

Saving Film Technology in Museums Before It's Too Late

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In July 2005, the Digital Cinema Initiative (DCI), a group of five Hollywood studios, issued proposals for digital cinema projection as a replacement for print film projection in cinemas. Currently (July 2007), the US Society of Motion Picture and Television Engineers standards committee is considering the DCI proposal as the basis for a U.S. standard, the precursor to an international standard.

— Paul Read, film historian, writing in *Journal of Film Preservation*, November 2007

Film in all of its original formats should be presented as such at art museums. Would paintings or drawings be replaced with high definition, electronic monitor displays of well-known works... administered by a lab technician in some unsupervised off-shore facility?

— Bruce Posner, film historian and restoration consultant, and head of the project to restore the film *Manhatta* by Charles Scheeler and Paul Strand

My purpose here is to present a case — partly philosophical and partly practical — for preserving older moving-image projection technologies such as 16-mm and 35-mm within contemporary museums. The rationale is this: Only by maintaining these

technologies and using them for the presentation of film can the museum fulfill its mission to authentically interpret the past.

Museums have adapted to digital technology to such a degree that high-quality digital projection systems for still and moving images are now the norm. So significant are these modifications in the traditional way that images are projected and viewed, that curatorial staff, lecturers, and museum visitors have universally come to expect digital equipment in museum theaters and audiovisual spaces. New museums and those planning expansion rarely think of installing analog projection any more, in part because of the presumed burden of maintaining analog systems.

The History of the Technology Is Important

Museum administrators normally well-focused on the preservation of art and culture often appear myopic in the audiovisual arena. When it comes to A-V, many museums operate on the assumption that newer technology will provide better A-V support. Witness the once indispensable but now banished Kodak 35-mm carousel slide projector. PowerPoint is nearly universal for museum events that require images. Vintage two-by-two-inch slides have become collector's items, of interest to archivists and artists but rarely playing their traditional role in illustrating lectures. Yet critical reviews of digital PowerPoint presentations can be mixed, and audiences can be left wondering



Barbara Kent and Glenn Tryon in *Lonesome* (1928), director Pál Fejös. Photo courtesy of Photofest.

whatever happened to decent illustration. While it's ridiculous to argue for the return of carousels, there are moments when digital fine-tuning begs for an old analog projector to save the day. Who, for example, would dare revise a PowerPoint at the moment of its presentation?

With moving images, however, a completely different situation applies—one that calls for a more discriminating analysis and careful understanding of historical technologies. Just as digital presentations are tailored to the precise technology that will support them, so too, historical film was intended for a particular kind of pro-

jection. Museums, in general, have not yet fully recognized this conundrum, nor have they recognized a potential role for themselves in protecting the collective motion picture heritage. More than simply showing DVDs of old movies, museums should consider some of the larger issues. Where else but in the museum, for example, can the complexities of the film arts be delineated for the public with anything that approaches precision or accuracy? Where else but in the museum can one fulfill a need to experience the authentic artifact? (Without, for the moment, arguing about what constitutes “authentic.”)

In order to decode historic film material, you need analog technology—the hardware of 16-mm and 35-mm projectors (and for older videos, the right video playback equipment). Film is not just about its content. Possibly, in fact, its hardware (or the “form” of its original gauge) constitutes an equally important component of movie culture that needs to be seen and understood. For the sake of analogy, would a historic albumen photographic print be exhibited in any other—more contemporary—form?

In digital conversions of older films, significant pieces of information drop out. What’s worse, only a fraction of older titles will ever get digitized at all. Although the argument can be made that an awareness of the concept of “cinema” is still preserved in digital formats, the historical elements—qualities like flicker or correct frame speed or even aspect ratio—are lost. Special measures need to be taken, therefore, to preserve the surviving technology that complements historic moving-image material. For sure, this function is not being served in the commercial world, where bottom lines are measured in DVD sales and the profit motive is fast making reels of film obsolete at the multiplex.

The Distinctive Properties of Film

Groups of people (audiences) historically have taken part in the experience of viewing cinema communally, another characteristic that is fading away or at least changing substantially with digital conversion. Film in the twentieth century was as much about the social and aesthetic experience of a cinematic auditorium as it was about the content of the product on screen. Museums with adequate theaters replicate, at least to some degree, this adventure of audience participation.

Besides the uniqueness of watching a

film with an audience in a theater setting, there are physical attributes even more fundamental—the perception of flicker, frames and montage, for example. Nicky Hamlyn¹ writes:

Persistence of vision creates a collision between one frame and the next: one frame is superimposed on its predecessor on the retina. Thus the eye mixes the frames, creating other levels of visual phenomena, color mixes, complementary color afterimages, frame ghosting’s... to some extent all films are constructed inside the viewer’s head...” (2003, 59).

