

Introduction to the Special Issue on Early Cinema History (Understanding Visual Culture Through Silent Film Collections)

Mark Williams

Editor of the Special Issue and Creator of the [Early U.S. Cinema Compendium](#)

This special issue and the Early U.S. Cinema Compendium are dedicated to the memory of Paul Spehr.

Overview

This special issue represents a [culmination of research funded by the National Endowment for the Humanities \(NEH\) for The Media Ecology Project \(MEP\)](#), a Digital Humanities (DH) project at Dartmouth College directed by Prof. Mark Williams and designed by Dr. John Bell.

"MEP is fundamentally 1) a sustainability project that 2) develops literacies of moving image and visual culture history, and 3) functions as a collaborative incubator that fosters new research questions and methods ranging from traditional Arts and Humanities close-textual analysis to computational distant reading."

The virtuous cycle of access, research, and preservation that MEP realizes is built upon a foundation of technological advancements (software development) plus large-scale partnership networks with scholars, students, and institutions of historical memory such as moving image archives. Our Onomy vocabulary tool and NEH-funded Semantic Annotation Tool (SAT) [discussed below] have been applied in this NEH advancement grant regarding early cinema history.

MEP is fundamentally 1) a sustainability project that 2) develops literacies of moving image and visual culture history, and 3) functions as a collaborative incubator that fosters new research questions and methods ranging from traditional Arts and Humanities close-textual analysis to computational distant reading. New research questions in relation to these workflows will transform the value of media archives and support the development of interdisciplinary research and pedagogy/curricular goals (e.g., media literacy) regarding the study of visual culture history and its legacies in the 21st century.

Our moving image heritage is at enormous risk. Moving image archivists and digital repository

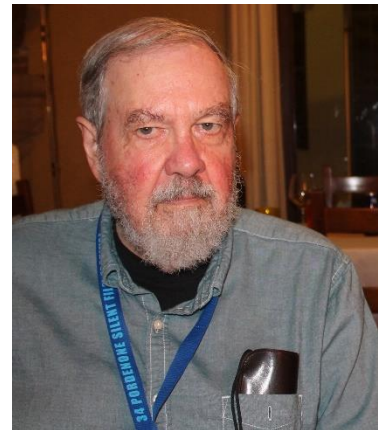


Figure 1. Image of Paul Spehr, taken at the 34th Pordenone Giornate in 2015.

advocates are developing solutions to these problems, but we cannot sustain interest in “preservation” without a better sense of the historical value of these materials. “Access” is not enough; new knowledge production is necessary to connect archival materials with audiences and accelerate preservation efforts. The Digital Humanities must move concertedly forward to engage visual culture with the same dedication and technological ingenuity it has brought to the study of word culture.

With internal support at Dartmouth, and especially support from the NEH, MEP has developed several digital tools that support and sustain the creation of new networked scholarship and pedagogy about archival moving image materials. These include:

- > [The Semantic Annotation Tool \(SAT\)](#), which enables the creation of time-based annotations for specific geometric regions of the motion picture frame.
- > [Onomy.org](#), which is a vocabulary-building tool that helps to grow and refine shared vocabularies for tags applied to time-based annotations.
- > A cut-detector to automatically identify the time code for “hard” cuts and “soft” cuts (dissolves, etc.) in digital files produced from older moving image prints – what the field of computer vision refers to as “damaged films”. This tool was developed in conjunction with The Red Hen Lab and two consecutive years of funding from the Google Summer of Code, which supported work by gifted programmer Shreyan Ganguly to design and refine the tool in conjunction with the MEP media collections and the manual annotations of many MEP student workers. The tool is designed to produce metadata for direct use in the renowned *Cinematics* software for moving image analysis.

Together, these three tools support close textual analysis of moving pictures based on time-based annotations. Annotations denote a start time and stop time for a subclip, a description and tags related to that clip, and attribution for its creator. This granular approach to media literacy and scholarly annotation is flexible enough to be applied to many types of research and analysis.

MEP promotes the study of archival moving image collections (and those of other institutions of cultural memory), enhances discovery of relevant corpora within these archives, and develops cross-disciplinary research methods. These efforts help ensure the survival of these collections via new published scholarship, and allow contributions of metadata and research on studied corpora to return back to the archival community—what we refer to as a “virtuous cycle.”

While developing MEP as a rather distinctive Digital Humanities project, we have learned first-hand several key lessons about this important and emerging field. Because we are building MEP from an Arts and Humanities perspective, we recognize that our goals must always be framed to raise awareness about the significance of cultural-critical perspectives within the various institutions that we have engaged (archives, libraries, universities, grant resources, etc.).

Everyone who participates in MEP scholarship is at some level working outside their comfort zones: across disciplines, across expertise, across vocabularies.

In a very real sense we are engaged in “translation” work, the great benefit of which can be experimentation regarding methodologies of study but also in infrastructural designs of workflow and output. New research questions in relation to these workflows will literally transform the value of media archives and support the development of interdisciplinary research and curricular goals (e.g. media literacy) regarding the study of visual culture history and its legacies in the 21st century. These goals have grown to be especially timely: the conceptual and ethical significance of re-imagining our collective purchase on historical imagination has been axiomatic to the emergent blur of reception processes

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defined by what is called the “attention economy.”

In 2018 Prof. Williams and Dr. Bell were honored to receive two advancement grants from the NEH for the Media Ecology Project. These grant projects had each been initially developed as demo pilots for MEP and are now poised to realize significant advances in Digital Humanities scholarship via further developments of SAT, both technologically and conceptually.¹

One of our inaugural pilot projects was in conjunction with the Library of Congress regarding their early silent film era materials, with an emphasis on the historically significant Paper Print collection.² The Paper Print collection is, especially in the U.S. context, roughly the equivalent of the

Rosetta Stone for those who study moving image history in relation to visual culture: a vast and inspiring series of historical objects that is unique in film history.

