

Adapting Moving Image Archives to the Anthropocene

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CINE-GT-1800: Introduction to Moving Image Archiving and Preservation

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Introduction

Dealing with time and its effects is an integral aspect of the archival profession. Living in the here and now, archivists possess the unique responsibility of bridging the past to the future. On the one hand, the objective to preserve collections for an unforeseeable tomorrow, presumably forever, presents an uneasiness that seldom consider within archival studies. On the other, one might also become accustomed to hearing archivists refer to the next “hundred years” as a lofty goal for their collections. Are we really content to stop there? By the end of the century, the greenhouse gases stand to warm the earth’s surface temperature by 9.7°F.¹ Along with the increase in temperature are a slew of catastrophic consequences like the rising of sea levels via the melting of icecaps and the strengthening of extreme weather events such as flood and drought. By this logic, a one-hundred-year benchmark would mark a logical conclusion for the physical safeguard of these collections. By then, certain regions of the world are slated to become too inhospitable for human life, and along with them, their cultural repositories.

Current questions and considerations might read like science-fiction fantasies, but the questions prompted by the Anthropocene require a high degree of imagination in order to solve them. A few outlandish considerations: If weather is what we are chasing, then why not place our archives in space, far away from these cataclysmic events? If the field, as part of a larger capitalistic system, is contributing to the destruction of the planet via our dependence of harmful resources (i.e. electricity, manufactured machines) should we be quick to move away from the norm and adopt more innovative approaches (e.g. DNA sequencing) for data storage purposes? Following this, will the changing climate push us to form truer standards for digital repositories,

¹ Herring, David. "Climate Change: Global Temperature Projections." NOAA Climate.gov., last modified March, accessed December, 2017, <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature-projections>.

as opposed to the ones that currently stand to change ad infinitum? If substantial efforts are made to control storage conditions, then why not place these archives in hostile yet stable environments like the deep ocean, for example, where those factors stand be controlled better than on the surface of the planet? If these are all absurd notions, then let us consider the ultimate question at stake: what do we stand to lose and gain when the eventual destruction of our planet as we know it is almost guaranteed?

The following discussion intends to address the uneasiness that the Anthropocene provokes in the Archive. The inability to pinpoint just how long archives are meant to last has unintended consequences in how we collect, access, and preserve our materials. Research materials stemmed from three conferences, listed here in chronological order: the Libraries and Archives in the Anthropocene Colloquium (LAAC) held in May of 2017; the Environmental Issues and Archives Stream at the 2016 Association of Moving Image Archivists Conference in Pittsburg; and the Postnatural South workshop held at the NYU King Juan Carlos I of Spain Center in November of 2017. These conferences mark a positive turn in the academic study of the Anthropocene, evidenced by the diverse and interdisciplinary discourse available at the respective forums. The paper will not present a thorough scientific analysis as to what stands to change—that is outside of the scope of this paper. What will be discussed is what might be prompted within the archiving field by climate change, with a special lens to moving image collections. The issues are vast and merit a wider interdisciplinary analysis that integrate future studies, the natural sciences, and considerations of deep time. For the purposes of this paper, they will briefly consider those relating to access, curation, and preservation.

A Framework

When NASA launched Voyager I and II into space, they went accompanied by twin copies of the Golden Record—a gold-plated time capsule containing ninety minutes of songs, sounds, and images of life on earth according to American scientists in 1977. Carl Sagan and his team did so with the hopes of eventually establishing communication with intelligent, extraterrestrial life. Currently, the Voyager Interstellar Mission has achieved its goal of recording the outer reaches of the solar system. By 2020, the spacecrafts will end their respective journeys through the heliosphere where “the Voyagers are destined—perhaps eternally—to wander the Milky Way.”² Here, the “perhaps”—a word weighed by the heavy sigh of hope—signals a kind of naivete and uncertainty with which we conduct some of our biggest endeavors as human beings. But the spacecrafts also provide a beautiful image for the larger life of the universe, which is, in its essence, an enormous place where atoms collide, shatter, and disperse, only to merge and realign again.

