

General Introduction

Media Archaeology: Foucault's Legacy

Film History as Media Archaeology

Anyone speaking about cinema today must be in a retrospective and prospective frame of mind at the same time. There is general recognition that cinema has been an enormous force in the twentieth century—it is the century's memory and its imaginary—but there is far less consensus on what its role, survival, or impact will be in the twenty-first. Even if the 'death of cinema' has been much exaggerated, the focus of interest has shifted—twice over. Popular stars-and-genre cinema continues to be taken for granted as the mass entertainment of choice for an evening out with friends or a partner (occasions for which Hollywood still provides the weekly new releases), but the cultural status once enjoyed by European art and auteur cinema has shrunk and all but disappeared. In its place are the emerging film-producing countries in Asia and Latin America (and to a lesser extent Africa) whose sites are the national, international, regional themed film festivals and whose topics are often the social consequences and family dislocations following globalisation.

As crucial as the geopolitical shifts in the cinematic landscape, is the fact that much of the intellectual attention has undeniably moved to digital media, comprising digital television, computer games and hand-held communication devices, mobile screens, and virtual reality. Scholars and the general public are especially taken by the *social media* and other *participatory forms* of engagement with sound and images, which both affect and connect many more people than cinema and which pose serious political and ethical issues around *direct democracy* and political activism;—concerns about the protection of *privacy*; the tracking and monetizing of our feelings, our likes, and desires; the threat of total *surveillance* by the State, and, last but not least, the criminal exploitation of our online vulnerabilities.

For those committed to the idea that cinema has a future, several options present themselves. Some are happy to draw a firm line in the silicone sand and devote themselves with renewed vigor to the aesthetic promises and possibilities of (past) cinema by reviving, in a different key, the old question

of 'Is cinema an art?' and answering, full-throated, in the affirmative.¹ Others are discovering (or rediscovering) the challenges that cinema poses for *philosophy*—for the philosophy of mind and the nature of consciousness, for phenomenology and theories of the embodied mind; others are re-describing and analyzing cinema by posing specifically epistemological and ontological questions.² Often the object of study is 'cinema', rather than individual films, making moot its purported death or afterlife. Yet others are happy to use films (especially contemporary ones) as symptoms, as raw materials, or as illustrative examples for a whole range of diagnostic purposes covering politics, identity, sexuality, gender, ecology, disability, the man-machine symbiosis, animal studies, and architecture. Generally, the point of view is that of the audience or the subjectivity of the spectator rather than the producer, artist, or *auteur*: what is of interest is the affective, bodily, or cognitive *response*, *engagement*, or *comprehension*.³ Under the heading of 'cinematic experience', we can return to Walter Benjamin (and his sophisticated but productive distinction of experience as split between *Erlebnis* and *Erfahrung*), or we can turn to the methods of the neuro-sciences and their experimental findings, hoping to generate new knowledge about the recipient as spectator, subject, consumer, participant, or player. But we also need to ask ourselves 'Knowledge for what?'. To celebrate cinema as a unique cognitive and affective experience, or to instrumentalize cinema and help better deliver its audiences to the aggregators, the data-miners, and monetizers?

There is, however, another way of acknowledging the air of obsolescence that hovers over cinema as a creative practice while relinquishing neither the awareness of its cultural importance nor the belief in its future potential.⁴ It

1 Dudley Andrew, the indefatigable advocate for cinema as art, turns André Bazin's question mark in "What is Cinema?" into an exclamation mark: *What Cinema is!* (Oxford: Wiley-Blackwell, 2010).

2 In the wake of Gilles Deleuze's *Cinema* books, there have been lively debates around the idea of cinema as a 'philosophical' machine and of films as modes of thought. Among many possible references, one article arguing the pro and one arguing against is Stephen Mulhall, "Film as Philosophy: The Very Idea," *Proceedings of the Aristotelian Society New Series*, vol. 107 (2007): 279-294; and Paisley Livingston, "Theses on Cinema as Philosophy," *The Journal of Aesthetics and Art Criticism* 64, no. 1, *Special Issue Thinking through Cinema: Film as Philosophy* (Winter 2006): 11-18.

3 See Murray Smith, *Engaging Characters: Fiction, Emotion, and the Cinema* (Oxford: Clarendon Press, 1995).

4 There is a paradox involved here, insofar as cinema's purported 'death', 'obsolescence', and diminished cultural relevance in the digital age is what has turned it into a kind of meta-medium, making it available as a media interface of digital media (Lev Manovich) or as metaphor and allegory, as in many of the books devoted to film as philosophy mentioned above. Much of this volume is devoted to exploring this paradox, i.e., of how obsolescence, either real or posited, can become a source of special aesthetic value and of philosophical attention.

is the one explored in this book, and I am calling it “film history as media archaeology”. This stance may seem more retrospective than prospective, but in fact archaeology wants what it finds to be maintained, defined, and carried forward. It touches on the *arche* (origin, first principle, authority), it asks about the status of the cinematic ‘archive’ (the physical and virtual location of the documents, films, and objects that make up cinema’s heritage), but the use of the term ‘archaeology’ is not solely metaphoric, because it also aims to present and preserve this heritage. It significantly differs from some of the responses and options just mentioned, not least because it does not insist on cinema’s uniqueness as an art form and its specificity as a medium. Instead, it sees cinema’s past as well as its future firmly embedded in other media practices, other technologies, other social uses, and above all as having—throughout its history—interacted with, been dependent on, been complemented by, and found itself in competition with all manner of entertainment forms, scientific pursuits, practical applications, military uses. To arbitrarily and ahistorically cordon off these other uses of the cinematic apparatus and manifestations of the moving image would, from today’s position, not only block understanding of how cinema came about; it would also risk misunderstanding some of the key developments under way, especially when dismissing contemporary cinema as a travesty of a once-great art, thereby making the ‘death’ of cinema a self-fulfilling prophecy.

For how could we possibly write a history of cinema today—separate from all the other media that complement it for the users—and enrich or refine the experience for the spectators and open up new venues for the makers of films? But then, how can we possibly write a history of all these media without resorting to bland generalities? Historians have tried to undertake a synthesis, none with greater understanding than Asa Briggs and Peter Burke in their *Social History of the Media: From Gutenberg to the Internet*⁵ or Armand Mattelart’s *Networking the World*.⁶ Yet in their histories, cinema occupies a very small place compared with print media, radio, television, or the Internet. This book is about cinema, and in several chapters that follow I shall be arguing that cinema has become invisible as a medium because it has become so ubiquitous, meaning that its specific imaginary (its way of ‘framing’ the world and us within it and also separate from it) has become the default value of what is real—to us. It is why I touch

5 Asa Briggs and Peter Burke, *A Social History of the Media: From Gutenberg to the Internet* (London: Polity Press, 2002).

6 Armand Mattelart, *Networking the World, 1794-2000* (Minneapolis: University of Minnesota Press, 2000).

upon the question of cinema as art and of its specificity as medium only as some of the ideological frames within which films have been discussed on and off for much of their history (though not all). The book does, however, set itself the task of asking how this imaginary has come about and where cinema fits into larger cycles and determinants that have so far been the engines of change in modern societies: cinema and film history but also cinema and film *in* history.

Can media archaeology, then, assist in this task, and does it have to?⁷ The term itself connotes different things to different people: “What is it that holds the approaches of media archaeologists together, justifying the term?” ask Erkki Huhtamo and Jussi Parikka, and they speculate: “Discontent with ‘canonized’ narratives of media culture and history may be the clearest common driving force.”⁸ For Siegfried Zielinski, who was one of the first to define ‘media archaeology’, it is an activity (*Tätigkeit*) that conducts “probes into the strata of stories, [that make up] the history of the media [and] a pragmatic perspective [that seeks] to dig out secret paths in history, which might help us to find our way into the future.”⁹ “Media archaeology is [...] a reading against the grain,” avers Geert Lovink, “a hermeneutic reading of the ‘new’ against the grain of the past, rather than telling of the histories of technologies from past to present.”¹⁰ For Lori Emerson, “Media archaeology provides a sobering conceptual friction to the current culture of the new that dominates contemporary computing,”¹¹ while Jussi Parikka argues that “Media archaeology sees media cultures as sedimented and layered, a fold of time and materiality where the past might be suddenly discovered anew.”¹² Huhtamo and Parikka again: “Media archaeologists have begun to construct alternate histories of suppressed, neglected, and forgotten media that do not point [...] to the present media-cultural condition as their ‘perfection’. Dead ends, losers, and inventions that never made it into a material product have important stories to tell.”¹³ But media archaeology can also be the method

7 The first archaeology of cinema is C.W. Ceram's 1965 study by that title (New York: Harcourt, Brace & World). C.W. Ceram is otherwise known as K.W. Marek.

8 Erkki Huhtamo and Jussi Parikka, introduction to *Media Archaeology: Approaches, Applications, and Implications* (Berkeley: University of California Press, 2011), 2-3.

9 Siegfried Zielinski, “Media Archaeology”, *Ctheory.net* (07/11/1996) <http://www.ctheory.net/articles.aspx?id=42>

10 Geert Lovink, *My First Recession: Critical Internet Culture in Transition* (Rotterdam: nai10 publishers, 2003), 11.

11 Lori Emerson, “Media Archaeology/Media Poetics” (<https://mediarchaeology.wordpress.com/class-description/>).

12 Jussi Parikka, *What is Media Archaeology?* (Cambridge: Polity Press, 2012).

13 Huhtamo and Parikka, 3.

and goal of those who shy away from the term or shun it altogether or who, like Timothy Druckrey, may even voice their discontent with those whose media archaeology is the expression of their discontent:

The mere rediscovery of the forgotten, the establishment of oddball paleontologies, of idiosyncratic genealogies, uncertain lineages, the excavation of antique technologies or images, the account of erratic technical developments are, in themselves, insufficient to the building of a coherent discursive methodology [for media archaeology].¹⁴

Such a warning also has my ‘film history as media archaeology’ on notice, and one response is a more restricted focus that puts cinema tactically at the center while extending the scope of the medium in new directions: I no longer just ask ‘What is cinema?’ or ‘What was cinema?’. As important is the question ‘Where is cinema?’ (at public screenings in purpose-built movie theatres or also on television screens, in galleries and museums, as well as on portable devices?). I also want to know ‘When is cinema?’: not merely performances at fixed times but an evening out with friends or lovers, irrespective of or in spite of the film; cinema as a state of mind or ‘mankind’s dream for centuries’? Is cinema an irreversible flow and thus a submission to the tyranny of time, or is it an experience that the viewer can control and should manipulate at will?

Yet beneath these questions lurks another one that this book is delicately trying to formulate, namely ‘Why is cinema?’ or ‘What is/was cinema good for?’. What role has cinema played—and is still playing—in the larger development of mankind, or more specifically, in our Western modernity and post-modernity? Before getting to any of these weighty matters, however, a historical and inevitably biographical account is in order, because the present study is part of a thirty-year trajectory that began with an essay reviewing half a dozen books, which then led to an international conference and an edited collection of essays. In the most direct sense, *Film History as Media Archeology – Tracking Digital Cinema* is therefore the continuation and reflexive extension of my earlier publication entitled *Early Cinema: Space Frame Narrative*,¹⁵ which built on an eponymous conference co-organized in 1986, as well as several years of teaching advanced courses

14 Timothy Druckrey, foreword to Siegfried Zielinski, *Deep Time of the Media* (Cambridge: MIT Press, 2006), ix.

15 Thomas Elsaesser (ed.), *Early Cinema: Space Frame Narrative* (London: BFI, 1990).

on early cinema at the University of East Anglia, followed by more years of teaching media archaeology at the University of Amsterdam.