As motion pictures were invented and experimented with, their producers applied for copyright of each film by placing a positive print of the film materials on ribbons of photosensitive paper for deposit at the Library of Congress. This resulted in a record of the literal development of early cinema practices that no other archive can duplicate. We are extremely proud that the Library of Congress promised to digitize the entire corpus of Paper Print titles in relation to the partnership forged by MEP and the esteemed early cinema and pre-cinema study organization DOMITOR. Early research in the pilot was represented as the plenary panel of the 2017 Women and the Silent Screen conference in Shanghai.³

The advanced NEH grant project “Understanding Visual Culture Through Silent Film Collections” was originally designed to produce a digital compendium of over 400 select films from the silent cinema era that document the aesthetic practices of early cinema, with attention to the transition of visual culture from stage to screen. The Compendium concept and partnerships have grown considerably and now afford many new questions regarding historical visual culture that span the extraordinary history of early cinema: from attractions to narrative, from the natural world to vaudevillian theatrics, from abstraction to realism. It

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combines highly-influential and rare works archived at the Library of Congress with materials and records at the The National Archives and Records Administration, The American Film Institute, The Museum of Modern Art (MoMA), The Seaver Center at The Museum of Natural History in Los Angeles, The Women Film Pioneers Project, The Eye Filmmuseum in Amsterdam, The Film Preservation Society, an Early Cinematographers Database (by Buckey Grimm), an Early Chinese Cinema Database (by Yuqian Yan and Panpan Yang), and an early Russian film database (curated by Anna Kovalova), plus several other key resources to create a publicly available online digital Compendium for film scholars around the world to use. The Compendium presents visitors with a variety of analytic lenses embedded in a single, simple interface.

"The Compendium also features new digital access to the collection of American Mutoscope and Biograph (AM&B) exhibitor catalogs at The Museum of Modern Art and The Seaver Center. These catalogs remarkably feature three keyframes from each of the first 3000 motion picture titles released by AM&B—rich historical information and extremely rare indexical fragments of visual culture, in many cases for films that are otherwise considered lost."

The late Paul Spehr's meticulous chronological production logs of American Mutoscope & Biograph films, derived from 30 various historical collections over many decades of research, served as an inspiration and a backbone for the Compendium, providing a framing infrastructure for many of the associated films and historical materials. Additionally, Charles Musser's essential companion to the early Edison films, Tom Gunning's original research notes about the Paper Print Collection at the Library of Congress, the American Film Institute's formal list of U.S. film titles up to 1920, and the list of

extant 68mm films preserved by the Eye Institute are also part of the Compendium—neglected marvels of early cinema, ripe for rediscovery and counter-history. The Compendium also features new digital access to the collection of American Mutoscope and Biograph (AM&B) exhibitor catalogs at The Museum of Modern Art and The Seaver Center. These catalogs remarkably feature three keyframes from each of the first 3000 motion picture titles released by AM&B—rich historical information and extremely rare indexical fragments of visual culture, in many cases for films that are otherwise considered lost. The Compendium will frame each film and its historical record as a resource for rediscovery and fresh methodological interventions, central to the advancement of the digital humanities in relation to visual culture.⁴

To create the Compendium, we have integrated MEP's Semantic Annotation Tool with software developed by the Alliance for Networking Visual Culture (ANVC). ANVC's Scalar is a web publishing platform designed to present text, media, and data using flexible interfaces, an early innovation target for MEP that moved the project beyond data exchange tools we had originally worked with (e.g., Mediathread at Columbia University). Integration of SAT into Scalar is an evolution of those earlier efforts: rather than attempting to move data between annotation tools that do not follow common standards, the improved tool takes the standards-compliant SAT module and drops it directly into the Scalar platform. Both SAT and Scalar are built on semantic web principles that make it easy to gather and merge diverse data from across the web using linked data, making the integration a natural fit.

For example, one key area of emphasis that evolved in the MEP pilot study on the Paper Print Collection was the analysis of performance styles. One of the characteristics of the era is the transition from heavily codified theatrical performance styles derived from late 19th century theater practices toward an uneven development of more "cinematic" performance styles that evolved in relation to the proximity of the motion picture camera.

An ideal case study emerged regarding the career of Florence Lawrence who, though uncredited (as were most all performers of the pre-Nickelodeon era), came to be known to audiences as "The Biograph Girl." In this study, primarily developed by Prof. Jenny Oyallon-Koloski, time-based clips of Lawrence's onscreen appearances were demarcated via brief descriptions and tagged according to a simplified protocol of Laban Movement Analysis (LMA). Mediathread provided the capacity to codify her performance style (gestures, facial expressions, other aspects of the expressive body) and potentially contrast her performance style with those of other Biograph actresses of the era, such as Mary Pickford. Mediathread allowed delimited written descriptions of Lawrence's performances applied via full-frame time-based annotations. Using the Semantic Annotation Tool can enhance the precision of our already granular annotation methodology by adding geometric targets within a frame and real-time playback of annotations with sub-second resolution. These innovations enable the creation of time-based annotations that reference films with greater specificity, a key enhancement given the speed with which historical performance modalities shifted.

The films represented in this Compendium designate a galaxy of new research inquiries, especially when placed into linked data relations with one another and with the new textual and contextual metadata we provide. The Compendium will re-animate early cinema history, phenomenologically and conceptually, especially for audiences and users new to this material. Contemporary media theorist Bernard Stiegler's preferred phrase is to "re-enchant" our sense of history and the world, a necessary tonic to the information bloat, hollow exploitation, and "presentist" ideology of contemporary attention culture that underscores much digital media engagement today.⁵ In the case of Volume 6 of the AM&B Exhibitor Catalogs (a volume held only by The Seaver Center in Los Angeles), Dartmouth student William Tarnowski has literally "re-animated" these disparate frames via slow dissolves that deliver their own distinctive historiographic allure.