Will humanity survive to see the day the Voyagers and their small archive of records reach our distant neighbors? The uncertainty is not enough to stop us. An old song goes: “It is useless to pursue the world, no one will ever overtake it.”³ And still, the impulse to preserve objects in perpetuity remains. Jean Baudrillard writes in “The System of Collecting” that the motivation behind our collection of the object is not so much to outlast time but to embody a relationship to these natural and cyclical patterns of life and death:

“What man wants from objects is not the assurance that he can somehow outlive himself, but *the sense that from now on he can live out his life uninterruptedly and in a cyclical*

² “Voyager - the Interstellar Mission,” accessed December 2017, <https://voyager.jpl.nasa.gov/mission/interstellar-mission>.

³ p. 59 An excerpt from an old folk song in *Mediterranean Countrymen* by P. Bourdieu, found in: Thompson, E. P. 1967. “Time, Work-Discipline, and Industrial Capitalism.” *Past & Present* (No. 38): 56-97. <http://www.jstor.org/stable/649749>.

mode, and thereby symbolically transcend the realities of an existence before whose irreversibility and contingency he remains powerless.”⁴

This contrasts to André Bazin’s notion that the embalming of life through the arts gives us triumph over time, the ultimate messenger of death.⁵ Though we may philosophize as to the many reasons for why that impulse might be, whatever is the case, it is evident that our connection to the material world allows for an intellectual and moral backing with which to contextualize it. This embalming of time through the material holds more layered truths for moving image archives in particular. Here, the preservation of cinema encapsulates an irony inherent to its materiality; the irony being that fixed expressions of time are subject to its very ravages.⁶

Collections and Access

With this in mind, we find ourselves in the Anthropocene, the name given to our current geological era, demarcating the end of the Holocene which encompasses the entirety of the written record thus far.⁷ At the Postnatural South workshop held at the NYU, attendees were asked by speaker Mary Louise Pratt to learn to see as geologists, who distill instances of deep time within our geological surroundings: “You can learn to read a history in the debris that’s left behind.”⁸ In human history, what is left behind has almost always been determined by the “winners.” This is the basic premise to archivist and filmmaker Rick Prelinger’s talk “Collecting

⁴ p. 17, Baudrillard, Jean. 1994. "The System of Collecting." In *The Cultures of Collecting*, 7-24: Harvard University Press.

⁵ Bazin, André, and Hugh Gray. "The Ontology of the Photographic Image." *Film Quarterly* 13, no. 4 (1960): 4-9. doi:10.2307/1210183.

⁶ In other words, it can remain fixed so long as its physical properties remain in tact.

⁷ Zalasiewicz et al. "Working Group on the Anthropocene." The Subcommittee on Quaternary Stratigraphy., accessed December, 2017, <http://quaternary.stratigraphy.org/workinggroups/anthropocene/>.

⁸ Silicon, a major element which forms a good 27% of the earth’s crust, is one such form of debris used to encode our digital materials. Nave, R. “Abundances of the Elements in the Earth's Crust." *HyperPhysics.*, accessed December, 2017, <http://hyperphysics.phy-astr.gsu.edu/hbase/Tables/elabund.html>.

Strategies for the Anthropocene” conducted at the LAAC. According to Prelinger, the impending changes to our climate might serve as a blessing in disguise; collections in this age can be repurposed as resistance to “amnesia and historical oversimplification” and the overabundance of dominating narratives. The urgency of climate change injects a much-needed intentionality to the archive.

Climate change has also brought about a wider anxiety towards displacement.⁹ During these times, archives and libraries might help offer a substitute for home in cementing their status as community centers. In New York, the Interference Archive offers a unique approach what an archive or library can look like when it is treated as such. Based in Brooklyn, the Interference Archive employs an open access, full transparency approach to their collections of grassroots social movements, allowing users an “open stacks” approach. Having this establishment work in tandem with its members enables a living and breathing element to their collection of works. In the Anthropocene, one should consider how access is directly tied to sustainability. Archiving without access is pointless, as goes an important mantra of the profession. The more records are accessed by people, the more records and byproducts are created out of these records, and eventually, the higher the chances a historical artifact has in surviving the forces of time. Think, for example, the possibilities Interference allows for artists to enter the space and remix the work in view. One of the most thought-provoking panels at the LAAC was presented by archivist Jan Zastrow titled “Back to the Future: Everything Old is New Again” where she posited that analog forms of communication will take precedent anew in a future world without the capacity to sustain manufactured goods such as computers (and everything else required to run an archive).

