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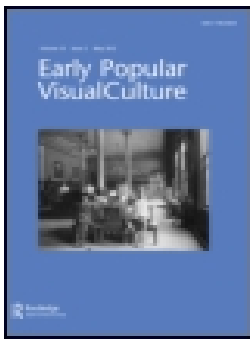
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ARTICLE FEATURE



Pre-cinema as paradigm and collection at the Getty Research Institute

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Since the late 1990s I have developed an ongoing familiarity with the early media optical devices held at the Getty Research Institute (hereafter GRI) in Los Angeles. Most of these items are part of a significant collection acquired in 1993 by the Getty from Werner Nekes (1944–2017), the German experimental filmmaker and collector whose approach to ‘pre-cinema’ became a primary source for the 2001 GRI exhibition and catalogue, *Devices of Wonder: From the World in the Box to Images on a Screen* (Stafford and Terpak 2001).¹ Since that time, I have selected items from this collection to be exhibited for students in the Special Collections reading room at the GRI. While most of the students that I have taken to view this curated collection of objects have participated in a series of undergraduate seminars, several graduate students, faculty members, and visiting scholars at the Getty have also joined me on a variety of occasions. An exploration of early media objects is the province of its own subfield of collectors, performers, and showmen, like the recently deceased magician Ricky Jay, who developed his own collection of magical ephemera. For me, developing a familiarity with these objects has evolved through an understanding of their context facilitated by related holdings and my work with GRI staff.²

The descriptions in the GRI finding aid and exhibition catalogue served as an early point of departure for my understanding of these objects, which sometimes seemed anomalous, like the Claude (Lorraine) Glass, named after the seventeenth-century landscape painter. The device is a black-coated convex glass mirror that translates colours into black and white graded shades while also effecting an optical reduction in scale for sketching a landscape.³ Another incongruous item is known as the Religious Festival peepshow box (Figure 1). It is a large accordion-like early nineteenth-century peepshow viewing box with 62 rectangular semi-transparent paper folds attached to two thick cardboard ends, one of which has a large circular glass lens for viewing 131 hand-coloured lithographic cut-outs inside. The peepshow box depicts the Corpus Christi (Fête Dieu) Roman Catholic procession held in Paris on Sunday 15 July 1804, with Napoleon Bonaparte as Emperor, who decreed that the holiday be delayed by one day to avoid conflict with Bastille Day and out of respect for the Concordat treaty of 1801.⁴ The assemblage of items in the Nekes Collection is somewhat idiosyncratic, such that the peepshow box and Claude Glass do not necessarily imply a vanishing point of cinema as a cohesive technological composite in which projection, optics, registration and perception all serve an indexical purpose.⁵ The incompatibility of some of these items with

