

THE STRANGE CASE OF DR. DIGITIZATION AND MR. FILM

By
Oscar Alonso Aguilera Garcia

ABSTRACT

Film strip decay is one of the most significant challenges that archivists must confront in the near future. With the renewed interest in and debate surrounding the film preservation in recent years - especially since the adaptation of digital material in the film industry - it is now more important than ever for archivists to clarify and consider new methods for preservation while also exploring the new concepts and new meanings that such methods bring to bear. To that end, this paper proposes that film archiving can go far beyond the traditional concept of preserving history by seeking a more enduring system of conservation that could potentially allow films to be maintained not only in various physical formats but also by way of memory. By tracing the basic concept of film as evidence of the past, and by considering the relationship between truth, reality and preservation, entirely new modalities might be introduced into the archival space. In the end, however, this paper does not seek to offer a single solution to the problems surrounding digitization and film archiving. Rather, it seeks to begin the process of accepting and adopting new technologies or techniques that will bring to bear new alternatives in the field of preservation.

Introduction

Film decay - that is, of the original, physical elements - seems to be the main concern in archival studies for film preservation. Film strips are not made to last indefinitely without being properly stored, and even in optimal conditions, they suffer deterioration over time. In the United States of America, only 20 % of the films in the 1910s and 1920s survive in complete form in American archives, and only half of the movies produced before 1950 still exist in their original form (National film Preservation Foundation, n.d., Para 2). Digitization offers many opportunities to rescue otherwise rare films and even keep them profitable for

future generations by making it possible to easily screen them worldwide. That being said, many digitization techniques are still in their infancy, such as the transfer of 35 mm film strips to a 4K format for streaming services or the adaptation of 8 mm or 16 mm strips into new digital formats that can then be mixed with elements that are digital by nature. Nevertheless, it is essential for people working within the field of film preservation to understand and perhaps seek new ways of approaching and integrating this emerging technology. This might not seem, at first glance, to be an exceptionally sensible claim. The digital camera has become such a ubiquitous filmmaking tool in the modern era that it must seem perfectly logical to conclude that preserving film has only become less challenging over time. The film *Suicide Squad* (Ayer, D., 2016, USA), for example, was shot using 35 mm film strips that were then converted into a digital format for editing and distribution purposes. This is also a common practice for archival film projects which in recent years have shifted away from converting digital footage to film strips to maintain the projects in their native format and avoid the expense involved in a transfer to a physical format. None of this, of course, should be very surprising. By its very nature, the film industry has always evolved alongside and in conversation with innovations and new technologies. And there has long been a strong connection between movies as a medium of truth and the archival concept of evidence.

Movies, in essence, are elements of the past. This perception must necessarily guide the daily practice of analysing, selecting, and preserving records, making them accessible and rendering them intelligible to future users. Until the arrival of digitization, the primary conception of “cinema as evidence” was highly physical, since it essentially described a mechanical way to preserve the past that was not subject to distortion in the same way as other types of art. But while digitization has impacted this attitude only slightly, in this essay we propose that film archiving can go far beyond the traditional concept of preserving history by seeking a more enduring system of preservation that could potentially allow films to be preserved not only through physical formats but also as a memory.

Film preservation, digitization and alternatives

The creation of film archives and the need for film preservation are subjects that should be treated with the utmost seriousness due to the speed at which films decay and the accompanying possibility of losing these invaluable records. The first influential discussions on motion picture longevity can be traced back to communications in the early twentieth century among the motion picture industry's worldwide primary players, concerning how best to manage their product throughout the production, distribution, and exhibition processes. (Karen F Gracy, 2013b, P. 369) The systems which came about as a result of these conversations certainly represented an essential first step in the archival process, but they

tended to extend only as far as the needs of commercialization required, something which remains a constant problem in the film industry.

