, March, 2005. VRA Bulletin, Volume 23, No. 2, pp. 65-66. A parallel study of usage by Art History Associate Instructors was undertaken by co-researcher Sarah Carter, a candidate in the Indiana University Dual Masters program in Art History and Information Science.