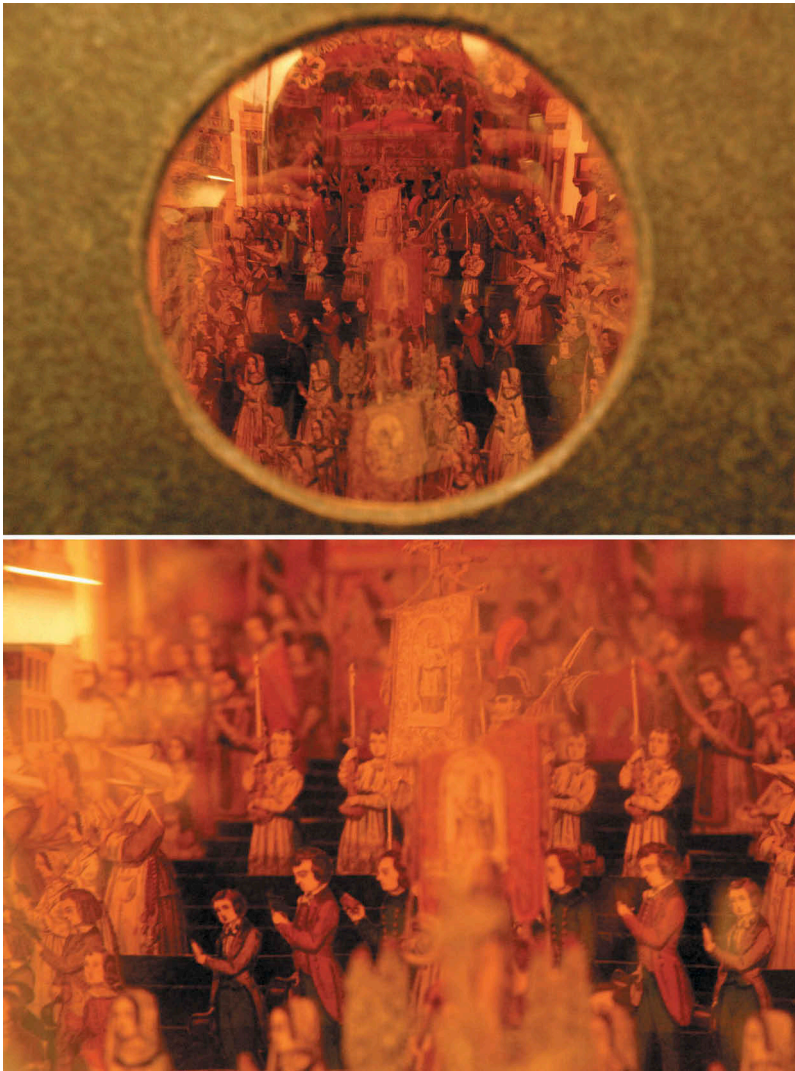


Figure 1. Multiple views of Religious Festival Peepshow Box. Corpus Christi (Fête Dieu) Procession featuring Napoleon Bonaparte (15 July 1804), France, ca. 1830–1875. Nekes collection of optical devices, prints and games. Getty Research Institute, Los Angeles (93.R.118). Reproduced with permission from the Getty Research Institute.

a conception of pre-cinema led me to reconsider a constellation of scholarship around these objects and consider their relationship to ongoing redefinitions of the field of film and media studies. Notably, the GRI collections present a distinct context for the study of early media that deemphasizes the significance of narrative storytelling in favour of multiple formats that are loosely associated with film- and media-centred machines of projection and registration.⁶

At first, the question of how to organize a seminar that featured a survey of divergent objects, if these objects are not understood as part of a collection, was of concern. As I later learned, Nekes sold a portion of his collection to the Getty after making several

films demonstrating their function, starting with the illustrative feature-length documentary *Film before Film* (dir. Werner Nekes, 1986), followed in 1995 by five additional documentaries that, along with *Film Before Film*, form a series known as *Media Magica* (now available on DVD). The early media objects in Nekes's collection were often replaced and sold when Nekes acquired better examples. The appearance of objects in his documentary films and at exhibitions enhanced, in turn, their visibility as types of historical objects to be collected.⁷ In addition, Nekes's interests later expanded to include non-Western shadow theatre and led him to make nine shadow play and puppet theatre documentary films that drew on theatrical traditions in Bali, China, Egypt, Greece, India, Thailand, and Turkey with musical accompaniment and song.⁸

The eclectic orientation of Nekes's collecting interests contributes to reshaping a context for early media. The GRI finding aid describes it as a mere collection of 'optical devices, prints, and games'.⁹ In addition, 'pre-cinema' serves as a descriptively useful though increasingly antiquated keyword that describes a collecting area in Special Collections at the GRI. The term 'pre-cinema' refers to a claim about the institutionalization of cinema that is derived from technological invention, theatrical staging, and the viewing experience. As a wide range of recent work has demonstrated, the so-called 'invention of cinema' incorporated a variety of technological innovations and priorities such that precise periodizations have become less convincing in spite of remarkable scholarly attention to provenance and to chronologically cataloguing narrative techniques.¹⁰