Specifically, film exchanges were created as central locations where the film collections belonging to the motion picture companies were available for rental to local exhibitors. Most of them included corporate offices and private screening rooms where said exhibitors - i.e. the owners and operators of domestic movie theatres - could preview and choose movies for rental on a commercial basis. But while the creation of these exchanges represented a useful first step along the path towards long-term preservation, the desire for profit exerted its own counteracting pressures. For an industry that relied on regular, repeat customers, for example, the problem of poorly maintained films was a constant concern. (Karen F., P. 372) With the advent of digital cinema, of course, these two impulses have largely been reconciled. Digital films can be easily and widely accessed by customers and vendors alike without in any way degrading the cinematic medium itself. And thanks to the possibilities inherent in streaming video, the moving image has become the predominant form of communication in the twenty-first century. Modern life, in many ways, would be incomprehensible without photography, video and cinema, all of which can now be retrieved, produced, controlled, and propagated by anyone with access to the internet. (Forbes, D. 2009, P. 37) The opportunities these systems of communication have created for interaction between individuals and the safe and durable creation and storage of new meanings and new memories are quite possible immeasurable.

Digital medium does have inherent problems, however, not the least of which - in common with physical film - is a certain amount of fragility. Just as film strips are subject to degradation and destruction over time, digital film exists in a form that can be corrupted, or lost, or rendered otherwise inaccessible. The first cause of this fragility is that technology moves faster now than it did when film preservation first emerged as a discipline. In less than a decade, current digital film creation and storage methods could easily be rendered obsolete, making it almost impossible to preserve certain artifacts for an extended period of time. Second, digital preservation requires expertise that archivists and filmmakers still do not always possess since many of the concepts and technologies involved are either brand new or still being developed. And third, the way that films are screened can and has changed over time, leading to serious distortions in how people perceive the final product. (Conrad, 2012, P. 31) Even if we thought to adopt the practice of creating physical film copies as backups, modern filmmaking has adopted digital technology so completely - with computer-generated imagery (CGI) demanding the use of digital storage and manipulation - that it ultimately makes more sense to find new digital options instead ignoring them. (Conrad, 2012, P. 37) But despite the impasse that this situation might seem to represent, organizations that recognize the value of archiving audio-visual materials are actively working towards the goal of saving and preserving materials throughout the modern digital

media landscape. Even in light of certain legal problems, such as copyright issues and the demands of commercialization, digitization and digital materials are being embraced as offering more solutions than problems, in large part because they offer fast access to records to an extremely broad audience.

Not everyone is equally as enthusiastic about the increasing ubiquity of digital media, however. One concern that has some archivists siding against digitization is the idea that archives would focus their efforts on creating accessible copies rather than protecting the original materials for preservation purposes. Budgeting, of course, is a necessary aspect of archival operations; decisions must be made about how and where money is spent, and there are legitimate concerns among preservationists about how the apparent value of digitization will likely draw resources away from physical preservation. In time, they feel, this kind of thinking will lead to a standard of practice that favours screening rather than preserving original materials, a shift that will ultimately reduce the quality of available material in an effort to promote wider accessibility. (Gracy, K. 2013a, P. 369) Granting that digitization does also offer the possibility of screening without using or affecting the physical record, solutions developed going forward must nevertheless also account for lingering issues having to do with conservation, storage, preservation, and duplication.

A key example of one of these issues concerns the datacenters that end up storing the relevant digital records. Recalling the comparison offered above, digital film data centres share with physical film warehouses the risk of materials damaged by exposure to the elements or simply because of degradation over time. Thankfully, new technologies are presently being developed that could potentially increase the lifespan of certain digital storage devices. One example of this is the experiment that Microsoft concluded just at the end of September 2020. A two-year test of a sealed container datacenter located on the floor of the Pacific Ocean successfully demonstrated the overall reliability of the technology in question in an environment with reduced corrosion from oxygen and humidity, fewer temperature fluctuations, and a general absence of people who could damage the equipment as a result of their daily interaction with it. (Microsoft, Para 12) The success of this kind of experiment opens the door to storing records using equipment that could theoretically last much longer than has previously been the case. This development would seem to solve at least two problems at once. The first is that it protects the physical manifestation of the records in a sealed form for future generations. The second is that it allows for the creation of copies at a comfortable pace and thereby preserves the record in the memories of the individual and society for as long as they desire to screen the relevant video. This kind of thinking, called “cultural memory,” constitutes a distinctly non-physical aspect of the archivist’s discipline whereby material is preserved in part by keeping it alive in the collective minds of a given community(Ulf Vierke, 2015, P. 21). In many ways, this way

of thinking has only really become possible since digitalization became relatively inexpensive.