Avant-garde artist Tony Conrad’s legendary film *The Flicker* (1966) captured and then exaggerated the essential flicker definition by alternating black and white frames. During projections, the shifting light and dark progressions produced intense stroboscopic effects, directly hitting the viewer’s nervous system. Conrad’s film caused a near scandal during its early screenings in the 1960s. To try to bring back to life the excitement of this experience on a DVD simply would not work.

The very notion that the film frame itself can be physically isolated as a discrete formal unit is a remarkable fact. By contrast, a digital frame, as such, does not exist.

Because the eye cannot quite keep up with frames alternating at, or close to, 24 per second, the frames blur into each other, producing “palpitations” (Hamlyn 2003, 58).

One of the things that often gets overlooked in ordinary discussions of film is the wide variety of forms that film can take: not only genres such as documentary, short subject, and fiction, but also film’s potential “expansion” beyond the screen. In the

1960s, the notion of “expanded cinema” usually referred to any sort of avant-garde or experimental presentation. Today, however, expanded cinema can mean anything beyond an isolated event. This might involve several competing projections within one space, live performance combined with film showings, mixed media or different movie gauges shown at one time, even synchronized slide and movie projection.

Expanded cinema is characterized by a concern with the nature of the projection as event: the space and the audience’s placement within it, the projector, light beam, and image. The work characteristically aims to change the spectator’s relationship to the image, not just conceptually, but also physically, as... [for example] walking through and peering into the projector beam itself... (Hamlyn 2003, 17).

Surveying the Field

To assess current attitudes toward the “film vs. digital” issue within the museum film community, I carried out an informal poll in the fall of 2007 by interviewing colleagues from art museums and universities, as well as several other professionals familiar with museum habits.² My survey results overwhelmingly supported the notion that 35-mm and 16-mm historical film presentations are not only essential within the museum context but very much alive and well. One of the professionals I interviewed is Russ Sunniwick, CEO of a prominent film lab that specializes in film restorations and digital conversions. His comment to me was bold: “Museums are aesthetically derelict if they put an end to analog presentations.”

Motion picture restoration expert Bruce Posner, speaking in particular about 16-



Janet Gaynor in *Seventh Heaven* (1927). Photo courtesy of Photofest.

mm, believes that: “Many independent films, especially those produced on 16-mm, will most likely never see the light of day again if museums discard their 16-mm projection. Rare, independent, curious, and time-honored but temporarily out-of-favor material will neither be transferred to digital, nor viewed ever again, unless there is conscious effort to uphold and maintain existing 16 mm equipment.” Without the historically correct technology to show filmic artifacts that will remain forever undigitized (due to lack of staff and time), these artifacts might as well be tossed out with other twentieth-century detritus.

At this point, someone might interrupt to say it’s foolish to be downbeat on digital, since digital formats are here to stay and getting healthier all the time. Indeed, digital has many significant advantages over analog, not the least of which is the observation that more and more artists are creating original works in digital. But we are not talking about new culture here,

only old culture—the kind of stuff that needs to be saved—the artistic patrimony.

Stating the argument in a slightly different way, film professor and former Harvard Film Archive curator John Gianvito said to me: “One of the losses incurred by venues moving solely into the digital realm is that they immediately eliminate huge tracts of cinema history and practice from ever being shown”—or even studied. He continued: “One of the reasons audiences still make the effort to go to a film in a museum or archive, as opposed to a multiplex or renting a DVD at home, is the ability to see films unavailable elsewhere, and to see them as they were intended to be seen. If the film is silent, then a slower projection speed of 16, 18, or even 20 frames per second is required.”

Bruce Posner observes: “If film-based works were as viable to museums as other art—that is, as tangible, financially solvent, and as ‘collectable’ as objects—then a museum’s board would offer the same protections offered to other works. Ultimately, to fiddle with the method of presentation of any artwork is to violate a sacred trust placed upon museums to ensure safe passage to future generations. A critical component of this ‘safeguard’ is to offer films as they were originally perceived in a theater-like environment projected on a white reflective screen via a film-based system.”

Museums, Archives, Universities: A Potential for Partnering?

In the early decades of the twentieth century, the Museum of Modern Art and the Wadsworth Athenaeum were among the pioneering institutions bringing cinema into the domain of art museum exhibitions. When poet Vachel Lindsay learned

that the Denver Art Museum, in the 1920s, was going to include cinema in its program, he was so happy that he noted in his *The Art of the Moving Picture*: “In the art museum should be set the final standards of civic life, rather than in any musty library or routine classroom” (Gaddis 2000, 129). The serious interpretation and preservation of moving-image culture must be added to the list of standards for civic life.