⁹ One can find as a tragic example the

Access in this regard is the most crucial element in ensuring the longevity of a given cultural work. Its life dependent on its purpose within a given community.

Returning to the earlier point of correcting for overabundance, an increase in production of the personal archive through social media might stand to correct this in the future. But despite a larger output, “the digital age has brought on the breathless collecting of materials because we can, not because we should.”¹⁰

Preservation Practices

The “should” refers to the direct impact current audiovisual archiving practices have on the environment. If archiving can be described as the discipline of saving (materials, artifacts, memories), then sustainability, the discipline of recycling, should act as a natural extension of the archival project. The Environmental Issues and Archives stream at 2016 AMIA conference presented the most relevant information in this regard. Digital Bedrock CEO Linda Tadic discussed the exponential challenges our field faces in digitizing the world’s heritage. Using as an example the estimated 400 million hours of unprocessed magnetic media stored across various cultural, corporate, and consumer institutions, her talk “The Environmental Impact of Digital Preservation” demonstrated the very real and physical elements of digital media storage.

¹¹ The 400 million hours in question roughly translates to 14,600 petabytes of data for one set of files, double that for redundancy. The preservation of this material would create millions of “media carcasses” (the largely non-recyclable physical elements of magnetic media), the exorbitant usage of electricity, and the inevitable waste created after each hard drive upgrade.

¹⁰ Quote taken from filmmaker and archivist Rick Prelinger during his presentation at LAAC 2017, titled Collecting Strategies for the Anthropocene.

¹¹ This was a hypothetical number devised from a comparison of reports by UNESCO, LC National Recording Preservation Plan (2012), and a NEDCC (2015) report. p. 8, Tadic.

Outside of these threats to nature through waste, there are also those that directly interfere with human health. Today, according to the World Health Organization, an estimated “23% of deaths in the developing world are attributable to environmental factors.”¹² Following this mock chain of events is a useful guide on the e-waste that these video tapes stand to create, both their recyclable and toxic byproducts. Tadic suggests that environmental repercussions can be mitigated through staff action and smart choices in the technology used.

An additional suggestion of interest is the digitization of items at a lower than optimal resolution in order to increase the storage capacities of a hard drive. Within the context of digital preservation, redundancy and multiple copies are the mark of a trustworthy repository, each iteration containing either a master, derivative, or access version of a work. But Tadic asks us to reconsider this for the purposes of long-term storage. The approach towards “forever” is impracticable and unsustainable, both by the sheer manpower and the resources required to perform the responsibilities of the Archive. In a similar vein, at the most recent Association of Moving Image Archivists (AMIA) conference, a panel titled “Good Enough to Best: Tiered Born-Digital AV Processing” very succinctly and pragmatically hinted to this fault found within archive. There, Rebecca Fraimow of WGBH described the impracticality of preserving born-digital materials into the future, and how they should only be kept as long as they remain relevant to their stakeholders. This is a refreshing remark coming from an archivist in the field, especially considering the incessant desire to migrate hard drives upwards for the newest and latest technology.

¹² p. 13, Tadic.

Concluding Thoughts

Is the Archive prepared to contend with deep time? Imagining our archives in the future requires a rehaul of our theoretical framework. To understand the role of the Archive today, one has to come to terms with a deep history laden with cyclical repetitions of creation and destruction. If there is an ultimate narrative here, it is our battle to contain time against the impossibility of permanence. The imminent challenges brought on by the Anthropocene ask us to reframe and enmesh timelines in both the long and short term. It also reveals an unsettling and thought-provoking notion that archives are not meant to last. The sooner this is acknowledged, perhaps the sooner it is that we get to the heart of the Archive's project.