Is Media Archaeology a Supplement to or a Substitute for Film History?

For some twenty-five years, then, I have been arguing for an ‘archaeological’ approach to film history.¹⁶ This is mainly in light of two major insights and developments: first, the realization that the early period of cinema was considerably richer, more developed, and more diversified than film historians gave it credit,¹⁷ and second, the awareness, following the changes brought by digitization and the new media, that certain implicit assumptions made by film historians about the presumed evolution of the form of film and the goal in cinema history had become untenable.¹⁸ To these must be added a third development that reinforced the archaeological impulse: the migration of cinema—both mainstream and experimental—from movie theaters to museums and art spaces in general. While cinema has also migrated and relocated to other sites and platforms since the 1990s, its passage and entry into the contemporary art museum has often taken the form of appropriation, self-reference, and re-enactment whose media archaeological alignment can best be described as a revaluation of *obsolescence as the new authenticity* of the avant-garde.

16 My first mention of media archaeology in print was in the introduction to *Early Cinema: Space Frame Narrative* entitled “Early Cinema: From Linear History to Mass Media Archaeology”. Although my introduction was a mix of several discourses (“from ...to”, “mass media”) that would subsequently be deconstructed, what I had in mind was a “new archaeology [...], because of the fundamental changes that film had brought to the notion of time, space and material culture.” (p.1) Especially the emphasis on cinema under the aspect of material culture would become a major preoccupation of media archaeology.

17 The realization of the richness and diversity of early cinema is generally dated to the synergies that formed between film archivists and film historians during and after the 1978 Brighton FIAF conference and its symposium on surviving films from 1900-1906. See Roger Holman (ed.), *Cinema 1900-1906, Vol. 1: An Analytical Study* (Brussels: FIAF, 1982) and a discussion of FIAF Brighton in the final chapter.

18 Evidently, film historians did not have to wait for digital media to critique the shortcomings of standard film histories. Speaking personally, Michael Chanan’s *The Dream that Kicks: The Prehistory and Early Years of Cinema in Britain* (London/Boston: Routledge & Kegan Paul, 1980) was a key text for rethinking the ‘origins’ of cinema, as were the interviews assembled in Kevin Brownlow’s *The Parade’s Gone By* (London: Secker & Warburg, 1968), both of which I read around 1980.

Faced with the historical evidence that had become available, for instance, one could no longer credibly maintain the idea that cinema was progressing towards greater and greater realism thanks to the incremental addition of sound, color, and scope, or even that the goal was the gradual self-realization of the medium's 'essence' (the modernist *telos* of specificity). It even seemed altogether wrong-headed in historiographical terms, if one wanted to comprehend the nature of change itself, when studying the technical media of sound and vision. The forces at work in technological change operate neither incrementally nor organically: one needs to factor in contingent events and recognize that even the continuities are due to a change of default values and that the digital turn but also political events brought about radical breaks during the last decades of the twentieth century. One also has to account for the reversal and rewinds taking place in the art world. Is it more than common sense, when tracking changes in the media, to guard against seeing these changes either as steady progress and improvement or as a narrative of impoverishment and decline? The corollary is that neither technological determinism nor evolutionary selection provides the underlying conceptual matrix, while unintended consequences and *events that did not happen* may also deserve to be considered.¹⁹

My 'archaeological' perspective was therefore initially intended to distinguish itself both from chronological history (especially the *infancy-adolescence-maturity-decline* narrative) as well as the *nothing is new under the sun* approach, where one finds precedents in the past for every innovation in the present. But it also differed from the way the label 'archaeology of cinema' had been current at the time, namely as an account of the so-called pre-history of cinema, or 'pre-cinema'. The first ones to use the term in this sense were C.W. Ceram in 1965 and Jacques Perriault in 1981.²⁰ Ceram's study was a well-researched but straightforward linear history of many of the animation, imaging, and projection devices that had, more or less inevitably, led up to the cinematograph. His archaeology ends in 1897 and lines up the inventors and technologies deemed necessary for cinema to be "born". Perriault, too, concentrates on the prehistory of the medium, pointing to philosophical toys, the developments in photography and chronophotography,

19 The idea of counterfactual history gained (at)traction for me after seeing Kevin Brownlow and Andrew Mollow's *It Happened Here: The Story of Hitler's England* (1964). The rationale, heuristic gains, and limits of taking into account also what did not happen are explored in Niall Ferguson (ed.), *Virtual History: Alternatives and Counterfactuals* (London: Papermac, 1997).

20 C.W. Ceram, *Archaeology of the Cinema* (New York: Harcourt, Brace & World, 1965) and Jacques Perriault, *Mémoires de ombre et du son: Une archéologie de l'audio-visuel* (Paris: Flammarion, 1981).

the different techniques of projections, and everything else necessary to produce an illusion of movements prior to the advent of cinema.

Theirs is still both a single-medium 'archaeology' and a story with a goal in mind and a happy ending, whereas one of the major lessons of 'early cinema' studies has been that it is best to avoid all forms of teleological narratives when it comes to film history. Also, besides the history of photography, the histories of the telegraph, the radio, the gramophone, and the telephone have always been much more intertwined with that of cinema than the specialists of the respective media felt comfortable with. A closer (but also more comparative) look at the period between the 1870s and 1900 in both the US and in Europe has shown that cinema (or rather: what would become cinema) had neither one specific origin (too many, and too arbitrarily fixed) nor purposive eureka moments (too serendipitous) or pre-ordained goals (too contradictory and too quickly obsolete). Under such circumstances, an archaeological account—in the first instance, in Michel Foucault's sense ("no origins", "questioning the already-said at the level of its existence", "practice as discourse/discourse as practice")—may initially have seemed to be no more than a holding operation. It discouraged the search of a single foundational moment or event and encouraged one instead to look for key trigger configurations or telling patterns.

For instance, if one starts from a non-media specific vantage point, as Jonathan Crary has done in his *Techniques of the Observer*—an art historian's re-examination of theories of perception in the nineteenth century²¹—one can uncover links previously missed. Challenging linear accounts of the cinematic apparatus, Crary highlights the importance of two devices, usually discussed as 'pre-cinematic' or 'proto-cinematic' but which in his account belong to other histories as well, where there is nothing *pre-* or *proto-* about them. Influential well beyond art history, *Techniques of the Observer* became a major resource for media archaeologists because Crary's main thesis, namely the emergence of embodied modes of perception that challenged Cartesian and Newtonian optics, was backed by a close examination of the phenakistoscope and the stereoscope. For film historians, his reconstruction of the extraordinary rich and above all popular culture of optical toys in the second half of the nineteenth century was a significant 'media archaeological' intervention. Rather than being able to draw, as had been assumed, a straight line of descent from the *camera obscura* to the projected image on a rectangular screen, which aligned cinema with the separation of the image from the beholder, historians must

21 Jonathan Crary, *Techniques of the Observer* (Cambridge: MIT Press, 1990).

reckon with a rupture that occurred between the monocular perspective as developed during the Renaissance and the cinematic apparatus as it became standard in the early part of the twentieth century. If quite different ways of perceiving images, of reproducing images, and of configuring projected images in public or private displays existed in the nineteenth century, then the role of the magic lantern must be rethought within a visual culture that included the stereoscope and the phantasmagoria, neither of which could be straightforwardly appropriated as a 'precursor' of cinema. Indeed, they might come to be regarded as 'rivals' or 'alternatives', displaced at the time but not dead, and instead biding their time and awaiting their return. This also raises the question why these once-popular practices and their technological traces were so quickly 'forgotten' with the 'invention' of cinema.

If one adds to these considerations the other ad-hoc, piecemeal, and serendipitous experiments that took place simultaneously but independently of each other in quite different parts of the globe in order for images to create the impression of movement, then the invention of cinema turns out to be both mysterious and preordained as well as more fortuitous and far from inevitable. It is the very disparate and the dispersed nature of the inventions, intentions, and implementations we now associate with the projection and display of photographed and electronically transmitted moving images that endows cinema's past with its many still-not-exhausted futures.

The activity of recovering this diversity and to account for such multiplicity, to trace these parallel histories and explore alternative trajectories, is what is meant by "film history as media archaeology": not just the excavation of manifold pasts but also generating an archaeology of possible futures. Respect for these once possible (or still virtual) futures as well as for any past's singularity, alterity, and otherness also disabuses one from drawing straight lines to the present or from running straight lines from the present to these pasts. It thus makes us more cautious and refrain from claiming that, once we identify precursors, we may readily *adopt* them as our '(grand) parents' and freely *appropriate* their work for our own ends.

The answer, therefore, to the question 'Is media archaeology a supplement or a substitute to film history?' has to remain an open one. As a supplement, it may be able to tackle the intrinsic historiographical problems that film history has either overlooked or has raised but not been able to solve. Media archaeology would then be something like a revision of (as well as an extension to) classical film history, with a wider scope of pertinent phenomena and more inclusive in its understanding of the visual and material culture that is relevant to a historical analysis of cinema. It may even *look like the old, but would come*

to these old questions with new default values and a distinctly contemporary vantage point. So different could be its new frame of reference that media archaeology might as well consider itself a substitute for film history. Yet as a substitute it could end up throwing the baby out with the bathwater, and, as we shall see, bypass cinema altogether or marginalize it even further when focusing its archaeological gaze on the origins and command (*arché*) of the digital media, and therefore concentrate mostly on electricity, electromagnetic waves, mathematics, algorithms as the material and conceptual infrastructures of contemporary media when determining media archaeology's agenda. This is certainly the view of someone like Wolfgang Ernst when he declares:

Media-archaeological analysis [...] does not operate on the phenomenological multimedia level; instead it sees all so-called multimedia as radically digital, given that digital data processing is undermining the separation into the visual, auditive, textual, and graphical channels that on the surface (interface) translate data to human senses. By looking behind the human-machine interfaces (such as the computer monitor) and by making invisible communication processing evident, an archaeology of media, as the notion implies, follows Foucault's *Archaeology of Knowledge* in [...] reconstructing the generative matrix created by mediatic dispositifs.²²

Walter Benjamin and the Modernity Thesis

I also follow Foucault, but in a different direction, backtracking to the moment when *The Archaeology of Knowledge* was indeed being read but when the idea of all media being “radically digital” would not yet have made sense, and thus the frames of reference were correspondingly different. When I first suggested the phrase “film history as media archaeology” in the late 1980s, my main intellectual references were Walter Benjamin and Michel Foucault. They proved useful, even necessary at a point in time, when I encountered problems of (film) historiography, which meant that I came to media archaeology through two related avenues. One was the desire to locate my then primary field of study—Weimar cinema—more concretely within the broader lineage of “modernity.”²³ Modernity was