As a marker for the invention of cinema, 1895 was robbed of its set of well-defined practices and identity prior to arriving at its centenary celebration with the advent of overlapping media formats. In fact, we might even say that the centenary contributed to further scepticism by dislodging claims about technological progress and teleology associated with the advent of cinema and shifting the emphasis to different kinds of historical models of change and perception. Siegfried Zielinski's monograph *Audiovisionen* (1989) was a significant intervention in that it focused on a wider context for media invention and integration that underscores a quality of in-betweenness, what Zielinski calls 'entr'actes of history', the subtitle of the 1999 English language translation (Zielinski 1999). However, I remained interested in conceptualizing what came before cinema in a less capacious manner than Zielinski, or through the influential conception of what Friedrich Kittler (1990) calls 'discourse networks', a hermeneutic approach to institutional power and the power of selection within a network of media technologies and institutions.¹¹

The translation into English of Laurent Mannoni's *The Great Art of Light and Shadow: Archaeology of the Cinema* (Mannoni 2000) also provided anglophone readers with a well-elaborated description of devices and contexts as part of a longer media history, using the invention of cinema as a heuristic historical marker for excavating a wide-ranging set of techniques with their own histories that support a perspective on pre-cinema as a series of gem-like episodes. Mannoni's encyclopaedic knowledge led to a reconsideration of significant historical experiments, such as those developed by Count Patrice d'Arcy (1725–79). D'Arcy measured the movement of rotating hot coals in a perceived circle of fire as a demonstration of what we now refer to as persistence of vision or the phi phenomenon (Mannoni 2000, 204). Mannoni's perspective on the history of projection, which draws upon a vast collection of moving image techniques,

technologies, and media, has become an institution unto itself, in part because of his prominent role as longstanding director of scientific and technical machines and techniques at La Cinémathèque Française.¹² His work was part of a broader and expanding interest in researching the history of screen practice as a context for the theatrical exhibition of films, an interest most notably seen elsewhere in Charles Musser's work (Musser 1990, 15–54); it also stimulated historical correctives to the history of film that had been written in the service of film's own mythology, such as Martin Loiperdinger's important essay, 'Lumière's *Arrival of the Train*: Cinema's Founding Myth' (Loiperdinger 2004), or Peter Tscherkassky's mischievous experimental film, *L'Arrivée* (1997–98) (Cargnelli 2001, 25). Early on, these approaches to 'pre-cinema' served as a useful paradigm for my own teaching, but later I reconsidered some of the same themes in the context of courses like 'Early Visual Culture' and 'Media Archaeology'. Since then, I have folded many of the themes into a variety of other courses, including 'Cabinet of Wonders', 'Fairy Tale Cinema' and, most recently, 'Inventing Attention'.

Just as a critique of 'pre-cinema' may be used to dislodge a teleological approach to the advent of cinema as a culmination of modern techniques of spectatorship, I see the context of the 'user' as an equally productive point of reference. The theme of the 'user' has been increasingly evoked as a technique for encouraging students to engage with historical media technologies in the classroom. Andreas Fickers and Annie van den Oever's discussion of the 'user' in their essay 'Experimental Media Archaeology' (Fickers and Annie 2019) is a significant renewal of these debates and themes. It directly refers to the role of the 'user' in processes of doing and enacting play that might also be considered scientific usefulness in a classroom setting. By contrast, my own approach is more focused on acts of observation. That is, I present early media machines and their uses in order to discover overlapping contexts for illusionism, performance, and display by reference to collections of media formats, techniques, and platforms. I am particularly interested in the role and function of media artefacts in a collection that imply relations within and between objects. The enduring value of these objects is paradoxical because it is directly related to their declining utility and lack of visibility. For example, many of the objects represented in the Nekes collection now imply specialized knowledge that makes them quite arcane despite their ongoing availability in auction and as reproductions or novelties. Nonetheless, early media objects remain foundational because they contribute to defining what is currently visible and useful about media history. 'Catoptrics', for example, long associated with the reflective nature of mirrors, has been incrementally folded into the convenience of personalized electronic devices like the smart phones or specialized instruments that have functions for simultaneous recording, measurement, and rendering, devices that are mirrorlike in their utility. The 'users' of such devices may best be understood as historically contingent sets of subject positions for which the technological object becomes a trace of positionalities for observation and participation.