But we also aspire to cross a new set of thresholds in a Digital Humanities context by re-articulating the dialectic described in the very notion of Digital Humanities. The tension that exists between the traditional Humanities tenets of close textual analysis versus the demand for distant reading and analysis-at-scale in the computational sciences will be both visualized and progressively informed by the linked data Compendium. The use of granular time-based annotations and metadata in scholarship that the

Compendium inspires, especially as applied in related essays, will hopefully contribute to the existing data pool of early cinema research that often focuses on the "temporal" and implicit/explicit editing dynamics of early cinema (e.g. the wide and powerful adoption of the *Cinematics* tool set) and the innovation of tools and methods more focused on the "graphics" components of the complex negotiation of visual culture fomented by early cinema, as Tom Gunning has discussed.⁶ We add to this the fundamental experiential distinction that will occur when watching annotation-augmented viewings. Scientists, scholars, and artists alike will be in a position to imagine and explore unique ways to further interrogate and mobilize these new viewing experiences and pursue new research questions and representational innovations.

This special issue of *The Journal of e-Media Studies* is published in relation to the Compendium and features 16 original essays inspired by the NEH grant "Understanding Visual Culture Through Silent Film Collections." The Compendium itself has been published as an Airtable resource, which also exists as a searchable incubator for complex scholarship about early cinema. The digitized films, plus a wealth of contextualized related metadata (that we intend to iteratively add to), open up new scholarly opportunities regarding a period of history that is widely acknowledged to be mostly lost. The Compendium will therefore be an engine for new and previously unconsidered research questions and methods, a first draft of varied directions of interdisciplinary DH pursuits that can directly engage the arts, historical and cultural studies, and computational analysis.

The NEH grant project was unduly impacted by a series of significant delays, including government shut-downs in the U.S. and especially the tragedy of the COVID era, which supremely interrupted many of our technological and scholarly endeavors. But we persevered and, in conjunction with heroic and inspiring efforts on the part of our archival partners, ultimately thrived in producing a considerably larger set of data and materials regarding early cinema history, dwarfing our initial estimates. (Full details can be found in the White Paper for the NEH grant at the NEH.)

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2019 and 2020: Major Developments for MEP

A few highlights of these endeavors merit attention:

In January 2019, Prof. Williams traveled to The Museum of Modern Art (MoMA) for a screening event of early films shot with the 68mm Biograph camera, and confirmed the spectacular quality of these rare films as a focus for the Compendium. This also led to a meeting at MoMA to examine the historic American Mutoscope & Biograph exhibitor catalogs that MoMA had committed to digitize for the grant project (Thanks to Rajendra Roy, Ron Magliozzi, Dave Kerr, Katie Trainor, and Ashley Swinnerton at MoMA for their support.) Based upon conversations with BFI archive director Bryony Dixon during this visit, we hoped that our many archival contributions for the project might include some of the amazing and rare materials from the British Film Institute. Although that goal has not yet been realized, the conversations led to a new aspiration for the project to somehow feature early cinema materials beyond only the U.S. films and materials in the grant purview, which we ultimately achieved by attending to several different global directions in the Compendium. The annotation work for the project was augmented in part via a semi-regular assignments for NYU graduate students in a film historiography class taught by Prof. Dan Streible (who had inspired the creation of MEP via his acclaimed Orphan Film Symposia). In March 2019, at the annual Society for Cinema and Media Studies conference, Prof. Williams conferred at length with Swiss DH visual culture pioneer Prof. Barbara Flueckiger about new machine reading softwares.

At Dartmouth, we received sponsorship to organize and convene a “Symposium on Digital Tools for Moving Image Analysis”, held in May 2019. Williams worked with Paul Spehr to contextualize Spehr’s chronological production log of American Mutoscope & Biograph films, and to better understand the international outreach by the Biograph company to utilize their unique 68mm moving image camera in major European capitals. Spehr was a featured keynote speaker at the Digital Tools event, which ultimately included many grant participant scholars plus Mike Mashon, director of moving images at The Library of Congress, who had literally articulated several central research values for MEP that led to our commitment to a “virtuous cycle” of engagement with archives. Several leading Digital Humanities colleagues from the EU also made remote presentations to the assembled scholars.



Figure 2. Group photo of Mark Williams and associates. From left to right: Lauren Tilton, Aboubakar Sanogo, Jenny Oyallon-Koloski, Mike Mashon, Mary Desjardins, Mark Williams, Taylor Arnold, Becca Bender, Juana Suarez, John Bell, and Paul Spehr.

The keynote presentation by Paul Spehr is featured here, with permission from The Eye Film Museum to include clips from their essential collection of 68mm films shot with a Biograph camera. Paul's presentation begins around the 43:00 minute mark of [this](#) recording.

In June 2019, Prof. Williams was invited by colleagues at Shanghai University to give lectures about MEP and continue the research he initiated the previous summer in Shanghai regarding archives of early Chinese cinema history. He presented lectures at SHU and at Shanghai Institute of Visual Arts (SIVA). Based on this proximity, he was invited to present lectures about MEP and early cinema at The Korean Film Archive in Seoul and The Chinese Film Archive in Beijing.