22 Wolfgang Ernst, “Media Archaeography” in Huhtamo and Parikka, 252.

23 For a discussion of modernity in the context of film studies and film history (notably the influence of Walter Benjamin), see Thomas Elsaesser, “Modernity: The Troubled Trope” in D. L. Madsen and M. Klarer (eds.), *The Visual Culture of Modernism* (Tübingen: Narr, 2011), 21-40.

synonymous with the city experience, as found in Georg Simmel's *The Metropolis and Mental Life*,²⁴ Siegfried Kracauer's *The Mass Ornament*, and Sigmund Freud's *Psychopathology of Everyday Life* (with echoes of the urbanist transformations of Vienna as well as Freud's asides about the dislocating and uncanny effects that modern forms of transportation had on perception and cognition). Additionally, and given the multi-media character of early cinema, it seemed appropriate to connect the emergence of cinema with the various tropes that Walter Benjamin had identified with the city and modernity in his *Passagenwerk* (the Arcades Project, known to me in the 1980s as *Paris: Capital of the 19th Century*).²⁵

The other opening to media archaeology was a related insight, namely that cinema had brought about a change in the experience of time, its reversibility and retroaction within the irreversibility of time's arrow, but also that cinema was to effect an interlocking and mutual interdependence of work and leisure.²⁶ This insight came from studying the work of Eadweard Muybridge and Étienne-Jules Marey, whom I had initially taken to be the joint precursors of the industrial uses of the cinematograph—time and motion studies—until more detailed work on Marey and the publication of Anson Rabinbach's *The Human Motor*²⁷ persuaded me to see Muybridge and Marey as belonging to distinct traditions and divergent trajectories rather than as complementary.²⁸

A further corollary of cinema's intervention in our notion of time is that it was closely aligned with changes in people's sense of space, location, and locomotion, of movement and mobility, and with the associated means of

A critique of this use can be found in D. Bordwell, *On the History of Film Style* (Cambridge, MA: Harvard University Press, 1998), 140-147. For a general terminological clarification, see Peter Osborne, "Modernity Is a Qualitative, Not a Chronological, Category: Notes on the Dialectics of Differential Historical Time", in Francis Barker, Peter Hulme, and Margaret Iversen (eds.), *Postmodernism and the Re-reading of Modernity* (Manchester: Manchester University Press, 1992), 23-45.

24 Key texts are Georg Simmel, *Die Großstadt und das Geistesleben* (1903) and Siegfried Kracauer's *Das Ornament der Masse* (1927).

25 I first read Benjamin in an essay entitled "Paris: Capital of the 19th century" *New Left Review*, March-April 1968: 77-88.

26 The interdependence of work and leisure as well as the alignment of cinema with different modes of transport is examined in more detail in the chapter "Cinema: Motion, Energy, Entropy".

27 Anson Rabinbach, *The Human Motor: Energy, Fatigue and the Origins of Modernity* (Berkeley: University of California Press, 1990).

28 For more on Muybridge and Marey, see the chapter "The Cinematic Dispositif (Between Apparatus Theory and Artists' Cinema)" in the present volume. See also Marta Braun, *Eadweard Muybridge* (London: Reaktion Books, 2010) and Laurent Mannoni, *Étienne-Jules Marey. La mémoire de l'oeil* (Milan: Mazzotta, 1999).

transport and propulsion, i.e. the railways, the automobile, the aeroplane, and the ocean liner. This would be the other paradigm of “modernity” complementing the trope of the city, and it would add two more authors who encouraged me to think of cinema outside and beyond its technological, optical, and narrative determinants, even though neither deals directly with cinema: Wolfgang Schivelbusch’s *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century* and *Disenchanted Night*,²⁹ along with Christoph Asendorf’s *Ströme und Strahlen*.³⁰ Schivelbusch’s books have become classics first, of how the railways imposed standard timetables and synchronized time in all walks of life, with speed of transport making space a variable of time (as it also was to become in cinema, through editing), and second, how ‘projection’ (in cinema) has to be understood as part of a broader dynamic of re-distributing sensory stimuli between night/darkness and day/artificial light in late nineteenth-century urban centers. Asendorf, by contrast, drew my attention to all the micro-energies passing between art and the beholder, which I translated into the screen-space and auditorium-space relationship, and how this dynamic supports, modulates, and layers the perceptual, bodily, and auditory registers of the spectators.

Walter Benjamin included cinema as an essential element of modernity in his essay “The Work of Art in the Age of Mechanical Reproduction”, which is still the foundational text for the ‘cinema and modernity’ approach embraced by so many scholars, both in cinema studies and cultural studies. The issues raised by the ensuing debate (also known as the ‘modernity and vision’ controversy)³¹ run parallel to and intersects with my media archaeological research, without directly converging, since my goals are different and I do not have a similarly polemical investment.³² As part of my Weimar cinema studies I had, already from the mid-1970s onwards, given seminars and lectures in the US and the UK on Kracauer, Benjamin,

29 Wolfgang Schivelbusch, *The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century* (Berkeley: University of California Press, 1986; first published in German in 1979) and *Disenchanted Night: Industrialization of Light in the Nineteenth Century* (Berkeley: University of California Press, 1995; first published in German in 1983).

30 Christoph Asendorf, *Ströme und Strahlen: Das langsame Verschwinden der Materie um 1900* (Giessen: Museum der Alltagskultur des 20. Jahrhunderts, 1989).

31 Polemically argued between David Bordwell and Tom Gunning. See, for example, the entry “Attraction,” in *The Routledge Encyclopedia of Film Theory*, edited by Edward Branigan and Warren Buckland (Abingdon: Routledge, 2014), 45-49.

32 See my essay “Modernity the Troubled Trope” (footnote 23), where I discuss the ramifications of the debate. The Chicago School of Film History, which since the 1990s had formed around Miriam Hansen, Tom Gunning, and Yuri Tsivian, was probably more representative of this modernity configuration than I was.

and the Frankfurt School, as well as published a number of essays in the early 1980s that have since contributed to the revival of Kracauer studies. Together with Miriam Hansen and David Bathrick, I was also co-editor of a special issue on Kracauer for *New German Critique*.³³

If Benjamin was not exactly news to me, when the great Benjamin revival eventually got underway, his rediscovery was nonetheless important also for media archaeology. This is because his newly established and seemingly unassailable authority within the humanities helped prize cinema away from the debates around 'Is it art?' and 'What is its media specificity' (which had dominated the field into the 1950s) or 'Is it a language and what is its ideological form of address and interpellation?' (which had dominated the debates in the 1960s and 70s)—and instead reminded us of its technomaterialist underpinnings.

For many of us, Benjamin also put a swift end to positivist history as well as to classic Marxian dialectical materialism. His "Theses on the Philosophy of History" as well as his allegorical readings of the political and social history of Paris from the 1848 revolution to the Days of the Commune and beyond were like a vast secret text that had to be deciphered layer by layer, across enigmatic incidents and poetic fragments. It was a tremendously appealing and inspirational form of research and writing, not least because Benjamin was also a media historian—with his short history of photography, his essays on surrealism, and last but not least, his essay "The Work of Art in the Age of Mechanical Reproduction (or Technical Reproducibility)".

Benjamin's interpretation of photography and film, of images in general and their singular material traces, seemed especially germane to media archaeology, since allegory connotes both loss and recovery, both fragments and gaps, both mortality and 'otherness'. Applied to film history, such an allegorical-archaeological gaze sharply contrasted with the vision and method of such eminent film historians as Paul Rotha, Terry Ramsaye, Arthur Knight, and William Everson. Even Jerzy Toeplitz and Eric Rhode—with all their merits—had largely ignored or dismissed the first twenty years (and part of cinema's prehistory) as aesthetically negligible because it was primitive, lacking purpose and stylistic signature. The general picture was of a murky sea of moving images on which floated a few masterpieces,

33 Thomas Elsaesser, "Social Mobility and the Fantastic", *Wide Angle* 5, no. 2, (1982): 14-25; "Film History and Visual Pleasure: Weimar Cinema", in P. Mellencamp and P. Rosen (eds.), *Cinema Histories/ Cinema Practices* (Frederick: University Publications of America, 1984), 47-85; and "Cinema: The Irresponsible Signifier or 'The Gamble with History': Film Theory or Cinema Theory", *New German Critique* no. 40, Special Issue on Weimar Film Theory (Winter 1987): 65-89.

while a succession of pioneers was able to pass to each other the baton of the art of film to come. This unsatisfactory state of affairs was the starting point (around 1985/86) of the so-called “revisionist” film history, for which I coined the label ‘The New Film History’ in a review essay of several books that had all appeared around the same time by Barry Salt, Steve Neale, Douglas Gomery and Robert C. Allen, John Belton and Elizabeth Weiss, as well as David Bordwell, Janet Staiger, and Kristin Thompson’s *Classical Hollywood Cinema*.³⁴

Noël Burch and “Primitive Cinema”

The review essay mentioned, only in passing, the single most important source for my turn to media archaeology, namely Noël Burch’s essay “Porter or Ambivalence” published in *Screen* in 1978.³⁵ To my knowledge, Burch was the first to posit a decisive rupture between early cinema up to 1917 (he called it ‘primitive cinema’) and the classical narrative cinema under Hollywood hegemony. He intended to break with forms of history writing that had relied on underlying notions of chronologically ordered succession, organic growth-and-decay cycles, dialectical reversals, and teleological inevitability. Taken out of its ‘primitive cinema’ frame of reference and applied to film historiography more generally, Burch’s call to arms challenged the traditional narratives of progress, (technicist) self-improvement, and (modernist) self-reflexivity but kept to vestiges of the great man theory, except that Edwin S. Porter replaced D.W. Griffith. Fritz Lang, F.W. Murnau, Sergej Eisenstein, and Jean Renoir were still the masters of modernist film form. However, their ‘firsts’ and ‘masterpieces’ did not advance either ‘technical perfection’ or ‘greater realism’ but made cinema a medium of abstract forms and conceptual thought. At the same time, Burch effectively replaced the steady progress narrative of film history with a much more lacunary version: he pointed to gaps, false starts, and dead ends, isolated experiments and contradictory conjunctures. But he also argued the case for distinct logics that separated the different periods of filmmaking and of cinema history, especially for the first decades of cinema but also for the

34 Thomas Elsaesser, “The New Film History”, *Sight and Sound* 55, no. 4 (Fall 1986): 246-251. In retrospect, it might have been better to speak of “new cinema history” because some of the revisionist historians I discussed were decidedly more interested in cinema (as urban sites, as business, as industry, as institutions) than in actual films.

35 Noël Burch, “Porter, or Ambivalence,” *Screen* 19, no. 4 (Winter 1978/79): 91-105.

practice of the (Russian) avant-garde and of European art cinema (Fritz Lang, German Expressionism).

Not all the scholars who—following Burch—deconstructed the premises of the canonical film historians just mentioned (to whom one should add Georges Sadoul and Jean Mitry) shared Burch's Foucaultian perspective. More often they came from different intellectual traditions, such as Marxism (Charles Musser) or Russian formalism (David Bordwell, Kristin Thompson), Walter Benjamin (Gunning) or Siegfried Kracauer (Hansen). In the case of Barry Salt, he rejected all of these intellectual 'fashions' in favor of 'scientific realism'.