To return to the Nekes collection at the GRI, my own approach to acts of assemblage and early media history more generally has shifted such that the collection remains an enduring point of reference. Collections are often haphazard and biographical, given the curatorial agency and identity of the collector or the institution. The collection itself might contain fakes, forgeries, duplicates, and simply irrelevant items. Nonetheless, it still establishes value, syntax, and a history of belonging in relation to other collections of the same type, catalogue descriptions, nomenclature, and informed analysis. Moreover, the

collection context raises some challenges in relation to Fickers and van den Oever's eight types of 'users' who are imagined, configured, expert, amateur, remembered, reenacted, artificial, and simulated. The 'user' of the collection most often exists outside the constitution of the collection itself and is relegated to positions that ultimately enable forms of appropriation that are distinct from the formative agency of the collector. In addition, collections are most often based on hierarchies of difference defined by how the collection is assembled in the first place. In many cases, viewing and handling historical objects in a collection at most research centres implies applying for funding and presenting one's credentials. In other words, these types of objects are not only functional or relational; they also imply a particular class of observers who demonstrate an interest in the act of uncovering a cabinet of experimental optical or media techniques.¹³ The observer who has access to the Nekes collection, for instance, is thus necessarily linked to longstanding associations between historical collections and royalty, the aristocracy, secret societies, notable figures, and outsiders nominated as such. In addition, the collections themselves, at least in the imagination of the West, were often associated with death, reliquaries, scientific collections, and sites of pilgrimage, and their objects have long been assembled in cabinets of wonder (*wunderkammer*) and museum exhibitions, among other types of private and public collections.

Early media histories led me to consider the role of these objects in different kinds of collections and the *dramatis personae* consisting of entrepreneurs, inventors, and scientists. In fact, the GRI also maintains a series of items featuring the image of these figures with their own form of self-invented iconography. These include a remarkable photostereoscopic assemblage of thick glass plates portraying Auguste Lumière (Figure 2), Louis's brother, most often understood as the secondary figure in the brotherly pair, and perhaps less well remembered than Antoine, the patriarch, owner of the Lumière photographic plate factory who patented and produced the extremely successful *étiquette bleue*



Figure 2. Multiple views of Photostereosynthesis holographic glass plate assembly depicting Auguste Lumière (1862–1954), c. 1920. Panorama collection assembled by Joachim Bonnemaïson. Getty Research Institute, Los Angeles (98.R.19). © Institut Lumière/Famille Lumière.

extra-rapid, dry-plate photographic process (see Gunning 2001). As this array of photographic transparencies consists of several positive albumen glass plates, the effect of backlighting it is to create a compelling depth of field in which Auguste's head appears. This style of assemblage, described as 'photostereosynthesis', creates the holographic illusion of a strangely disembodied three-dimensional object, a phantasmatic head detached from the body and preserved with large-format photographic accuracy in black and white without the inconvenience of being in a corpse-like scented state.¹⁴ Here, the illusionism of the three-dimensional refers to the legacy of the peepshow box, linked to alternating front-lit and backlit protean views and to the use of photographic, lithophane porcelain, and pin-pricked prints that transform what is seen under variable lighting conditions. In fact, the portable peepshow box, sometimes referred to as a *guckkasten*, was part of the wares most often associated with the traveling showman, well illustrated in Emile Cohl's early animated films.¹⁵