At the 2019 Ritrovato film festival in Bologna, one of the most prominent annual celebrations of silent film history, he was able to reconnect with Bryony Dixon, Paul Spehr, Barbara Flueckiger, and many international film scholars to further promote the early cinema project and made stronger connections with Pordenone Silent Film festival director Jay Weissberg. After years of conversation, acclaimed scholar Thomas Gunning agreed to contribute his landmark original notes about the Library of Congress Paper Print collection for the Early U.S. Cinema Compendium. (Thanks to MIAP intern Ben Rubin for doing the heavy lifting in making these papers spread-sheet friendly for the Compendium.)

In July 2019, the most significant international exposure to MEP and our NEH grant occurred over two weeks in the Netherlands: first at a meeting of Digital Humanities scholars in Amsterdam at the EYE Filmmuseum (one of our participating archives), but more prominently by the participation of both Prof. Williams and MEP architect Dr. John Bell in a pre-conference "DH for AV" workshop and then a very well-attended panel on Visual Culture studies in DH at the annual Digital Humanities conference in Utrecht. The conference was a turning point in moving international DH research more determinedly forward regarding visual culture and time-based media.

In August 2019, Prof. Williams initiated a conversation with Sarah Clothier, the director of the

catalog of The American Film Institute, regarding possible participation of MEP and the Early U.S. Cinema Compendium regarding the expansion of the AFI's silent film listings to better attend to women who participated in film production. This conversation ultimately led to the inclusion in the Compendium of significant early cinema materials from both the AFI and the ground-breaking Women Film Pioneers Project directed by Prof. Jane Gaines.

At the Los Angeles Natural History Museum, Prof. Williams spent several days researching and documenting the only other extant copy of the American Mutoscope and Biograph exhibitor catalog. Only two thirds of this copy is viewable due to physical damage, but it includes Volume 6 of the catalog which the MoMA collection lacks (gracious thanks to Betty Uyeda, John Cahoon, and Brent Riggs at The Seaver Center). Use of an iPhone in the reading room afforded an inferior research copy of many materials from the catalog that inspired our research while awaiting MoMA and The Seaver Center to more rigorously digitize their pristine copies for the compendium. The research copies produced during Prof. Williams' trip to The Seaver Center were the source material for his published essay "Keyframes to Cinema History: New Studies of The Exhibitor Catalogs of The American Mutoscope and Biograph Company".⁷

Also in August 2019, Prof. Williams and Dr. Bell participated in the New England DH conference in Maine and were featured presenters about MEP and the NEH grant.

In September, Prof. Williams and Dr. Bell presented about MEP at the inaugural symposium about Libraries and Machine Learning at The Library of Congress. In October, Prof. Williams was invited to participate in the annual CLARIN conference of European Research Infrastructures for Language Resources and Technology in Leipzig, Germany. His poster about MEP and our NEH grant was featured in the CLARIN Bazaar and promoted the project among European DH scholars and technologists. He was then able to attend much of the annual Giornate in Pordenone, the most prominent of the annual film festival celebrations of silent film history, where he convened with Paul Spehr and helped to solidify Spehr's book contract with John Libbey Publishing for a detailed historical study of Biograph films. He further promoted the Early U.S. Cinema Compendium among the most dedicated scholars and archivists of this era, and received a commitment from renowned Edison scholar Charles Musser to work with his acclaimed study of early Edison films for the Compendium.

Classes ended at Dartmouth in December, and Prof. Williams continued work on the NEH materials with select students and was invited to teach at SIVA in Shanghai. In correspondence, Paul Spehr revealed that he had been diagnosed with a serious ailment and worked with Prof. Williams to secure book manuscript materials in order to pursue the publication of Spehr's Biograph book after his death. Mr. Spehr passed away on December 20, 2019. The MEP early cinema project is dedicated to him.

"The rise of the COVID pandemic in March 2020 significantly altered every aspect of our research and workflows, especially the essential work that needed to be achieved by the Research Computing team at Dartmouth."

In January and February 2020, Prof. Williams accelerated discussions with Mike Mashon at the Library of Congress regarding expanded access to early cinema materials that were newly digitized. The LoC began to supply higher-resolution scans of their materials, which stimulated additional enthusiasm from peers in performance study analysis such as Prof. Peter Uhrig in Germany (FAU Erlangen-Nürnberg), a key member of the international Red Hen Lab. Prof. Uhrig made a virtual presentation at our May 2019 symposium about digital tools and has pioneered success with a variety of machine reading softwares. Prof. Williams also

initiated a conversation with esteemed independent scholar Buckey Grimm to include his database of early cinematographers within the Compendium. His essay with Marsha Gordon is published on this issue. A conversation with acclaimed early cinema scholar Yuri Tsivian led to his consideration of a new textual analysis of films listed in the Compendium in relation to his ground-breaking research via the *Cinematics* tool—an essay that is published in this issue, co-written by Prof. Daria Khitrova.

The rise of the COVID pandemic in March 2020 significantly altered every aspect of our research and workflows, especially the essential work that needed to be achieved by the Research Computing team at Dartmouth. Part of this impact was due to an immediate COVID-related hiring freeze at Dartmouth, which halted significant searches then in process. But soon it became clear that most RC work for the foreseeable future would be directed to campus efforts and larger collaborative efforts to confront and deal with the dire and expansive effects of the pandemic.

Prior to COVID, the RC team completed a complex upgrade to the ONOMY tool and also made progress on ensuring inter-operability with other key digital tool sets as part of our ongoing cooperation with the CLARIAH group of associated DH scholars across the EU. During the pandemic we maintained regular correspondence with our key collaborators at USC regarding the development of technological bridges from our tools and annotations into the Scalar digital publishing platform. We were also continually processing serial deliveries of newly digitized films from the LoC and placing these materials into our research platforms (still primarily focused on the Mediathread platform from Columbia University) for students and researchers to annotate.