Yet when Burch in his 1978 essay played off Porter against Griffith as the true pioneer of early cinema, he spoke above all in the name of a film-aesthetic avant-garde who wanted to go back to cinema prior to Griffith (much the way the Pre-Raphaelites in Britain in the 1850s had gone back to Giotto and medieval art)³⁶ in order to challenge, both politically and conceptually, the dominance of the narrative feature film (and of Renaissance perspective) but also to prove that there had been historical precedents for the avant-garde, with examples like *TOM TOM THE PIPER'S SON*, *THE BIG SWALLOW*, or *THE GENIUS Soubrette*: all made by practitioners and showmen of popular entertainment, rather than 'auteurs'. The discovery of a 'primitive mode' (analogous perhaps to the discovery of 'primitive art' in high Modernism) with its own internal logic, rules (and sophistication) seemed like a vindication of more than fifty years' indefatigable efforts on the part of the avant-garde in both North America and Europe, to rethink the basis of 'film form'. It raised hopes of finishing once and for all with the notion that the development of cinema towards fictional narrative and representational illusionism was its pre-ordained destiny. Speaking perhaps more presciently than he knew at the time when he said '[the development] of cinema could have been otherwise [than Aristotelian narrative]', Burch might find himself vindicated (if probably against his stated intentions) by the proliferation of non-linear storytelling in contemporary cinema, not to mention the interactive architecture of video games or the re-use of old movies in found-footage films and installation art.

None of the books I reviewed for "The New Film History" essay specifically dealt with the early years of cinema or its pre-history. It was Burch

36 One is reminded of the pre-Raphaelites and their preference for Giotto's complexly spatialized narratives in his frescos at the Scrovegni Chapel in Padua. Coinciding with the rise of photography and antedating Cubism, they used Giotto in order to declare war on the perspectival, theatrical, illusionistic pictorial space of the Renaissance and Baroque.

(and in a more local British context, Michael Chanan)³⁷ who allowed me to see not only how much a more detailed and closer look at the films that had survived from the 1890s to the eve of WWII revealed special pleasures and rewards but also how these small masterpieces could become exciting conceptual tools and theoretical objects with which to gain leverage against traditional accounts of cinema, both historical and theoretical. This is why I was not overly concerned by subsequent debates as to whether Burch ‘had got it wrong’ in the details and the dates, or even whether the choice of the word ‘primitive’ was unfortunate.³⁸ He was able, within a few short pages, to sketch such a vibrant and convincing vision of an altogether different cinema, and of a different course that cinema might have taken, while drawing exciting parallels between this ‘primitive cinema’ and modernist art (without getting boxed in by the films of the historical avant-gardes) that I could suddenly see a whole new conceptual landscape that was well worth exploring and mapping, and in this way both rediscovering for myself and helping to rescue and redeem for film history.

The Legacy of Michel Foucault

The philosophical support for this conception of early cinema as distinct and self-sufficient came from Michel Foucault’s work, which felt rigorous and conceptually rich enough to buttress the historiographical challenges. A sign of the times as much as an inevitable disciplinary choice, Foucault was read selectively, and I took from him only what was of immediate use: his deconstruction of linear causality, the myths of single origins, and his distrust of all teleologies of historical progress, including Marxist ones.

‘Media archaeology’ is thus directly inspired by Foucault’s use of ‘archaeology’ in the title of two of his books, *The Order of Things: An Archaeology of the Human Sciences* and *The Archaeology of Knowledge*.³⁹ He had introduced the term in his analysis of the different regimes of knowledge from the Classical Age to the Modern. One important misunderstanding—one that

37 Michael Chanan’s *The Dream that Kicks: The Prehistory and Early Years of Cinema in Britain* (London/Boston, Routledge & Kegan Paul, 1980).

38 See David Bordwell and Kristin Thompson’s somewhat uncharitable attack on Burch: “Linearity, Materialism, and the Study of Early American Cinema,” *Wide Angle* 5, no. 3 (1983): 4-15. A more even-handed treatment of Burch can be found in Bordwell, *On the History of Film Style*, 83-114.

39 Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1970); *The Archaeology of Knowledge* (New York: Pantheon Books, 1972).

is shared by Burch—is that each regime or episteme connects to the next (contiguous or successive) mainly across radical breaks, and that it is the task of the archaeologists to retrace these underlying ruptures rather than attend to the apparent continuities.⁴⁰ Foucault is often ambiguous on this point but sometimes tries to clarify his position:

Archaeology disarticulates the synchrony of breaks, just as it destroyed the abstract unity of change and event. The period is neither its basic unity, nor its horizon, nor its object. [...Thus] the Classical age, which has often been mentioned in archaeological analyses, is not a temporal figure that imposes its unity and empty form on all discourses; it is the name that is given to a tangle of continuities and discontinuities.⁴¹

The misunderstanding had the advantage of supplying a strong polemical argument against linear chronology, which was needed to exert some leverage on traditional accounts. Thus the idea of ‘early cinema’ constituting a distinct *discursive formation* we not only owe to Foucault; if need be, the idea must be defended against Foucault. Likewise inspired by Foucault was the emphasis on institutions, customs, habits, and unwritten rules as historical agents, invariably expressing relations of power. It highlighted for instance, in the case of early cinema, the power struggles between exhibitors and producers, fought out over the length of films, the programming of screens according to the ‘numbers’ principle, and the adoption of multi-reel films, sustained by a single narrative: connections between film form and the material conditions of cinema as a socio-economic institution that might not have been made without Foucault’s mindset and method.

Nonetheless, there is a further terminological issue, since Foucault at a certain point abandoned the word archaeology and returned to the Nietzschean formulation of a genealogy in order to emphasize underlying power structures. I initially used genealogy in the sense of reverse chronology, i.e. as a mode of thinking about the past that substituted an associative-generative chain for the causal nexus rather than breaking with it, with genealogy thus halfway between chronology and archaeology. Perhaps one can think of it as a dual process, whereby a genealogical mode

40 The issue of rupture versus continuity is one that initially distinguished Foucault’s archaeology from the work of the *Annales* School in France (notably Ferdinand Braudel’s writings). For a more complicated conception, notably of ‘multiple historicities’, see Barbara Klinger, “Film history terminable and interminable: Recovering the past in reception studies”, *Screen* 38, no. 2, (1997): 107-128.

41 Foucault, *The Archaeology of Knowledge*, 176.

of reasoning firmly separates cause and effect, accounting for origins in a non-chronological way and allowing for non-linear clusters of events, and thus of continuities as well as breaks, repetition as well as rupture. As Foucault himself envisages the dynamics of historical change:

To say that one discursive formation is substituted for another is not to say that a whole world of absolutely new objects, enunciations, concepts, and theoretical choices emerges fully armed and fully organized in a text that will replace that world once and for all; it is to say that a general transformation of relations has occurred, but that it does not necessarily alter all the elements; it is to say that statements are governed by new rules of formation, it is not to say that all objects or concepts, all enunciations or all theoretical choices disappear. On the contrary, one can, on the basis of these new rules, describe and analyse phenomena of continuity, return, and repetition.⁴²

An archaeological approach aligns itself with this model, describing and reconnecting historical phenomena in a different conceptual space, either by positing distinct epistemes and discursive formations or by a conjuncture or a constellation that ‘makes new sense’ explicitly from the point of view of the present. The links to the past are weaker than causal connections but stronger than mere correlations, since one would still want to claim that such archaeology could uncover evidence that testifies to determination and control and speaks of domination and legitimation.⁴³

Media archaeology would thus be something of a hybrid, its ‘archaeology’ in part borrowed from Foucault’s ‘political-polemical’ definition but partly also consonant with the more common-sense, literal definition of archaeology as the discipline that studies past human activity through its material culture, physical remains, and symbolic artefacts. In a way, the practice of archaeology today mirrors the situation in film history to the extent that several tendencies appear to oppose or compete with each other: the objective of an archaeological dig can be to find, reconstitute, and display individual artefacts as artworks and precious objects, but it can also have another purpose, namely to collect fragments and unearth traces from the

42 Ibid., 173.

43 “The Anglo-American tradition has valorized Foucault as a thinker who emphasized the role of discourses as the loci where knowledge is tied with cultural and social power. Material bodies, events, and institutions are all conditioned by discursive formations. The effects of ‘hard’ technology are considered secondary to immaterial forces that differentiate and mediate their uses.” Huhtamo and Parikka, introduction to *Media Archaeology*, 9.

dust and residue of fireplaces, burial grounds, or waste grounds that serve above all to visually re-present or discursively infer a whole way of life, the spiritual beliefs, or nutritional habits of a people—in short, the material and mental ‘world’ of a community. In the first case, the master discipline is art history, while the second procedure is interdisciplinary, ranging from anthropology and the history of religion to biology and medicine, also making use of geology and genetics as naturally as of art history and traditional archaeology. While the former would argue that such interdisciplinarity ends up trying to combine incompatible disciplines and research procedures, the latter holds that any meaningful reconstruction of the past requires such incompatibilities, not least to flag that any reconstruction has to remain inconclusive, incomplete, open to revision and reinterpretation.⁴⁴ As the editorial of the *Journal of Contemporary Archaeology*'s special issue on media archaeology puts it: “[one may] wonder whether this might be one of those opportunities that invite archaeologists to develop new ways of attending to contemporary assemblages that produce space and time in ways that are profoundly different from the spatio-temporalities of, say, structured deposition.”⁴⁵

Media Archaeology by Default as well as by Design

Translated into film history, the same tension can be observed in the archival policy and preservation practice of the past thirty years between those archivists who are above all interested in restoring ‘masterpieces’ that can be ‘rediscovered’ at festivals, shown during retrospectives, and celebrated in glossy publications,⁴⁶ and those archivists who are more concerned with cataloguing, interpreting, and thus rescuing the decaying remains of nitrate tins, the hitherto unidentified ‘bits-and-pieces’ of their

44 See, for instance, Alice Beck Kehoe, *Controversies in Archaeology* (Berkeley: Left Coast Press, 2008).

45 Angela Piccini, “Media Archaeology: An Invitation”, *Journal of Contemporary Archaeology* 2, no. 1 (2015): 1-147.

46 An example would be Enno Patalas and the Munich Film Archive, which undertook costly restorations of German classics by Fritz Lang and F.W. Murnau, often having to rely on incomplete or less than optimal copies. Patalas was also responsible for the restoration of S. Eisenstein's *Battleship Potemkin*, which premiered at the 2005 Berlin Film Festival. https://www.berlinale.de/en/archiv/jahresarchive/2005/08_pressemitteilungen_2005/08_Pressemitteilungen_2005-Detail_2047.html

collection,⁴⁷ the so-called ‘orphans of the cinema’, in order, for instance, to study the coherence of particular forms of ‘programming’, or to date the historical consolidation of stylistic ‘norms’, identify studio styles of set designs, camera placement, and figure blocking. For these ‘archaeologists’, the masterpieces are less telling and valuable than more ‘run-of-the mill’ studio productions.⁴⁸

During the 1970s and 1980s, scholars of early cinema had to become archaeologists almost by necessity, given the sheer number of incoherencies, inconsistencies, and errors in the traditional accounts of cinema’s first decades. These could not be rectified merely by adding more research; the whole film-historical enterprise had to be recast. It implied a new self-reflexivity about (and eventual change of) method, which in turn introduced quite different levels of argument in order to deal with the incompatibilities of previous accounts. By contrast, until quite recently, contemporary historians of new media rarely took the time to be reflexive with respect to method and seldom felt the need to adopt an archaeological approach. Often enough, a posture of *tabula rasa* prevailed, not least because of the strategic advantages of legitimizing the ‘new’ without too much ballast from the past. It was—among many others—one of the great virtues of Lev Manovich’s *The Language of New Media*⁴⁹ that it provided a credible *cinematic* genealogy for some of the key features of new media—montage, multiple screens, compositing, scalability, etc.—while also reconstructing the diverse and quite distinct origins, for instance, of the (computer) screen in impeccably archaeological fashion.⁵⁰

Film History as Media Archaeology: Tracking Digital Cinema does not pretend to take up or extend Manovich’s agenda.⁵¹ Instead, it proceeds from the opposite direction, approaching digital media practice by having cinema

47 For a detailed analysis of the Jean Desmet Collection at the Dutch Film Museum, see Ivo Blom, *Jean Desmet and the Early Dutch Film Trade* (Amsterdam: Amsterdam University Press, 2003).