Krzysztof Pomian's writing about the collection has partially guided my thinking about a phenomenological approach to the visible and the invisible along these lines (Pomian 1990, 7-44). As Pomian points out, utility and social values shift over time, establishing a shifting hierarchy of what is validated and conventionally understood. Though primarily focused on a segment of the early modern era – 1500–1700 in Paris and Venice – Pomian's work, which emphasises the diminished utility of objects in the collection, is relevant to the discussion at hand, and to a broader approach to grappling with a collection in its assembly of artefacts. In particular, he points to the role of 'semiophores' as objects without utility that become transformed into symbols. Semiophores, or objects of absolutely no use, are endowed with meaning and represent a nearly invisible spectrum with limited accessibility. They are typically put on display instead of being handled, removed as it were from normal circulation, establishing a context for a state of being unused and assigned to a position of rarity. By contrast with a conception of the so-called 'user', Pomian has described those charged with access to semiophores as agents but also as vehicles for these symbols. These 'semiophore-men' may be understood as royalty, scientists, and inventors on the one hand, or priests, archivists, and curators on the other. They protect the semiophore from being used while being authorized to display it; they also contribute to shaping the role of the semiophore in a construction of hierarchy and value.

The context for developing an argument about collections as comprising both visible and invisible elements are partially derived from how our relationship to the historical past is structured. Pomian suggests that there is a cleavage or splitting at the very heart of the visible world of appearances. On the one hand, there are 'useful' things that can be consumed, provide subsistence, render raw materials for consumption, or act as protection from the effects of the weather. Eventually, these objects wear out. Pomian sets up an opposition between usefulness and meaning, neither of which can exist without the observer, such that no object can simultaneously be a useful 'thing' and a protected symbolic 'semiophore'. As a result, the semiophore fulfills its ultimate purpose by becoming part of a collection, and in the process accrues meaning while losing its quality of use-ability (Pomian 1990, 29–30). Pomian also explains that semiophores are linked to individuals who are nominated to the role of defining a collection. These individuals may be institutionalized, and positioned within a series, like a collection or iconography of dead presidents, scientists, professors, and notable personalities. Auguste Lumière may

be said to constitute such a figure in the Nekes collection. Auguste, as part of the brotherly pair, is credited with a strong claim regarding the invention of cinema, in recognition of which his photostereoscopically memorialized head is metaphorically embalmed in the rare and obsolete 3-D optical technique described above.

This might lead us to assert that historical collections are themselves value-making claims founded on hierarchy and value. The overriding question might then be: who does the collection serve and how does its institutional footing come to define it? At the GRI, the Nekes Collection functions in relation to other items and collections, distinct from Nekes's own context for collecting and filmmaking as forms of documentary and experimental practice. Though primarily an art library and research centre, the GRI is part of a much larger Getty institutional complex made up of two other museums, a conservation institute, and a foundation. As library and research centre, the GRI invites scholars to pursue their research and participate in ongoing seminars and themed events. It also contributes to the symbolic economy of academic capital, museum ownership, conservation, and display in relation to market forces.¹⁶ The small archive of optical media devices held in Special Collections at the GRI demonstrates that these objects are worthy of being collected alongside items in more traditional formats such as books, manuscripts and photographs, among other two-dimensional formats that imply a particular approach to research, reading, and scholarship. These media objects most often involve worlds of play and a quality of playfulness that leads us to ask questions about their addressees, relevance, location, market value, and the techniques that they embody.

In considering how to reconcile these historical and disciplinary puzzles regarding the user in the context of teaching early media, I have sought to position the act of collecting as one of the discoveries. The display of optical devices for students invites them into a personalized experience of seeing in a new way. Take, for example, the pedagogical use of multiple types of stereoscopic viewers to decode the archive of stereo-cards and slides at the GRI. In this particular context, I am most interested in asking students to consider associative qualities of reception. While stereoscopy is a visual form of display that demonstrates three-dimensional vision through differential focusing planes for each of our two eyes, stereophonic listening implies a similar principle of differential information directed towards our two ears. Furthermore, multi-channel recordings divide the sound information well beyond the effect of bifurcated listening channels to a greater distribution of dynamic sonic information. With this in mind, I have asked students to compare multi-track stereo recordings with the visual dynamics of stereoscopic views, leading them to consider their own sensory relationships to technologies of sight, sound, and touch. Hearing and viewing also refer to an analytic framework for reception. The redistribution of cognitive information, as with stereo-optics or stereo-phonics, transforms the affective context for reception, thus reorienting our position in the spaces that we inhabit.