In the spring we were delighted to learn that we would be able to work with a gifted summer intern from the Moving Image Archiving and Preservation program at NYU, Shiyang Jiang. Shiyang helped enormously to advance basic organizational aspects of MEP by helping to achieve collection legibility via Airtable sheets for a number of MEP pilot projects. Her essay about realizing these goals is part of this special issue. She now works at The China Film Archive in Beijing.

A Dartmouth symposium about AR and VR tools in August 2020 (“Beyond Zoom: XR for Teaching and Research in the COVID-19 Era”) led to very promising but nascent conversations about possible 3D applications for historical 2D cinema with Prof. Matt Lewis at Ohio State (whose essay about this topic is part of this special issue). This work was greatly stimulated by a new association with Tracey Goessel and her remarkably diligent work on early Griffith films for The Film Preservation Society. Her essay about this work is also part of this special issue. The relationship between FPS and MEP has continued and is part of our recent Mellon-funded project, “Deep Screens.”⁸

Another extraordinary research opportunity arose from the participation of acclaimed Film Poster and Lobby Card collector Dwight Cleveland. We have initiated a long-term digitization project of historical Lobby Cards from the silent film era in conjunction with The Library of Congress that will eventually become an additional extraordinary feature of the Early U.S. Cinema Compendium.⁹

The essays in this special issue emanate from the expansive archival participations and scholarly interest in the Early U.S. Cinema Compendium. It represents new scholarship from esteemed scholars of early cinema but also a younger generation of excellent scholars. Several essays are directly related to materials collected for MEP research and for the Compendium. Others are representative of the augmented outreach during the grant period to recognize a sample of non-U.S. and non-Western research in film history.

Each essay is presented in an online format that features a linked outline of the essay, designated pull-quotes from the essay that are highlighted for emphasis, a variety of graphic materials and films or film clips to illustrate the arguments featured in the essay, linked footnotes throughout the essay, a final list of the external links cited throughout the essay, and an option to

download a PDF of the essay.

A brief introduction to the essays is provided here, followed by a list of the component collections in the [Early U.S. Cinema Compendium](#).

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New Windows on the World by Ian Christie (Birkbeck College, University of London)

Acclaimed early film historian Ian Christie opens the issue with a generous yet rigorous survey of early cinema that includes many important U.S. films but readily expands its purview to Europe and Great Britain. Taking care to provide correctives for certain popularly mis-understood myths of early cinema, Christie focuses on introducing key historical contexts and sub-genres that were critically important to the successful rise of cinema as a form of entertainment and eventually as a recognized cultural force. A marvelous essay to introduce early cinema to new film and media students and also to reference quite a bevy of significant early films for everyone.

Early Cinema and the Historiographic Impulse: Scholarly Positionality Then and Now by Charles Musser (Yale University)

The most famous and esteemed scholar of Edison motion pictures (his essential book about the earliest Edison films is included in the Compendium), Charles Musser provides an expansive history of the serpentine legacies of the Brighton conference mentioned by Christie and broadly recognized as a key turning point in the genesis of contemporary historiographic film scholarship. This is a deeply reflective essay recognizing the publication of the Compendium as a new entry in the complex weave of innovative scholarly “positionalities” that early cinema scholarship has inspired and will continue to inspire in new international and intersectional directions.

Seeing Through the Haverstraw Tunnel by Dan Streible (New York University)

The visionary force behind the globally influential Orphan Film Symposia--and therefore a key influence on the creation of the Media Ecology Project--Dan Streible demonstrates his skills as an early cinema historiographic bloodhound via two essays in this special issue. This essay is inspired by an evaluative claim from a 1920 film review that infers a complex relation to the earliest years of cinema as attraction and spectacle. Streible stakes out his investigative path through the vast and fecund array of recently available source materials about early cinema, significant institutions of cultural memory, and notable presentations at different Orphans symposia to provide a detailed roadmap of new discovery that serves as a methodological model for future students and enthusiasts in this always-evolving field of study.

Learning to See on the Screen: Exploring Female Performance in Early Film through the Media Ecology Project by Victoria Duckett (Deakin University)

Victoria Duckett initiates a series of essays focused on new approaches to the history of performance styles in early cinema, each of which has utilized MEP tools as a means toward new insights and methodologies of close textual analysis. For Duckett, this suggests a deeply reflexive consideration of film studies historiography in order to recognize, for example, the legacies of attention to Ekphrasis within certain interventions of early cinema history. She ultimately emphasizes the pivotal role that theatrical gesture will play as a test case for new critical languages regarding the history of film performance, and associates this with pedagogical practices that implicitly engage with emerging theoretical emphases on

speculative methodologies that foster new ways of seeing.

Annotating FloLo: How the Media Ecology Project Fostered Early Cinema Performance Analysis and Collaborative Research by Jennifer Oyallon-Koloski (University of Illinois)

One of the earliest progenitors in the use of MEP tools for performance studies, Jennifer Oyallon-Koloski has been developing a systematic approach to applying the ideas of Laban Movement Analysis to early film performances since 2015. Her research was featured as part of the plenary panel about MEP at the 2017 *Women and the Silent Screen* conference in Shanghai.¹⁰ Here she assays the extremely productive research we have pursued regarding the performances of Florence Lawrence, originally known only as “The Biograph Girl” before becoming the first major film U.S. star in 1908, ultimately creating a career across multiple genres of early cinema with an awareness of a variety of detailed performing gestures and styles.

Action and Acting at Biograph Studio, 1908–1912 by Daria Khitrova (Harvard University) and Yuri Tsivian (University of Chicago)

Foundational *Cinematics* scholars Tsivian and Khitrova deploy their considerable skills toward a first pass regarding the expressive use of mise-en-scene as a key context by which to parse sometimes obscure or mysterious choices in performance styles found in early short films directed by D.W. Griffith. By articulating and illustrating distinctions between “action” and “acting”, and then between “cross-cutting” and “cross-acting”, the essay provides new insights into the complexities of early cinematic language that may often seem mis-begotten when read as primitive or even illegible.