48 Ben Brewster and Lea Jacobs’ *Theatre to Cinema: Stage Pictorialism and the Early Feature Film* (Oxford: Oxford University Press, 1997) and David Bordwell, Janet Staiger, and Kristin Thompson’s *Classical Hollywood Cinema* (New York: Columbia University Press, 1985) both make a strong and explicit case for seeking out and analyzing the ‘average’ studio production.

49 Lev Manovich, *The Language of New Media* (Cambridge: MIT Press, 2001).

50 Lev Manovich, “Towards an Archaeology of the Computer Screen”, in Thomas Elsaesser and Kay Hoffmann (eds.), *Cinema Futures: Cain, Abel or Cable? The Screen Arts in the Digital Age* (Amsterdam: Amsterdam University Press, 1998), 27-43.

51 Lev Manovich’s *Software Takes Command* (New York: Bloomsbury, 2013) represents an extension but also a radical rethink especially of the central idea of his previous book, namely that the (history of avant-garde) cinema effectively constitutes the (media) interface for many of the day-to-day encounters with new media.

firmly in mind—its apparatuses, its affordances, its supposedly defining characteristics. Nonetheless, the book offers suggestions and gives concrete examples of how and why the study of digital cinema can benefit from both the reflexivity and the discursiveness that film history as media archaeology can bring to the field. Foucault's legacy is still relevant, since it helps to stake a claim for the special epistemological importance of this early cinema and, by extension, for cinema as such within the several histories of modernity. Not only to counter or nuance the notion that cinema is above all a narrative medium and the inheritor of the nineteenth-century novel but also to support, from a historical perspective, the increasingly recognizable argument that cinema can be a form of thought—or, as I would prefer, a form of thought experiment.⁵²

Such epistemological claims are complex and not uncontested. Initially, they were suggested to me by various sources, apart from the readings of Foucault and several essays by Burch. With other early cinema scholars, notably Tom Gunning and Charles Musser, I shared an interest in the New York avant-garde (Ken Jacobs and Michael Snow were especially important here), while my involvement since the mid-1970s with the work of Harun Farocki introduced me to another version of media archaeology. Apart from practicing a Bert Brecht-inspired 'blunt materialism', Farocki highlighted the need to investigate what he would subsequently call "operational images", which alerted me to the importance of the non-entertainment uses of the cinematic apparatus, especially in the fields of scientific experiment and medicine, heavy industry and factory work, surveillance and military operations, which in turn drew my attention to the extraordinary (and extraordinarily multi-medial and multi-functional) career of Oskar Messter, a previously largely forgotten German multimedia entrepreneur. As a writer on German cinema, my "German media theory" was derived from Farocki and Siegfried Zielinski rather than from Friedrich Kittler, while Paul Virilio and Gilles Deleuze provided conceptual support for the essays on the different "S/M" practices of the cinematic apparatus, one of which ("Digital Cinema and the Apparatus: Archaeologies, Epistemologies, Ontologies") is reprinted below.

One can see why Foucault was so suggestive for scholars of early cinema, because he allowed us to argue that 'early cinema' was a separate episteme with its own internal logic, and therefore radically distinct from so-called classical cinema. This meant that the purpose of early cinema studies was to

52 The case for cinema as thought experiment is argued in Thomas Elsaesser, *European Cinema and Continental Thought* (London: Bloomsbury, forthcoming).

identify the discourses—the institutions, the practices, the power-relations, the competing objectives, and interest groups involved in cinema, or what was to become cinema. And we used Walter Benjamin to read individual films as the allegories of these larger discursive formations: We did not—as previous historians had done—judge these films in relation to canons of realism, as a mimetic representation of reality, or by the standards of novelistic narrative and storytelling but as encoded social texts and complex artefacts, which had to respond to certain external forces and address specific publics and audiences but also tried to find compromises and creative solutions to these different demands and pressures. One of the clearest examples of how early cinema studies differed from conventional history was around the question of why cinema became a storytelling medium, i.e. whether cinema had to become predominantly a narrative medium, or whether cinema had always been something else besides – a claim persistently maintained by the avant-garde, as well as by many theorists and philosophers.

At the same time, the Lumière cinematographe and the Edison kinetoscope had become embedded in the wider developments and popular awareness of other media of communication and transport, of display, education, and entertainment. It meant that film history as media archaeology had to look beyond the usual genealogies that were cited in order to explain the ‘birth’ of cinema, such as shadow plays and magic lanterns, persistence of vision and the invention of photography, which, in the conventional account, all somehow miraculously converged in the cinematographe—as if that was their obvious destiny, like tributary streams coming together to form one single river: cinema. As it turned out, there was no such river but rather a striated and layered landscape, more like a battlefield than a natural formation, pacified by truces and compromises rather than by harmonious convergence.

Media Archaeology and the Digital Turn

If Foucault has without a doubt been the formative influence on virtually everyone engaged in media archaeology, his *Archaeology of Knowledge* gave ‘archaeology’ perhaps too deceptively familiar a ring, as if we all knew what was meant and how the term could be applied productively. The problem for his disciples in film studies was that Foucault showed little (professional) interest in cinema (other than seeing it as a problematic vehicle for false popular memory). And while he wrote with passion and insight about painting, he never seriously engaged with the technical media (his ‘archives’ were

predominantly of written and printed documents). On the other hand, his writings on surveillance and spatial control, on self-monitoring and forms of visual coercion, on the body as a site of inscription and disciplinary regimes proved enormously influential. In fact, his importance continues to grow in the digital realm, partly because some of his main insights were so succinctly summarized by Deleuze in his “Postscript on the Societies of Control”.⁵³ But the new century is also Foucault’s because of the exponentially increased capabilities for surveillance that our widespread use of the Internet, global positioning systems, and mobile communication devices have given to corporations, to legal and illegal spy agencies, and to national governments.

The adoption of ‘media archaeology’ as an analytical concept and a practice among (film) historians was, however, due to more than Foucault’s intellectual groundwork. Besides early cinema, the factor that favored the rise of a new approach to history—and, some would argue, the reason for the surprising popularity of media archaeology, at least since the new century—was the suddenness of digital media’s appearance, their broad appeal and quasi universal acceptance in so many areas of daily life—not just in cinema, music, or writing (i.e. the education and entertainment media) but for business transactions, global finance, and cross-border commerce. The almost overnight presence of digital tools—hardware and software—in work and play, information and communication came for many media scholars as a shock. How could so many different technologies, industrial processes, bureaucratic practices, daily habits, and media histories converge so quickly into one all-embracing ‘digital machine’ that swept everything before it? How did all these changes come about? Was it an act of liberation (“information wants to be free”) or was it a capitalist plot (“American tech companies’ takeover bid”)? The fact that some of these devices, gadgets, and applications seemed to possess quasi-magical powers all contributed to a kind of astonished turn towards the past—“Where did all this stuff come from?” As a result, the idea of media archaeology, in the sense of presupposing a discontinuous, heterogeneous, differently caused, and interconnected emergence for digital media, *seemed easier to accept, more intuitively plausible than linear histories and mono-causality*. A strict cause-and-effect logic, where each technology’s trajectory through time would have had to be mapped separately, did not readily explain how so many of these media technologies and ingenious inventions—with quite different characteristics, origins, and pedigrees such as digital photography,

53 Gilles Deleuze, “Postscript on the Societies of Control,” *October* 59 (Winter 1992): 3-7.

wi-fi connectivity, computer software, miniaturization, silicon chips, track pads, touch screens—could suddenly come together (‘converge’) in word processing, digital imaging, seamless scalability, mp3 music files, digital video, non-linear editing, voice-recognition, and instant transmission.

There was thus a distinct need for explanation, a rethinking of time frames in order to accommodate all these transformations but also to reconsider the very nature of change itself. Traditional notions of history and causality just did not seem to apply any more. There had to be room for coincidence and contingency, for the ‘six degrees of separation’ and ‘small world syndrome’. ‘Conjuncture’ and ‘correlation’ became as important as causation and consequence, and accident and chance needed to be recognized as real world agents. Change was precipitous: scarcely had one become used to new inventions when they had already become obsolete (think videotape and videorecorder, think Walkman replaced by mp3 player and iPod, think DVD replaced by download and streaming video). The vocabulary of choice was ‘creative destruction’ and ‘disruptive technologies’. Terms that Foucault had used in the context of revolutionary actions that were meant to overthrow the ruling order—rupture, epistemic break, etc.—were suddenly being used by neo-liberal entrepreneurs and capitalist ideologues. When Apple proudly proclaimed in 2015 that “the only thing that has changed is everything”,⁵⁴ it was meant to signal not only that capitalism and technology are still the most revolutionary agents around but that the tech companies have successfully co-opted change itself (i.e. history) along with the erstwhile anti-capitalist opposition: the dissenters, the hackers, and the disruptive forces of the counter-cultural movements.

With respect to digital media, then, conventional notions of history were also not adequate to explain the changes one was witnessing, and something like archaeology—i.e., a spatialized concept of time and transformation—seemed more promising and appropriate. In other words, it was as if media archaeology had to step into the breach and—at least temporarily—fill this gap in explanation, confronting bafflement and possibly even panic, fuelled by these ominously short life cycles of almost every device connected with digital media. Computer hardware becomes obsolete almost as fast as operating systems have to be reinstalled, while dedicated software dictates the rhythm of the update and the beat of the upgrade. It leaves users fighting the distinct sense that even the recent past is receding faster than one could either envision the future or make sense of the present. Wolfgang Ernst

54 Tim Cook, Apple Developers' Presentation, San Francisco, Sept 16, 2015 <http://dailyflickk.com/the-only-thing-that-has-changed-is-everything-tim-cook/>

calls media archaeology “a kind of epistemological reverse engineering”, but might ‘archaeological’ approaches to contemporary media history not just as well be seen as *attempts at reverse engineering the future*, made necessary in the face of a bewildering proliferation of digital media phenomena and, even more importantly, in the face of a future that has already been colonized and predetermined by global companies like Google, Facebook, and Apple, whose promise is always for more of the new?