Previously, preservation of analog moving images and audio required a high initial investment in equipment which still did not always solve some of the problems inherent in the process. Screened copies of films, for example, tend to be of lower quality as a result of continuous use, and film transfer work, while possible, tends to take a prohibitive amount of time (Gracy, K. 2013a, P. 368). Digitization allows films to be cheaply and easily stored and screened, but the technology involved is still in its relative infancy at the moment, and the problems associated with its prolonged use are still being debated.

That being said, it is necessary to remember that the film industry encountered the same kinds of problems relatively early in its history since there was virtually no consideration given to film preservation or the value of this new type of physical record until the 1930s at the earliest, several decades after the advent of moving pictures. In this way, we could consider this present stage as the beginning of a new era in the history of film archives and of the film industry itself (Gracy, K. 2013b, P. 371). The film industry is always going to think in terms of business, of course, and considerations of profit and loss will ultimately determine how and when new technologies are adopted. That said, some amount of thought should still be given to the fewer material benefits of film preservation. In addition to being products that are intended for exhibition and sale, after all, films and photography are also forms of art and historical documents that are deeply intertwined with the concepts of evidence and memory.

A Closer look at Film as Evidence

Since the inception of the film industry, it has become natural for people to connect with the idea that moving images and photographs can in some manner preserve time. The first cinematographers sought to record events worldwide and offered a glimpse of the world for an audience eager to devour each new image that emerged. The first decades of this industry's life accordingly inspired artists and intellectuals to debate the implications of these developments from a diverse array of aesthetic, scientific, and philosophical perspectives. Underlying many of these debates was the impact of these new recording devices upon the conception of memory (Amad, P, 2010, P96). For some researchers, the film reel resembled a sort of a time capsule or time machine which would capture a place or an object in a way that could potentially be stored for future reference, marking the indexical, irrefutable, and reproducible trace of past events as they unfolded in duration (Amad, P. 2010, P. 135). But as the medium of cinema took time to be understood, this conception of its impact on memory and culture also took time to be digested and adopted.

Perhaps the best-known researcher, and the one whom most film historians and theorists call back to when attempting to explain what they think cinema actually is, would be Andre Bazin. His essay *Ontology of the Photographic Image* (1958) has offered generations of scholars an extremely useful analogy between the “mummy complex” and the essence of film. In primary terms, Bazin put forth the idea that photography, and cinema itself, offers us the opportunity to preserve, artificially, anything that is captured through the lenses of the camera; to snatch it from the flow of time, to stow it away neatly, so to speak, in the hold of life (Bazin A., 2005, Pp. 82-83). This ability that cinema possesses to preserve time accordingly gives the film a quality of credibility that no other art form can claim, and has lent film an inherent quality of truthfulness since photography enjoys certain advantages in terms of this transference of reality from the thing to its reproduction (Bazin A., 2005, Pp. 94). Bazin followed this initial claim by further arguing that the value of the camera was that it could be considered objective, since for the first time, between the originating object and its reproduction, there intervened only the instrumentality of a non-living agent. For the first time, the world's image was formed automatically, without man's creative intervention. The arts, up to that point, were based on the presence of man. Only photography derived an advantage from his absence. (Bazin A., 2005, Pp. 92-93) This theory is crucial to archival studies since archives are interested in preserving evidence with as much fidelity to the original as possible.

It is, of course, necessary to delimit the concept of evidence for this argument to succeed. For this document's benefit, we ultimately gravitated toward English philosopher and political reformer Jeremy Bentham and American Lawyer and legal scholar John Henry Wigmore's theories, which suggest that evidence is constituted by the very processes that use evidence to prove a fact or acquire knowledge about a past event. (Meehan J., 2006, P. 137) This short explanation seems to align with our analogy of the mummification of the past and the essence of evidence. It also seems to apply in legal terms, as when the recording of an event constitutes proof that the event took place, with the image or record itself a signifier of the relationship between record and event. (Meehan J., 2006, P. 139) This notion of evidence as proven fact is a concept that in large part governs the placement of records in archives; specifically, the idea that records prove an event in the past. The past was recorded and is stored so it can become evidence for the future. The archive offers a complete look at the past and, in this way, accepts the truth.