Silent Era Motion Picture Camera Operators by Marsha Gordon (North Carolina State University) and Buckey Grimm (Independent Scholar)

Acclaimed independent scholar Buckey Grimm is a notable contributor to the Compendium as the key researcher for the “Early Cinematographers” section of the Compendium. With the assistance of exemplary film scholar Marsha Gordon, they have produced a genuine historiographic intervention regarding the essential yet still under-recognized role of early cinema camera operators, who in one way or another literally modulated and extemporized various aspects of the new and modern visual language of cinema. There is still much more research to pursue in this area of study, but this is an excellent beginning that details the careers of several notable personages.

Two Ways of Memory: The Signal Corps and CBS World War I Motion Picture Collections at the National Archives by Bret Vukoder (Temple University)

Bret Vukoder is a new and important voice in film and media history and theory, genuinely invested in diverse issues at the margins of established historiography and seeking to develop new research questions that often involve vast collections of historical moving images that have thus far gathered less attention than they deserve. (See for example the special issue he co-edited with Hadi Gharabaghi on *Studies of the U.S. Information Agency* [provide new url for this issue]). In this essay he parses two extraordinary and deeply related collections of materials on deposit at The National Archives in College Park, Maryland: the collected records of The Signal Corps, the first concerted long-term “investment” in motion pictures by the U.S. Government, and the CBS Collection of WWI materials that were gathered

from archives around the world for their multi-part series of network specials regarding the 50th anniversary of WWI in 1964.¹¹ Both of these vast collections are part of the Compendium. Vukoder assiduously surveys both collections to derive some similarities but primarily the vast differences regarding both prominent subject matter and examples of specific address that are foregrounded in each collection. He also provides many welcome methodological insights plus ideas and conceptual toe-holds for future researchers to pursue.

The Biograph Project by Tracey Goessel (Founder of Film Preservation Society)

Tracey Goessel is the genius behind the remarkable Film Preservation Society, a private company in Los Angeles that is deep into the process of restoring a great number of early landmark U.S. films, including “The Biograph Project”, an aspirational goal of “restoring” all of the films that Griffith directed at that studio from 1908 to 1914. In this essay she describes the meticulous process whereby available film prints and elements from multiple archives may be used to isolate best sequences and frames that will be rigorously enhanced toward a best-resolution digital file of the film—files that honestly often look as good or better than one imagines did the original nitrate 35mm print. This passion project will continue to be a boon not only for film historians and scholars but also for the Media Ecology Project and other interested Digital Humanists who will utilize these “pristine” historical objects/recreations for use with computer vision tools to re-understand the legacies of early cinema visual culture.

Silent Films and Augmented Reality by Matt Lewis (Ohio State University)

One advantage to the extraordinary resolution of the Film Preservation Society films is that it makes them potentially available for new scholarship and research regarding XR environments (Virtual Reality, Augmented Reality, and whatever digitally-synthetic realities that may follow). Matt Lewis is pioneering developments in Augmented Reality, and in this essay discusses in great pedagogic detail how he evolved an innovative 3D environment based on a specific historical block of Fort Lee, New Jersey, constructed with visual culture materials drawn from several Griffith Biograph films “restored” by Film Preservation Society. The generative potentials of historic archival visual culture materials are still to be imagined and debated, and Matt Lewis presents a cogently argued series of enlightened pathways to pursue.

Daydreams: Cinema of the Russian Empire and Beyond, a Database by Anna Kovalova (University of Pittsburgh)

Anna Kovalova has pioneered an extraordinary new digital resource regarding the history of very early Russian cinema, and presents an overview of this work in conjunction with a partial listing of the films from this database that are featured within the Compendium. This is truly innovative scholarship rooted in the Digital Humanities that directly addresses otherwise inaccessible and largely forgotten early cinema. It introduces a wide variety of extant material resources that can be brought into vivid contextual relationships via a renewed interest in and re-enchantment of significant film history, and of course also helps to expand the Compendium beyond its U.S. cinema roots.

Between Naïveté and Desire: Analyzing Collective Intimacy in Sun Yu’s Films with a Time-Based Annotation Tool by Yuqian Yan (Zhejiang University)

Yuqian Yan and Panpan Yang each have featured essays and have also collaborated to create a first draft of a listing of all known early films produced in mainland China. Yuqian Yan’s essay focuses on several films by the notable director Sun Yu, whose films were especially notable in the premiere

participation of The China Film Archive at the Pordenone Giornate in 1995. Yan utilizes the MEP tools for time-based annotations to create new insights via close-textual analysis regarding what she terms “collective intimacy” in a key period of national crisis in China in the wake of devastating attacks from Imperial Japan in the early 1930s. Her attention to cinematic language and the often delicate representation of key female stars in these films is both graceful and insightful, work that begs to be expanded upon.

Photographs in Films Starring Ruan Lingyu: Considering Geometric Regions of the Motion Picture Frame
by Panpan Yang (University of London)

As mentioned above, Panpan Yang collaborated with Yuqian Yan to create for the Compendium the draft of a listing of all known early films produced in mainland China. In her essay, Panpan Yang deftly considers the trope of photographs found in films that star the most famous actress of early Chinese cinema, Ruan Lingyu. Framing her analysis within a knowing phenomenology of both Ruan’s tragic history but also sophisticated theories of representation (e.g., Roland Barthes on the punctum produced by a photograph), Yang weaves a sophisticated analysis across several films by utilizing close textual analysis in relation to inter-medial reflections wrought via the augmented attention to detail and mindful analysis that can be rendered via time-based annotation tools. Yang’s call for a re-awakening of a historical imaginary is fully in sync with the designs and goals of MEP and the Early U.S. Cinema Compendium project.