If film studies in the 1980s initially came to media archaeology in large part because of the veritable explosion of interest in early cinema and the decades preceding the 1890s, digital cinema often became the explicit reference point in the present from which to seek out precedents and parallels across a hundred-year span. The need for some historical distance was the more keenly felt, especially by those for whom digital media were front and center and who began to distrust the boosterish discourse of the ‘new’ in ‘new media’ or doubted the capitalist fantasy of unlimited growth and the promise of perpetual improvements fostered by the tech world. It called for intellectual resistance and political rebellion, for which media archaeology became the code word and the rallying cry. Science fiction author and cyberpunk writer Bruce Sterling put it most pithily when he called for a dead media handbook:

What we need is a somber, thoughtful, thorough, hype-free, even lugubrious book that honors the dead and resuscitates the spiritual ancestors of today’s mediated frenzy. A book to give its readership a deeper, paleontological perspective right in the dizzy midst of the digital revolution. We need a book about the failures of media, the collapses of media, the supersessions of media, the strangulations of media, a book detailing all the freakish and hideous media mistakes that we should know enough now not to repeat, a book about media that have died on the barbed wire of technological advance, media that didn’t make it, martyred media, dead media. The handbook of dead media.⁵⁵

For the lovers of early cinema, however, the medium was very much alive! Those freshly restored nitrate copies, sometimes in mint condition, had an eye-popping vitality and shiver-down-your-spine presence. At annual

55 Bruce Sterling, *The Dead Media Project: A Modest Proposal and a Public Appeal* (1995) (<http://www.deadmedia.org/modest-proposal.html>). See also https://en.wikipedia.org/wiki/Dead_Media_Project and Garnet Hertz’s “In Memory of the Dead Media Handbook” (2009) <http://www.conceptlab.com/problems/>.

festivals such as the *Giornate del cinema muto* in Pordenone, or *Il cinema ritrovato* in Bologna, one discovered cinema when it was vigorous, vital, and surprisingly self-assured. Tim Druckrey's irritated diatribe (cited above) seems aimed at Sterling's 'paleontological perspective', and so it is perhaps small wonder that media archaeology found itself quickly splintering into several strands and factions, including the disavowal or rejection of the very name 'media archaeology'. In film studies, locutions such as Gunning's 'cinema of attractions' superseded Burch's 'primitive cinema' and all but replaced 'early cinema'. In media studies, Siegfried Zielinski preferred the term 'anarchaeology' (a play on words to indicate that media developments are 'leader-less')⁵⁶ before settling on 'variantology' (to indicate his preference for metaphors drawn from paleontology, and pointing to species diversity), while disciples of Friedrich Kittler such as Bernhard Siegert opted for the deliberately pleonastic compound 'cultural techniques' as a way to distinguish a conceptually more rigorous media philosophy from media archaeology, deemed to have become already too fashionable in its hands-on materiality, too encumbered by the free-for-all uses of the word 'media', or too contaminated with Foucault's own terminological vacillations between 'archaeology' and 'genealogy'. Wolfgang Ernst—Kittler's successor at Humboldt University in Berlin—calls his media archaeology 'archivology' and defines it as "epistemological reverse-engineering". Ernst downplays the human subject as agent of historical and technical change and instead wants to uncover the "nondiscursive infrastructure and (hidden) programs of media" that determine the scope of what humans can think and do.⁵⁷ His archival media materialism is based on diagrams, data, code, programs, and numbers rather than on specific media technologies or obsolete machinery. It is not surprising, therefore, that Vivian Sobchack, in a benevolent afterword to Huhtamo and Parikka's collection, calls media archaeology "an undisciplined discipline that assiduously avoids totalizing theory".⁵⁸

Initially, film history as media archaeology was a deconstructive enterprise and tried to disassemble set preconceptions—about film history

56 Zielinski points out that the Greek word *archos* can also mean 'leader', yet when studying media and their 'inventions', we need to get away from any 'great man theory of history'. *Deep Time of the Media: Towards an Archaeology of Hearing and Seeing by Technical Means* (Cambridge: MIT Press, 2006), 26.

57 Wolfgang Ernst, *Digital Memory and the Archive* (edited and introduced by Jussi Parikka; Minneapolis: University of Minnesota Press, 2013), 55, 59.

58 Vivian Sobchack, afterword to Huhtamo and Parikka (eds.), *Media Archaeology: Approaches, Applications, and Implications* (Berkeley: University of California Press, 2011), 328.

and the nature and forces that drive historical change in film style, modes of production, institutional organization, and business models. It targeted with its deconstructive efforts above all the widespread (ab)use of organic metaphors and teleological narratives that appropriated the past in order to self-congratulate the present. Or, to quote Druckrey once more:

An anaemic and evolutionary model has come to dominate many studies in the so-called media. Trapped in progressive trajectories, their evidence so often retrieves a technological past already incorporated into the staging of the contemporary as the mere outcome of history. These awkward histories have reinforced teleologies that simplify historical research and attempt to expound an evolutionary model [...]. Anecdotal, reflexive, idiosyncratic, synthetic, the equilibrium supported by lazy linearity has comfortably subsumed the media by cataloguing its forms, its apparatuses, its predictability, its necessity. Ingrained in this model is a flawed notion of survivability of the fittest, the slow assimilation of the most efficient mutation, the perfectibility of the unadapted, and perhaps, a reactionary avant-gardism.⁵⁹

The counter-offensive against these “anaemic evolutionary models” was staged from a vantage point of non-linearity and a certain pleasure in disorderliness and creative chaos, as tokens of a wished-for ‘openness’. It reflected a preference for *becoming* over *being*, of *hybridity* over *specificity*—paradigms that became pervasive also in critical theory and cultural studies. Beyond that, media archaeology aspired towards technical description rather than interpretation, and it set the notions of networks and nodes against ‘vertical’ causality and ‘linear’ chronology. Horizontality and connectivity became the ‘vectors’, ‘engines’, and ‘rhizomes’ that operated as dynamic forces also in the sphere of the arts, creativity, and culture. Media archaeology has therefore been called “an anti-hermeneutic approach to media history that prioritizes the role of instruments, techniques and machines in producing cultural logics”.⁶⁰

59 Timothy Druckrey, foreword to Zielinski, *Deep Time*, vii.

60 Bernard Dionysus Geoghegan, “After Kittler: On the Cultural Techniques of Recent German Media Theory”, *Theory, Culture and Society* 30, no. 6 (2013): 66-82.

Four Dominant Approaches

Despite the impossibility of neatly delineating or demarcating the various schools and tendencies of media archaeology as they have emerged (and are consolidating themselves) since the 1990s, some broad distinctions can nonetheless be drawn. Wanda Strauven, for instance, has detected four distinct strands:

media archaeology, rather than being one school, consists of various schools, not only in terms of (trans)national borders, but also and especially in terms of methodology. To simplify the rather complex picture of a discipline that is still in formation, I identify four dominant approaches for the media-archaeological project [...] adopted by key figures of the field, which consist in seeking: 1) the old in the new; 2) the new in the old; 3) recurring topoi; and 4) ruptures and discontinuities.⁶¹

She explains that *the old in the new* goes ‘from obsolescence to remediation’, citing Jay David Bolter and Richard Grusin’s *Remediation* as an example, which reworks Marshall McLuhan’s dictum that “the content of any medium is always another medium” into ‘remediation’, the “formal logic by which new media refashion prior media forms”.⁶²

Strauven associates the *new in the old* with Siegfried Zielinski, whose “anarchaeology”, “variantology”, and “deep time” promote a media archaeology that “refers to geological time and its measurement by analysing [media as if they were] strata of different rock formations. What is crucial [...] is that these strata do not form perfect horizontal layers one on top of the other, but instead present intrusions, changes of direction, etc.”⁶³ Applied to the study of media, this means that, according to Zielinski, the “history of media is not the product of a predictable and necessary advance from primitive to complex apparatus,” from which it follows that the “current state of the art [in media developments] does not necessarily represent the best possible state”.⁶⁴

61 Wanda Strauven, “Media Archaeology: Where Film History, Media Art, and New Media (Can) Meet,” in Julia Noordegraaf, Cosetta G. Saba, Barbara Le Maître, and Vinzenz Hediger (eds.), *Preserving and Exhibiting Media Art: Challenges and Perspectives* (Amsterdam: Amsterdam University Press, 2013), 68.

62 Bolter and Grusin, quoted in Strauven, 69.

63 Strauven, 69.

64 Zielinski, *Deep Time*, 7.

The *Recurring Topoi or The Eternal Cycle of the Déjà Vu* is Strauven's paraphrase of Erkki Huhtamo's approach, who borrows the notion of topos from Ernst Robert Curtius' study of the literature of the Latin Middle Ages. Translated into the terms of media archaeology, identifying topoi is a "way of studying the typical and commonplace in media history—the phenomena that (re)appear and disappear and reappear over and over again and somehow transcend specific historical context" (1996: 300). Their trans-historical recurrence, however, does not preclude these media clichés from being themselves "cultural, and thus ideological, constructs". For Strauven, Huhtamo's media-archaeological project, which looks back into the past from the perspective of the present, recalls Tom Gunning's "uncanny sense of *déjà vu*"⁶⁵ that overcame him in the face of new media, because he noted the same mixture of anxiety and optimism surrounding the new technologies that Freud had observed at the end of the previous century around telephones and railway carriages.

Emphasizing *Ruptures and Discontinuities* is how Strauven characterizes "Foucault's Legacy", by which she alludes to the Amsterdam project as I conceived it in the mid-1990s, where a media-archaeological approach means the revision of "historiographic premises, by also taking in the discontinuities, the so-called dead-ends, and by taking seriously the possibility of the astonishing otherness of the past".⁶⁶ As already discussed, there are in Foucault's thought conceptual ambiguities of how apparent continuities might be hiding breaks and disguising changes in default values or shifts in the frames of reference. But such changes 'inside out', as it were, where the new looks like the old—or even disguises itself as the old—are crucial to understanding how different epistemes connect to each other, while still needing to be thought of as distinct. For instance, for most moviegoers, the change from analogue film to digital film and from celluloid projectors to digital beamers was barely perceptible, while 'behind the scenes' the changes were momentous (the shifting frame of reference to all things digital; postproduction and special effects as the default values even of cinematic realism; the battles over digital projection standards). This is why I argue that 'digital cinema' is both a contradiction in terms and an accurate description of how 'everything changes and everything remains the same'.⁶⁷

65 Tom Gunning, "Heard over the Phone. The Lonely Villa and the de Lorde Tradition of the Terrors of Technology," *Screen* 32 (Summer 1991): 185.

66 Strauven, 70.

67 Thomas Elsaesser, "Digital Cinema: Convergence or Contradiction", A. Herzog, J. Richardson, C. Vernallis (eds), *The Oxford Handbook of Sound and Image in Digital Media* (Oxford: Oxford University Press, 2013), 13-44

As to the “astonishing otherness of the past”, media archaeology, revealing and naming the particular mindsets or thought processes that produced a certain device or dispositif can show how materially and conceptually different the past is from the present, even in its apparent similarity, which in turn leads one to speculate what might have been and could still be, along with what has been, has been forgotten, or is poised to return.