This concept of evidence necessarily relies upon the idea that the archive is a repository of objective truth and that the material stored in the repository is there to preserve the evidence of truth. Archivists employ notions of evidence to refer to the function and value of records, to shape how they treat records, define the role of the archive in society, and provide a particular substance to archival ideas concerning the nature and purpose of the archival endeavour. (Meehan J., 2006, P. 128) This kind of thinking should inherently connect to the

notion of memory, yet it seems that it is normal to divide these two concepts and even consider them to be in opposition. This thinking has contributed to the current division between evidence and memory and kept archivists from fully considering the possible affinities between the different facets of the archival idea. (Meehan J., 2006, P. 131) By digitizing objects, it becomes possible to continue connecting memory to evidence while also preserving the original physical material. Perhaps more importantly, it gives us the chance to see two archival systems, cultural memory and physical archiving, living and working together. In a way, it's possible to mummify the records and at the same time give them a new life. The opportunities are endless.

CONCLUSION

The idea of film as evidence can thus be traced back to the advent of cinema, and as a result of the works of theorist Andre Bazin, it has been cemented in the popular imagination that cinema is the evidence of time as preserved through images. Despite this close connection between film as a medium and evidence as a concept, however, preservation has always been and continues to be a significant problem for those creating and studying film in its various forms. Until the advent of digitization, archival studies and cinema studies did not question the basic concepts that govern the creation and storage of records. But while some may perceive the ensuing conversations as a kind of crisis, this is emphatically not the case. The advancement of technologies in digital storage, like the advancement of technologies used in cinema, should not be considered extraordinary but rather a natural step in preserving the cinematic record. The constant evolution of technology in cinema has allowed it to survive and become the predominant form for the representation of reality. Digitization offers archivists the same kind of opportunity, allowing for the screening of films without using or affecting the physical records. The technology currently available for storage is limited, but it will improve and become the preferred method for research in time.

ABOUT THE AUTHOR

Oscar Aguilera Garcia is a student of Master of Information at the University of Toronto, where he learned the importance of archival methodology in film preservation and new preservation methods. He is working on a documentary project which is in line with his future goal of working on film documentaries. Oscar is currently finishing his Master's degree.

WORK CITED

Amad, P. (2010). "Counter-Archive: Film, the every day, and Albert Kahn's Archives de la Planète." Columbia University Press.

Ayer, D. (2016) *Suicide Squad*. Warner Brothers: USA

Bazin, A. (2005). *What Is Cinema? Translated by Hugh Gray. Forewords By Jean Renoir*. Univ. of California Press: California.

Chassanoff, A. (2013). "Historians and the Use of Primary sources Materials in the Digital Age." *The American Archivist* (2013) 76 (2): 458-480

Conrad, S. (2012), "Analog, The Sequel: an Analysis of Current Film Archiving Practice and Hesitance to Embrace Digital Preservation." *Archival Issues* 34(1), pp. 27-43.

Forbes, D (2009), "Film Archives: A Decaying History." *African Research & Documentation* 110, pp. 37-43

Gracy, K. (2013, a). "Ambition and Ambivalence: a Study of Professional Attitudes Toward Digital Distribution of Archival Moving Image." *The American Archivist* (2013) 76 (2): 346-373. DOI: [10.17723/aarc.76.2.t401kx8j64682224](https://doi.org/10.17723/aarc.76.2.t401kx8j64682224)

------(2013, b), "Moving Image Preservation Work: The Evolution and Integration of Moving Image Preservation Work into Cultural Heritage Institutions." *Information & Culture: A Journal of History* 48(3), pp. 368-389

Meehan, J. (2006). "Towards an Archival Concept of Evidence." *Archivaria* 61 (Spring): pp. 127-146.

National Film Preservation Foundation (n.d.) "Preservation." National Film Preservation Foundation: <https://www.filmpreservation.org/preservation-basics> [accessed September 27, 2021]

Roach, John (2020, September, 14) "Microsoft finds underwater datacenters are reliable, practical and use energy sustainably." Microsoft Innovation Stories: <https://news.microsoft.com/innovation-stories/project-natick-underwater-datacenter/> [Accessed December 1, 2020]

Vierke, U. (2015), "Archive, Art, and Anarchy: Challenging the Praxis of Collecting and Archiving: From the Topological Archive to the Anarchic Archive." *African Arts* 48(2) (Summer), pp. 12-25.