Metadata and the Media Ecology Project by Shiyang Jiang (China Film Archive)

We had the pleasure and honor to work with Shiyang Jiang as an incredibly resourceful intern from the renowned NYU program in Media Archiving and Preservation. Her essay details in a succinct fashion the development of the complex metadata schemes for MEP and the decision to construct the Compendium as an Airtable resource which combines the strengths of a spreadsheet with the capacities of a relational database. We are delighted that Shiyang is now employed by The China Film Archive back in her home country.

Finding One American Beauty: Deyo and Deyo (1897) by Dan Streible (New York University)

Maestro Dan Streible had the wherewithal to compose two impressive essays for this special issue, and has produced here a symphonic collation of disparate research questions that found a genuine consonance with one another while also raising important historiographic challenges (including questions about the accuracy of materials in our brand new Compendium). Once again, his diligent methods of inquiry across a range of new and old intermedial resources regarding early cinema history produces significant new knowledge regarding the rare and fascinating objects of his analysis: a fulsome treatise on the career of Blanche Deyo; a detailed post-mortem on the multiple gauges actually put into practice under the banner of “68mm”; the proliferation of graphic formats such as “thumb books” that complicate our notion of film “circulation” and distribution, etc. But Streible also conjures a broader historiographic terrain wrought by his magisterial sleuthing. (One perfect sentence sums this up: “While not a false lead, this personal connection was misleading.”) Offering a wealth of surprises and turns along the way, this essay is indeed one American beauty.

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American Film Institute List of U.S. film titles and cast lists (up to 1920) [Sarah Clothier]

Edison Motion Pictures 1890-1900 [Charles Musser]

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American Mutoscope & Biograph Exhibitor Catalogs, Volumes 1-5 [Museum of Modern Art]
American Mutoscope & Biograph Exhibitor Catalogs, Volume 6 [The Seaver Center, LA Natural History Museum] – includes time-lapse 3-frame videos produced by William Tarnowski
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Conclusion

Thank you to all of the marvelous members of the community of scholars, archivists, enthusiasts, and students who have contributed their support and good wishes for this project along the way.

As we placed the final touches on this issue of the journal, we received the excellent news that exemptions to the Digital Millennium Copyright Act's prohibition on circumvention of technological protection measures (e.g., DRM) have been adopted.¹² This will very likely mean that networked and shared research in the Digital Humanities may soon be expanded and augmented under specific conditions and rigorous stipulations. While the full implications of this ruling will take time to understand, it may promise that researchers from different institutions will be able to perform data mining and automated visual analysis, etc. on a corpus that is securely maintained at an institution other than one's own. The actual implementation of this ruling will of course be pursued with great enthusiasm in the coming months and years, and The Media Ecology Project will be an active participant.

The Rulemaking Process for Temporary Exemptions

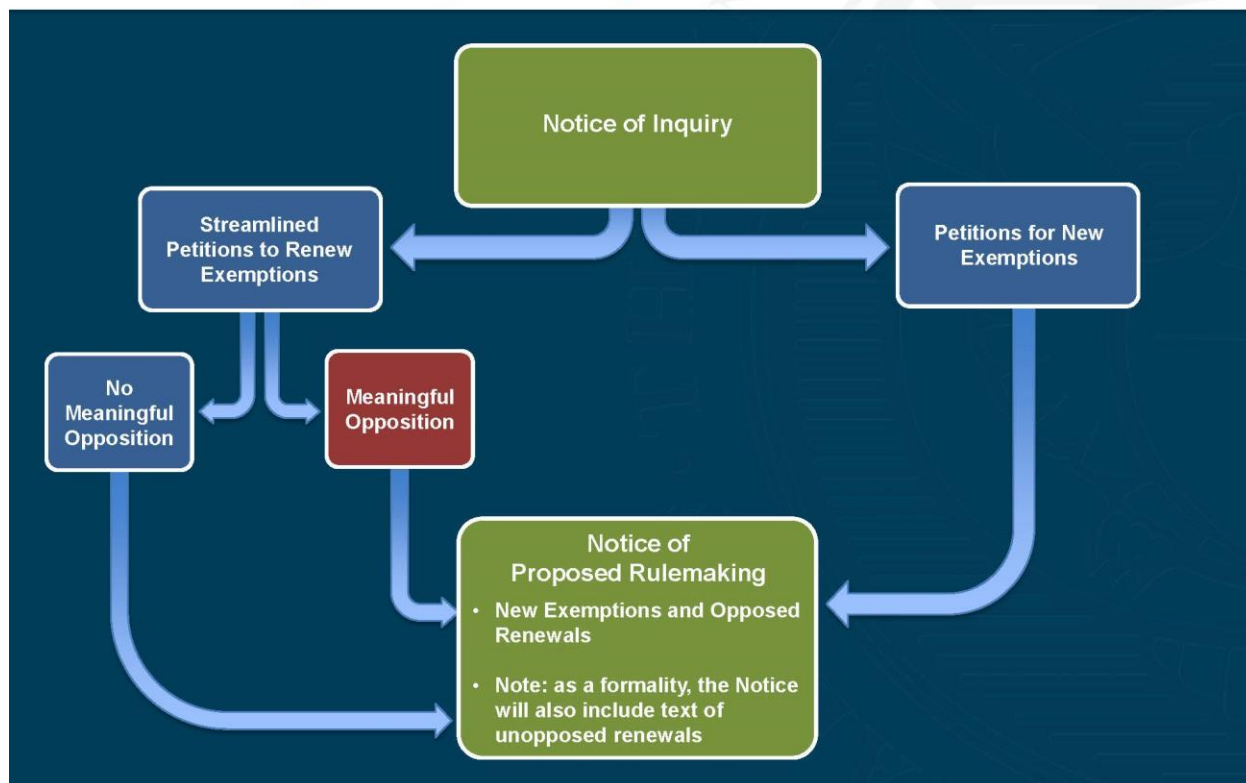


Figure 3. U.S. Copyright Office 1201 Rulemaking Process, taken from <https://www.copyright.gov/1201/>.