The 'student-user' may not have a frame of reference for all of the historical objects that I have presented in my courses over the years, but all the better. Eventually, the collection comes to define the observer, and techniques of observation become an important context by which to challenge a conception of the 'user' and 'user-ship'. In addition, it is important to consider the effect of institutional change and how new paradigms of vision and observation transform the significance of the collection itself.

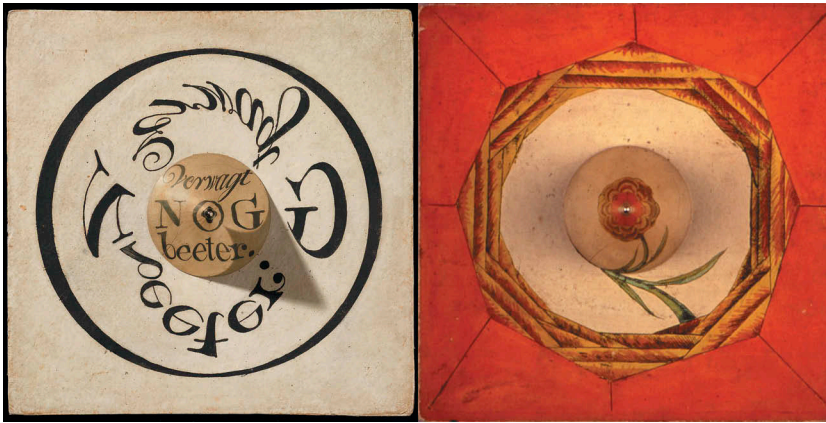


Figure 3. Anamorphic Pictures and reflective Cone Viewers (c. 1700–1750): (top) Dutch Text reads: *Verwagt Nog Beeter* ('expect even better'); (bottom) Flower. Nekes collection of optical devices, prints and games. Getty Research Institute, Los Angeles (93.R.118). Reproduced with permission from the Getty Research Institute.

New techniques of observation and positioning recast the significance of objects in the collection. These techniques lend themselves to breaking up and recombining collections, and yet they continue to exist, even under erasure, because they provide clues to vanishing positionalities that often return unexpectedly. It is from this vantage point that Fickers and van den Oever's list of eight 'users' implies that the media objects under scrutiny are assembled in the mind of the user, or student in this case, through active engagement.

Fickers and van den Oever's pairing of Roger Collingwood's notion of historical reenactment with Michel Serres's history of the senses directs us towards acts of personalization apprehended by the user, rather than a consideration of how institutional spaces are dynamic, and not merely subject to dormant historical paradigms. While representing the past in the present is an active context for reenactment, we might in fact be describing overlapping positionalities in acts of viewing and participating in the effects of illusionistic display. We could then say that a conception of situatedness or positionalities is already encoded in the collection itself. The relationship between the Claude glass, photostereoscopy, 3-D projected media, and anamorphic devices, in which mirrors bring otherwise distorted and illegible figures into focus, implies futures and pasts, but it also points to subject positions that cross temporal and institutional boundaries (see [Figure 3](#)). In turn, these media objects not only inform our location in the present beyond the construct of 'user'; they also animate a context for observation, identity formation, and psychological attachment.

Notes

1. The *Devices of Wonder* exhibition was held at the Getty Research Institute from 13 November 2001 to 3 February 2002.
2. These staff include, in particular, Frances Terpak, Senior Curator at the GRI (who purchased the collection), Isotta Poggi, GRI curator (who then catalogued the items), and Albrecht