Media Archaeology and the Museum World

Before describing in more detail this Amsterdam project—which Strauven herself joined in 2002—it is worth mentioning “media archaeology as media art” (Strauven) as the third site (along with early cinema studies and the digital turn) that both favors and necessitates media archaeology. One of the remarkable events in the mediascape of the 1990s is the migration and displacement of cinema and the moving image into the museum. Media archaeology would in this case be one of the practices (rather than historiographical reactions) that responds to the more general dislocation and re-location of cinema around the centenary of cinema itself, an occasion which, emblematically, was seen as the change of default value from photographic to post-photographic cinema, notably with the release of Steven Spielberg’s *JURASSIC PARK* (1993), Pixar’s *TOY STORY* (1995), and James Cameron’s *TITANIC* (1997), three films that introduced computer-generated special effects to a mass audience. But 1995 was also the year that was the start of a ten-year series of major exhibitions dedicated to cinema, held by prestigious museums including the Hayward Gallery in London, the MoCA in Los Angeles, the Whitney in New York, the MuMoK in Vienna, the Centre Pompidou in Paris. These were all institutions that had until then fought shy of giving cinema proper art space or anything more than a cinema screening room on their lower floor or basement. The question that arose was whether the art world was now celebrating cinema all the better to bury it (the mid-1990s were, as mentioned, the moment of major public figures declaring the “death” of cinema), or was it commemorating cinema by way of a hostile-friendly takeover bid? Was it that cinema in its agony was ready for a cultural upgrade, the trade-off being that the museums, especially the museums of contemporary art, would acquire cinema’s mass public appeal and the extraordinary cultural memory that its 100-year history represented as future assets?

The gamble seems to have paid off. The museum’s archaeological impulse in media and installation art was partly focused on the popular memory of

both Hollywood and the art and auteur cinema (with many a major *auteur* turned into a modern artist), but it was partly also specifically targeted at a selective appropriation of the film avant-garde of the 1970s, which—as already mentioned—had at the time been quite hostile to the museum for a variety of reasons. Filmmakers such as Michael Snow, Dan Graham, Ken Jacobs, and Anthony McCall but also video artists (who in the 1970s had been shunned by filmmakers and vice versa) were co-opted and re-introduced as installation artists. Thanks to bridging figures such as Bill Viola, the transition was smooth, spectacular, and almost imperceptible in its inner contradictions, as was the migration into biennales and documentas of established filmmakers such as Chantal Akerman, Harun Farocki, Peter Greenaway, Ulrike Ottinger, or Johan Grimmonprez.

But the media archaeological impulse was also carried by an increasing number of established and younger artists, the latter already trained and versed in digital cameras and non-linear editing, who became invested in analogue film technology, old 16 mm projectors, carousel slide projectors, photocopiers, fax machines, and 16mm film stock. Among the established artists are James Coleman, Rodney Graham, and Nan Goldin, while Tacita Dean, Zoe Beloff and Rosa Barbra are part of the next generation of media-archaeological installation artists. One way to characterize this art-space media archaeology is to speak of it as a “poetics of obsolescence”, meaning that artists are rediscovering in formerly useful objects and functioning practical devices the strange beauty of the recently useless. Such work often manifests an affective empathy with the discarded and the disfigured, reviving an aesthetics that is receptive to the *lacrima rerum* of the damaged and the broken. Not unlike the Romantics’ investment in Gothic ruins and the Surrealists’ passion for *objets trouvés* (found objects), the poetics of obsolescence embody and express a love for ‘dead media’, ‘degraded media’, or ‘dirty media’, and with respect to cinema, excavates and samples ‘found footage’—film material from often anonymous sources that can be brought back to life, proving that celluloid cinema is at once irresistibly inviting in its transparency and luminosity and preciously perishable in its materiality, and giving a new meaning to the notion that cinephilia is also in part a kind of necrophilia.

On the other hand, media archaeology—as practiced by installation artists and filmmakers exhibiting in art spaces—covers a wide spectrum of agendas.⁶⁸ The *discarded* can still be operational, bricolage-fashion, and

68 See also Matilde Nardelli, “Moving Pictures: Cinema and Its Obsolescence in Contemporary Art”, *Journal of Visual Culture* 8 (2009): 243-264.

the *useless* can liberate other energies than those of the beautiful: it raises challenging questions around temporality and functionality and reinstates the category of ‘play’ in its increasingly problematic relation to ‘work’, not only in the so-called ‘creative industries’. Some of these issues are discussed in the chapter headed “Media Archaeology and the Poetics of Obsolescence”.

The Amsterdam Media Archaeology Network

To summarize, then, there are three major impulses to which media archaeology owes its prominence since the 1990s: early cinema, digital media, and media installation art. Of these, the two that preoccupied me initially, because they were at the center of the enterprise I was most closely associated with, were ‘early cinema’ and ‘digital media’, with ‘digital cinema’ a potent oxymoron, as I try to demonstrate in my essay entitled “Digital Cinema—Convergence or Contradiction?”⁶⁹ But in the course of *Imagined Futures* and my subsequent teaching, cinema as media installation art has gained in importance.⁷⁰ That these three intersect in various ways and comment—sometimes retroactively—on each other is inevitable, since each provided a perspective from which the other could be made to appear strange and once more unfamiliar. As digital media transformed the way we processed, accessed, and experienced both still and moving images, along with the printed word, music, and speech, it proved both reassuring and exciting to be able to return to a situation—seemingly equally in ferment as ours—that prevailed a century earlier, when the telephone and the telegraph, photography and chronophotography, sound recording on wax cylinders and the typewriter as text-machine all competed with each other. If around 1900 it seemed that cinema was to emerge victorious in the realm of mass entertainment, by the 1990s, its future was no longer assured. At all events, one way of moving forward into the digital age, was to look back, not nostalgically or by way of a retreat, but in a parallax fashion, keeping

69 The third impulse identified within media archaeology—media installation art—has also been central to a course on “The Moving Image in the Museum” which I taught at Yale University and Columbia University between 2013 and 2016.

70 See the chapter “Media Archaeology as the Poetics of Obsolescence” in this volume. Under the auspices of the *Imagined Futures* research group, important work in this area has been done by Pepita Hesselberth, *Cinematic Chronotopes – Here, Now, Me* (London: Bloomsbury, 2014) and Jennifer Steetskamp, “Lessings Gespenster. Die Zeiträume der Bewegtbildinstallation” (PhD, University of Amsterdam, 2012), as well as Edwin Carels, *Animation beyond animation: A media-archaeological approach* (PhD, Ghent University, 2014).

two viewpoints or periods firmly and simultaneously in focus: the ‘episteme 1900’ and the ‘episteme 2000’.

If in the rediscovery of the first decades of cinema the digital turn had a subordinate role in the background, it was nonetheless present: What struck me, for instance, was how much easier it had become, in light of current upheavals, to ‘understand’ early cinema as a distinct epoch or episteme, which is to say, how one felt curiously ‘at home’ in the world of the films and filmmakers from the 1890s and from around 1900. This strange but pleasing familiarity was no doubt in part illusory as subsequent corrective maneuvers would show, but it was also due to the fact that, with the ‘conceptual rupture’ of the digital in the new millennium, it was possible to formulate newly pertinent questions and address them to an earlier period of major media change, prompted by the awareness of how an otherwise quite slowly evolving media landscape could suddenly experience very radical and multi-level changes.

In my personal case, making direct contact with early cinema not only altered my intellectual outlook on film history and film theory. It also led to a change in career and location because it took me from the University of East Anglia to the University of Amsterdam—via an unexpected detour to a place that for two generations of film scholars is now all but synonymous with the serious study of ‘silent cinema’: the Verdi cinema in the Northern Italian city of Pordenone. There, as already mentioned, the annual festival known as the *Giornate del cinema muto* has been held since 1985, and it was in Pordenone, during my first visit there in 1989, that I made the acquaintance, among others, of scholars, archivists, and film specialists from Amsterdam whose film museum was to play a major role in the rediscovery of so many unique films from the period between 1907 and 1917: crucial years, as it turned out, of cinema’s consolidation and internationalization.

My move to Amsterdam, tasked to initiate a film and television studies department at a university, proved to be an opportunity to put the study of early cinema and of digital media on an equal footing.⁷¹ In due course, thanks to two international MA programs (“Film and Media Studies” and “Presentation and Preservation of the Moving Image”) where junior faculty co-taught with me a mandatory module on “Media Archaeology”, several joint research enterprises (which included PhD students) began to take shape around the examination of possible parallels between early cinema,

71 I was greatly helped in this by my then PhD student Michael Punt (now Professor of Digital Art and Technology at Plymouth University, UK) who came with me to Amsterdam from East Anglia.

digital cinema, and—somewhat later—archive-based installation art.⁷² From 2005 onwards, the main research project was called *Imagined Futures (iFut)*⁷³ and was convened by myself, Wanda Strauven,⁷⁴ and Michael Wedel.⁷⁵ Given the number of researchers, not all the projects associated with or affiliated to the Amsterdam network pointed in the same direction, nor would everyone recognize their work as an integral part of media archaeology.⁷⁶ As was to be expected, some cinema historians located in Amsterdam felt less close to the project than others, while film scholars working geographically further afield felt more sympathetic and were eager to join.⁷⁷

The broader alliances are, however, reflected in another aspect of the Amsterdam network, i.e. the substantial number of monographs and collected volumes in the area of early cinema/media archaeology that were published over the years by Amsterdam University Press in its series “Film

72 Starting in the mid-1990s, we were able to invite as distinguished visitors and research fellows David Bordwell and Kristin Thompson, Robert C. Allen, Lev Manovich, and Jussi Parikka, among others.

73 The *Imagined Futures* research group, apart from its three coordinators, consisted of seven PhD students and was affiliated with the Gradisca Spring School, organized every year by the University of Udine. Exchange visits were also established with several international research networks, notably the GRAFICS group around André Gaudreault and Viva Paci, Université de Montreal, and the team led by François Albera and Maria Tortajada at the Université de Lausanne. A similar research project (“Film 1900”) had been formed at the University of Siegen, led by Klaus Kreimeier, Joseph Gancarcz, and Anemone Ligensa. There were also joint meetings in Amsterdam with colleagues from the University of Utrecht, notably William Uricchio, Frank Kessler, and Nanna Verhoeff.

74 Wanda Strauven’s first major publication was devoted to F.T. Marinetti and his work across several different media, including cinema: *Marinetti e il cinema. Tra attrazione e sperimentazione* (Udine: Campanotto, 2006).

75 Michael Wedel has published an exemplary media archaeological study of sound and (early) cinema, *Der deutsche Musikfilm: Archäologie eines Genres 1914-1945* (Munich: text + kritik, 2007).

76 The Dutch film historian Karel Dibbets, together with Bert Hogenkamp (and loosely associated scholars such as Ansjé van Beusekom, Ivo Blom, Huub Wijfjes, Judith Thissen) had been working on an extensive database to catalogue Dutch film culture, audience studies, and the history of cinema theaters, using digital tools and specially developed software. While there were personal and professional contacts with our Media Archaeology group, a difference in research methods and goals precluded a more formal affiliation.