As an aside, it’s interesting to note a remarkable resurgence recently of magic lantern shows in museums. A pre-cinematic technology that makes use of nineteenth-century large-format slides, the magic lantern—with its obvious correlation to art history and the early science of optics—possesses a beauty and genuineness that appeals to a range of museum audiences. Its historic technology is usually brought onto the premises by collectors and specialists. Comparing this interest in technological “authenticity” to the recent surge of disregard for the technology of historical cinema, I see nothing short of an uncanny irony: Such intense precision goes into accurately recreating an arcane *pre*-cinematic event, while DVD shows are now deemed acceptable for the presentation of what eventually became the dominant visual culture of the last century—35-mm feature films.

Museums might do well to consider the rich potential for cross-fertilization with other cultural institutions within a community. Schools, universities, local archives, and historical societies often possess collections of early motion picture material. If the museum retains its 35-mm and 16-mm equipment—and it is often the only institution in town to do so—then where else except the museum will students and public be able to witness the rich history that can only be viewed in a theater with a complete projection system? Film archives

collect historic prints and try to save them, but their usual emphasis is neither on public education nor on re-creating history in front of an audience. In order for these collaborations between public museum and film archive to occur, museums must first make the investment to preserve and maintain their 35-mm and 16-mm equipment and technical staff.

Consider what is happening now within universities across the United States in the area of film study. At one time in the not-far-distant past, there were only a few film studies programs. But now, at both undergraduate and graduate levels, we find an increase in the number, complexity, and popularity of these programs. In 2006, for example, Harvard University noted on its Web site the establishment of its “long-awaited film studies concentration” and proposed a doctoral program in film and visual studies. Film studies graduate and undergraduate students are interested in—and required to become skilled at—such topics as moving image aesthetics and philosophy. But they must also know the history of film technology and archival practice, both of which are integral to the still-developing discipline. Since universities are often not able to expose students to the full range of motion picture technology, the opportunity exists for museums that have kept their 35-mm and 16-mm equipment to form partnerships with local universities by opening up museum theaters to film students and faculty, even, perhaps, inviting them to program the theater.

Conclusion: Phoenix Emerging from the Ashes?

With the introduction of new digital and time-based media into the gallery spaces of most contemporary (and even traditional)

art museums, the question of the nature of moving images—their history, their culture, their preservation, and their interpretation—quickly arises.

Moving images, whether exemplified by new or old media, did not spring directly from the technology of still photography. Lingering in the shadows is the full historical development of the cinema. The history of new media is itself intimately connected to the history of film.

In that case, why are many museums seemingly abandoning their traditional role of sustaining 35-mm and 16-mm projection? These two formats are primary for viewing historical cinema in its proper aspect ratio and context. The answer to this question, in my opinion, has a lot to do with a fundamental lack of knowledge and visual sophistication on the part of museum personnel. Since film as an art form is not widely taught (either in public schools or in other institutions), both the general public and museum staff members usually view film-going as entertainment. If the culture of film is to be understood and digested by the public—and why shouldn't it be, as the most prominent popular visual form of the last century?—then the clear choice for where this kind of learning should take place is the museum, especially the art museum, where historical theaters can be represented and even replicated. Silent film presentations with live piano accompaniments are now more popular than ever. Older technologies can both enrich the museum experience and broaden an institution's value through collaborations and partnerships outside the museum.

John Gianvito comments: “Despite the growth of the digital DVD industry, huge amounts of film history remain only in film form, unlikely to be transferred. One



The House on 92nd Street (1945), director Henry Hathaway. Photo courtesy of Photofest.

of the largest terrains is that of documentary and experimental film history. The aesthetic textures and traits that can be observed in a projected film image (versus a projected digitally-transferred image) are paramount for many artists for whom qualities like the grain, and subtle changes in emulsion and color, are integral to their achievement. Distinctions and textures of this sort are suppressed in the transfer process. It is the mission of film archives and museums to keep alive the experience of seeing the history of the motion picture as it was intended."

Historically correct presentation and preservation of cultural materials is the primary purpose of any and all muse-

ums. As the long-established custodians of treasured artifacts, museums must learn to understand, preserve, and sustain their historic 16-mm and 35-mm analog film technology. Or to put it another way, why should such places not wish to *fully* participate in the survival of culture?

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Notes

1. Nicky Hamlyn studied Fine Art at the University of Reading. He has taught workshops at the London Filmmakers' Co-op, and was co-founder of and contributor to the Co-op's magazine *Undercut*. He is currently a lecturer in Time Based Media and Visual Theory at Kent Institute of Art and Design, U.K. His films have been screened at festivals and venues around the world.
2. The survey included the following people, to whom I am very grateful: Bo Smith, Museum of Fine Arts Boston; John Ewing, Cleveland Art Museum; Marian Luntz, Museum of Fine Arts

Houston; Susan Oxtoby, Berkeley Art Museum/Pacific Film Archive; John Gianvito, professor of film at Emerson College and former film curator at Harvard; freelance film historians Bruce Posner and Max Alvarez, both of whom are former curators; Erju Ackman, architect and a founder of the Toronto Film Society; Russ Sunniwick, head of Colorlab in Maryland.

References

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