- Gumlich, former GRI conservator of three-dimensional objects (who repaired and exhibited them). Gumlich's active working knowledge of the devices has been an invaluable form of instruction over the years.
3. 'Lorrain mirror, 1800 s,' (Box 26) in the 'Finding Aid for the Nekes Collection of Optical Devices, Prints, and Games, 1700–1996, bulk 1740–1920', by Isotta Poggi. Accessed 29 August 2019. https://oac.cdlib.org/findaid/ark:/13030/kt8x0nf5tp/entire_text/. In addition, see the full-length study by Arnaud Maillet (2004).
 4. James Hodge, Associate Professor in the Department of English at Northwestern University, created an extended description of the Religious Festival peepshow box for the Pre-Cinema seminar that I taught at UC-Santa Barbara in March 2005. Getty Research Institute: 93.R.118, box 50, Nekes. For further discussion of the Corpus Christi event depicted in the peepshow box, see volume 2 of Napoleon Bonaparte's memoirs (De Bourrienne 1885, 196–99).
 5. Erkki Huhtamo, in particular, has been an advocate for 'peep media', a collection of media forms that is part of a wider context for his work as collector, exhibitor, and theorist of media archaeology (see Huhtamo 2012).
 6. The scholarship about this context is distinct from writing about early cinema history often marked by the 1978 FIAF (International Federation of Film Archives) Brighton Symposium *Cinema 1900–1906* (Holman 1982).
 7. Another set of objects held by Werner Nekes was presented as part of the *Eyes, Lies, and Illusions* exhibition at the Hayward Gallery in London (7 October 2004–3 January 2005) (see Mannoni, Nekes, and Warner 2004).
 8. *Shadowtheater of the World* (dir. Werner Nekes, 1993–96). These films are for sale, in VHS format, on the Werner Nekes website. Accessed 28 August 2019. http://wernernekes.de/00_shop1/index.php?p=p_22&iCategory=22&iPage=1.
 9. Getty Research Institute Finding Aid. Nekes Collection of Optical Devices, Prints, and Games, 1700–1996. Accessed 24 November 2019. <http://archives2.getty.edu:8082/xtf/view?docId=ead/93.R.118/93.R.118.xml;query=;brand=default>.
 10. The work of André Gaudreault (1987, 2003) is especially mindful of precise chronologies, particularly in his detailed work on 'trickality', 'attractivity', and early institutional thresholds associated with film editing, stock, and exhibition. His work is more literary and politically engaged in its approach to film narrative, in contrast to the empirical approach adopted by Barry Salt (1983), that has since become associated with Cinematics. It has been actively developed as a useful measurement tool that is available on the Cinematics website. Accessed 24 April 2020 at: <http://www.cinematics.lv/index.php>.
 11. There is a close relationship between Kittler's conception of 'discourse networks' and Jacques Derrida's underlying approach in *Of Grammatology* (Derrida [1967] 1976) that has been widely commented upon. See also Kittler (1987), which was one of the most influential texts that introduced 'discourse networks' to an English-speaking readership.
 12. See in particular Mannoni and Pesenti Campagnoni (Mannoni and Campagnoni 2010), a remarkable exhibition catalogue about the history of the magic lantern as preamble to the history of cinema.
 13. Jonathan Crary's conception of the observer has been among the most influential texts in this regard. His discussion in *Techniques of the Observer* begins with a reference to the 'retinal afterimage' in Goethe's 1810 *Zur Farbenlehre* (translated into English in 1840 as *Theory of Colours*) while also querying the nature of optical 'truth' (Crary 1991, 97–136).
 14. 'Photostereoscope of Auguste Lumière (c. 1920)', Panorama collection assembled by Joachim Bonnemaïson. Getty Research Institute: 98.R.19. For further research about this technology see Hertz (2009).
 15. See *Binetoscope* (1910), among other short films depicting the role of traveling showman, on *Emile Cohl: L'Agiteur aux mille images* (2008), the double DVD set containing 43 films produced by Emile Cohl for Gaumont from 1908 to 1910.
 16. Several figures associated with the history of collections and early media history have been selected as scholars in residence at the GRI, including Krzysztof Pomian and Barbara

Stafford (1995–96), Tom Gunning (2009–10), Thomas Levin (2004–05), Philippe-Alain Michaud (2004–05), and Marina Warner (1987–88).

Disclosure statement

No potential conflict of interest was reported by the author(s).

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