Bibliography

"Voyager - the Interstellar Mission." NASA.gov., accessed Dec 16, 2017, <https://voyager.jpl.nasa.gov/mission/interstellar-mission/>.

Baudrillard, Jean. 1994. "The System of Collecting." In *The Cultures of Collecting*, 7-24: Harvard University Press.

Bazin, André and Hugh Gray. 1960. "The Ontology of the Photographic Image." *Film Quarterly* 13 (4): 4-9. doi:10.2307/1210183. <http://www.jstor.org/stable/1210183>.

Herring, David. "Climate Change: Global Temperature Projections." NOAA Climate.gov., last modified March, accessed December, 2017, <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature-projections>.

Tadic, Linda. "The Environmental Impact of Digital Preservation." *Environmental Issues and Archives Stream at 2017 Association of Moving Image Archivists Conference*, November 2016. <http://www.amiaconference.net/wp-content/uploads/2016/12/Advocacy-3-1-Environmental-Impact-Tadic.pdf>

Thompson, E. P. 1967. "Time, Work-Discipline, and Industrial Capitalism." *Past & Present* (No. 38): 56-97. <http://www.jstor.org/stable/649749>.

Zalasiewicz et al. "Working Group on the Anthropocene." The Subcommittee on Quaternary Stratigraphy., accessed Accessed December, 2017,
<http://quaternary.stratigraphy.org/workinggroups/anthropocene/>.

Adapting Moving Image Archives to the Anthropocene - Resource Guide and Further Readings

Organizations

Project_ARCC Archivists Responding to Climate Change (Group)

<https://projectarcc.org/>

SustainRT: Libraries Fostering Resilient Communities

<http://www.ala.org/rt/sustainrt>

Disaster Recovery

Disaster Recovery Documents and Resources for Audiovisual Materials (FIAF)

<http://www.fiafnet.org/pages/E-Resources/Disaster-Preparedness-Recovery.html>

Recovering the Collection, Establishing the Archive (AVPreserve)

<https://www.avpreserve.com/wp-content/uploads/2013/05/RecoveringTheEyebeamCollection.pdf>

The Archives in Context

Environmental Issues and Archives Stream at AMIA 2016

<http://www.amiaconference.net/eia-environmental-issues-and-archives/>

Slides

The Environmental Impact of Digital Preservation, presentation by Linda Tadic

<http://www.amiaconference.net/wp-content/uploads/2016/12/Advocacy-3-1-Environmental-Impact-Tadic.pdf>

Libraries and Archives in the Anthropocene: A Colloquium, May 13-14, 2017

<http://litwinbooks.com/laac2017colloq.php>

Session Videos

Saturday, May 13, 2017

Morning: <https://www.facebook.com/litwinbooks/videos/1303849529684125/>

Afternoon: <https://www.facebook.com/litwinbooks/videos/1304081016327643/>

Sunday, May 14, 2017

Sunday morning: <https://www.facebook.com/litwinbooks/videos/1304790986256646/>

Sunday afternoon: <https://www.facebook.com/litwinbooks/videos/1304987482903663/>

Slides

Collecting Strategies for the Anthropocene, presentation by Rick Prelinger
<https://www.slideshare.net/footage/collecting-strategies-for-the-anthropocene>

UNESCO's Recommendation for the Safeguarding and Preservation of Moving Images
<http://www.fiafnet.org/pages/E-Resources/1980-UNESCO-Recommendation.html>

Statistics and Reports on the Environment

Intergovernmental Panel on Climate Change Fifth Assessment Report
<https://www.ipcc.ch/report/ar5/>

Potsdam Institute for Climate Impact Research
<https://www.pik-potsdam.de/pik-frontpage>

Turn Down the Heat: Climate Extremes, Regional Impacts, and the Case for Resilience
<http://documents.worldbank.org/curated/en/975911468163736818/pdf/784240WP0Full00D0CO NF0to0June19090L.pdf>