Thank you also to masterful copy-editor Denise Marie Logsdon, and to our colleagues in the Dartmouth Library: Daniel Chamberlain, Shawn Martin, and Abigail Murdy. One final note or recognition: this special issue and the Compendium itself could not have come to fruition without the extensive and diligent skills of Managing Editor Lauren Spencer. We all owe her an extraordinary debt of gratitude. Thank you, Lauren!!

A list of external links featured in this essay can be found here.¹³

About the Author

Mark Williams is Associate Professor of Film and Media Studies at Dartmouth College where he directed a foundational [Digital Humanities Institute](#), founded an e-journal, [The Journal of e-Media Studies](#), co-edited the book series [Interfaces: Studies in Visual Culture](#), and directs an NEH-supported DH research initiative, [The Media Ecology Project](#) (MEP).

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¹ See Mark Williams and John Bell, "The Media Ecology Project: Collaborative DH Synergies to Produce New Research in Visual Culture History". *Digital Humanities Quarterly* (15:1) Special Issue on AudioVisual Data in DH, March, 2021. <http://www.digitalhumanities.org/dhq/vol/15/1/000524/000524.html>.

² See Mark Williams, "The Media Ecology Project: Library of Congress Paper Print Pilot" *The Moving Image: The Journal of The Association of Moving Image Archivists*, 16:1 (Spring, 2016), 148-151.

³ See "Annotating FloLo: Utilizing Laban Movement Analysis in The Media Ecology Project" by Jenny Oyallon-Koloski and Mark Williams in *Histories, Her-stories, and Methods: Proceedings of the 2017 International Film Conference*, Wan Chuanfa, ed. (China Film Press, 2018).

⁴ "Key Frames to Cinema History: New Studies of The Exhibitor Catalogs of The American Mutoscope and Biograph Company" in *Domitor 2020 Proceedings: Crafts, Trades, and Techniques of Early Cinema*. Valentine Robert, Louis Pelletier, Sirois Trahan, Priska Morissey, Ian Christie, Tami Williams eds. (Indiana University Press, 2024) [DOMITOR series].

⁵ Stiegler, B. *The Re-Enchantment of the World: The Value of Spirit Against Industrial Populism*. Bloomsbury, London (2014).

⁶ Gunning, Tom. "Cine-Graphism: A New Approach to the Evolution of Film Language through Technology." *Technology and Film Scholarship: Experience, Study, Theory*, edited by Santiago Hidalgo, foreword by André Gaudreault, Amsterdam University Press, 2018, pp. 195–212. JSTOR, <https://doi.org/10.2307/j.ctt1zqrmrh.13>. Accessed 9 Oct. 2024.

⁷ "[Key Frames to Cinema History: New Studies of The Exhibitor Catalogs of The American Mutoscope and Biograph Company](#)" in *Domitor 2020 Proceedings: Crafts, Trades, and Techniques of Early Cinema* [DOMITOR series]. Valentine Robert, Louis Pelletier, Sirois Trahan, Priska Morissey, Ian Christie, Tami Williams eds. (Ann Arbor: Michigan Publishing 2024) [pages 302-322].

⁸ See <https://mediaecology.dartmouth.edu/wp/archives/1026>.

⁹ See <https://mediaecology.dartmouth.edu/wp/archives/1034>.

¹⁰ See "Annotating FloLo: Utilizing Laban Movement Analysis in The Media Ecology Project" by Jenny Oyallon-Koloski and Mark Williams in *Histories, Her-stories, and Methods: Proceedings of the 2017 International Film Conference*, Wan Chuanfa, ed. (China Film Press, 2018).

¹¹ For an early approximation of this study, see "The Great War at Scale: New Opportunities for Provenance in World War I Collections at the National Archives (NARA)" by Mark Williams and Bret Vukoder in *Provenance and Early Cinema: Preservation, Circulation, and Repurposing*. Paolo Cherchi Usai, Joanne Bernardi, Tami Williams, and Joshua Yumibe eds. (Indiana University Press, 2021). [DOMITOR series].

¹² "Text Data Mining Research DMCA Exemption Renewed and Expanded" (October 25, 2024), <https://www.authorsalliance.org/2024/10/25/text-data-mining-research-dmca-exemption-renewed-and-expanded/>.

¹³ [Links Featured in "Introduction to Special Issue on Early Cinema History \(Understanding Visual Culture Through Silent Film Collections\)"](#)

NEH Grant, "Understanding Visual Culture Through Silent Film Collections":

<https://apps.neh.gov/publicquery/AwardDetail.aspx?gn=HAA-263803-19>

Semantic Annotation Tool (SAT): <https://mediaecology.dartmouth.edu/wp/projects/technology/the-semantic-annotation-tool>

Onomy.org: <https://onomy.org/>

Paul Spehr's Lecture in "Media Ecology Project: Digital Tools for Moving Image Analysis Symposium, Keynote

Presentation" (May 8, 2019): <https://www.youtube.com/watch?v=kPi3ofCMYVI&t=2594s>

Early Cinema Compendium: <https://airtable.com/appVwqBAyZOW1pQju/shriYd7VkWOyymdtm>