77 Mention must be made of another Amsterdam institution, De Balie, where Eric Kluitenberg organized the symposium “An Archaeology of Imaginary Media” in February 2004. A crucial collaborator and media archaeologist extraordinaire is Edwin Carels, nominally working in Ghent but omnipresent, including in Amsterdam and for many years now at the Rotterdam Film Festival: <http://expertise.hogent.be/en/persons/edwin-carels%28edd99c20-4c0a-41d7-9944-44a9864fad20%29.html>

Culture in Transition".⁷⁸ The present essays add another volume while serving as a retrospective re-assessment of this two-decade-long endeavor.

The (provisional) culmination of the Amsterdam media archaeology project, which started around 1993 and concluded in 2011,⁷⁹ remained *Imagined Futures* which was concerned with the conditions, dynamics, and consequences of rapid media transfer and transformation. While 'media' in principle encompassed all technical media of image and sound, cinema continued to provide the conceptual starting point and primary historical focus. Changes in basic technology, public perception, and artistic practice may often evolve over long historical cycles, yet the project's main assumption was that there are also moments when transfer occurs in discontinuous, unevenly distributed fashion during relatively short periods of time and with mutually interdependent determinations.

Imagined Futures initially identified two such periods of transformation taking place across a broad spectrum of media technologies: the period from the 1870s to 1900 and from 1970 to 2000. The first witnessed the popularization of photography, the emergence of cinema, the global use of the (wireless) telegraph, the domestic use of the telephone, and the invention of radio and of the basic technologies of television; while the second saw the consolidation of video as a popular storage medium and avant-garde artistic practice, the universal adoption of the personal computer, the change from analogue to digital sound and image, the invention of the mobile phone, and the development of the internet and world wide web, leading to an information and communication infrastructure dependent on the digital

78 The series was initiated by me and I have remained its general editor. From 1994 onwards, we published *A Second Life: German Cinema's First Decade* (eds. Elsaesser and Michael Wedel), *Film and the First World War* (eds. Karel Dibbets and Bert Hogenkamp), *Cinema Futures: The Screen Arts in the Digital Age* (eds. Elsaesser and Kay Hoffmann), *Film Front Weimar* (Bernadette Kester), the English translation of *Audiovisions* (Siegfried Zielinski), *Jean Desmet and the Early Dutch Film Trade* (Ivo Blom), *Herr Lubitsch Goes to Hollywood* (Kristin Thompson), *The West in Early Cinema* (Nanna Verhoeff), *The Cinema of Attractions Reloaded* (ed. Wanda Strauven), *Films That Work* (eds. Vinzenz Hediger, Patrick Vonderau), *Cinema Beyond Film* (eds. François Albera and Maria Tortajada), *Mapping the Moving Image* (Pasi Väliäho), *Victor Sjöström in Hollywood* (Bo Florin), *The Cinematic Dispositive* (eds. François Albera and Maria Tortajada), and *Walter Ruttmann and the Cinema of Multiplicity* (Michael Cowan). To these should be added several other volumes, also published by Amsterdam University Press, in a different series: Julia Noordegraaf, Cosetta Saba, Barbara Le Maitre, and Vinzenz Hediger (eds.), *Preserving and Exhibiting Media Art*; Giovanna Fossati, *From Celluloid to Pixel*; and Nanna Verhoeff, *Mobile Screens*.

79 Wanda Strauven and Alexandra Schneider subsequently coordinated the research group "Recycling Media" <http://asca.uva.nl/research/magic-constellations/content/recycling-media-reading-group/recycling-media-reading-group.html>.

computer, telephony, radio waves, and satellites more than on the camera, photography, or moving images.

A key characteristic of such periods of rapid media change is the volatility, unpredictability, and even contradictory nature of the dynamics between the practical implications of the new technologies (their industrial applications and economic potential), their perception by the popular imagination (in the form of narratives of anxiety and utopia, panic and fantasy), and the mixed response (eager adoption or stiff resistance) they receive from artists, writers, and intellectuals. These shifting configurations among different agents offered a rich field of investigation for cultural analysis, posing methodological challenges and requiring specific case studies.

But equally inspiring was the hope that, by studying the emergence of cinema *in situ* rather than *in statu nascendi*, i.e. not as something just being born, but fully functioning in itself, while still open on all sides, one would get a better grasp of the direction of the changes we were witnessing in digital cinema, where the old 'birth' metaphor was even more inappropriate than it was a hundred years earlier. For these changes there was as yet no reliable compass other than to attentively observe this particular period of the past around 1900, as if its similarity to ours was both imaginary and real but further estranged by the fact that *their future* was not identical with *our past*, and most certainly their *imagined future* was not *our present*.

In most other ways, the Amsterdam Media Archaeology network, by concentrating on cinema, was part of the mainstream revival of early cinema in film studies to which scholars all over the world contributed, both inside and outside the academy, comprising at least two generations. While it would be invidious to list all those who have and are contributing to this still lively field, one name stands out in retrospect: that of Tom Gunning, who has been especially prolific, erudite, and detailed in his analysis of almost every significant aspect and phenomenon of nineteenth-century visual culture, recorded sound, and early cinema. With his felicitous coinage "the cinema of attractions", Gunning has done more than anyone else to propagate and popularize the period of the 1870s to 1900 and beyond, investigating an enormous range of media practices, aspects of cinema, and specific films. In 2006, the Amsterdam project paid homage to Gunning's stature and achievement by publishing an 'anniversary' volume called *The Cinema of Attractions Reloaded*, initiated and edited by Wanda Strauven. Reconstructing the genesis of the 1986 article which introduced the term, it also gives due recognition to André Gaudreault, who collaborated with Gunning for a time and who has a prominent place in the francophone world among scholars of *le cinéma des premiers temps*, along with a senior

curator of the Cinémathèque française, Laurent Mannoni, whose book entitled *The Great Art of Light and Shadow: Archaeology of the Cinema* (2000, originally 1994) provides an extraordinarily detailed and informed history of optical media from the twelfth to the twentieth century, but whose subtitle 'archaeology' refers mainly to what is more often called 'pre-cinema'.

My own ambitions were both less grand and more meta-historical. Besides trying to direct attention to early cinema in Germany (which had suffered even worse neglect than the first decades elsewhere) with a multi-authored collection of essays (co-edited with Michael Wedel) on what I called 'Wilhelmine cinema', along with studies of the German detective film, the director-producer-inventor Oskar Messter, and Franco-German film relations, I was above all interested in issues of film historiography and the challenges an archaeological approach posed to (film) history. I therefore began thinking of the wider implications of what it meant to revise and rewrite traditional film histories, not simply by adding more 'facts' or adopting newly rediscovered films into the canon but by setting out to change the very framing of film and cinema within different intellectual, cultural, socio-economic, and technological histories, while positing that at each point in time, starting with the 1890s, one was dealing with an already fully constituted art form with its own logic and rules. As argued above, this made the turn to Foucault and his archaeological method almost inevitable, and also forced me to be quite self-critical regarding my ulterior motives and goals. Was this return to cinema's 'beginnings' fuelled by nostalgia; was it the sheer challenge of helping to chart what appeared to be 'no-man's land' or 'virgin territory'; or was it to map the discourse of my fellow scholars of early cinema and materialist historians and thus to write a chapter in the intellectual history of my discipline? If one answer was: 'all of the above', another had to do with thinking more deeply about causation, contingency, coincidence, and conjuncture, about counterfactual history and more generally about the contemporary status of history. Under the impact of digital media, 'memory', 'trauma', and the 'archive' emerged as concepts somehow more authentic and useful than history, which as Foucault (via Nietzsche) taught us was above all a discourse of power, and as Benjamin argued was usually written by the victors.

All this made it easy to conceive of media archaeology, when applied to film history, as an anti-history or at least as a *counterhistory*. One could think of oneself as deconstructing the orthodox discourse of film history while at the same time resisting hegemonic forces (notably those of a once-again-global Hollywood of blockbusters), and thus imagine oneself to be engaged in a political task: championing these early films and their

apparently experimental freshness fostered the hope that one might re-inject some of that diversity bordering on chaos and disorder also into the present situation, when the avant-garde of the 1960s and 70s seemed to have run out of steam or had simply been killed off by the combined effects of multiplexes and commercial television. *Early cinema became a proxy avant-garde*: preferably anonymous but bristling with resistance, with oddity, and showing an awkward but bracing indifference to what later became the norms of 'proper' cinema. By shifting the emphasis from films as authored autonomous works, to films as the material manifestations of a range of contradictory exigencies, scholars of early cinema began comprehending cinema very concretely as a system of interlocking institutions, a mesh of heterogeneous agents in competition with each other. Specific films, if 'successful', came to be interpreted as the optimal solution or compromise formations to problems of technology, social class, audience expectations, physical conditions in the theater, or properties of the cinematic apparatus which one could trace or reconstruct in the different genres, the film forms, and even national styles. This particular hermeneutics appealed to me, and I wrote a number of such studies, of which the analysis of Franz Hofer's *WEIHNACHTSGLOCKEN* in its genre hybridity serves as example.⁸⁰ One can call the method materialist in that it tries to reconstitute the material conditions—in the widest sense—that have given rise to a given film, or one can call it allegorical in that it takes the film as an allegorical 'working through' of all the forces external to it, which act on it as constraints and affordances but also produce gaps or displacements that need to be interpreted.

In order to read these gaps, I invoked Conan Doyle and his theory of 'the dog that did not bark' as my own media archaeological method. Several articles that follow bring Sherlock Holmes' forensics of negative evidence to bear on certain moments in the history of cinema: the reasons why certain events did *not* occur are telling us something important about what *did* happen, and what may have been forgotten or seemed to have failed also belongs to history. It is an approach that situates itself between what I have referred to as counterhistory and 'counterfactual history', counterfactual history being a method that, by extending the range of possibilities (or enlarging the context), forms a conjecture of what—with the intervention of some set of equally probable circumstances or a contingent incident—might have happened instead of what actually did happen. The purpose is to

80 Thomas Elsaesser, "Sounds Beguiling: On the Origins and Transformations of Music Genres in Early German Cinema," L. Quaresima, A. Rengo, L. Vichi (eds), *La Nascita dei generi cinematografici* (Udine: Forum, 1999) 391-406.

come to a more complex understanding of why certain key events took place by speculating on the factors necessary for there to have been an outcome different from the one that did in fact occur. Certain kinds of media archaeology—for instance, when the impulse is to argue that “things might have been different”—are close to counterfactual history, but my own “dog that did not bark” forensics has a slightly different aim. For me, the challenge is to try and give back to a particular past—say, the 1890s or the 1910s—its own future: not the one that history subsequently conferred on it, which in the case of early cinema had been an impoverished and selectively appropriated one, but a future that was imagined (in popular magazines), predicted (by self-promoters like Edison), and fantasized (as in Albert Robida’s mock-dystopic *Le Vingtième Siècle, la vie électrique*).⁸¹ These ‘futures’ were in some sense realized in films that were deemed lost or had been poorly understood and on being rediscovered now look remarkably modern and sophisticated. Other historical moments still retain an underappreciated potential (disclosed by the ingenuity of some inventor, the sacrifices of some bricoleur, or the risks taken by an entrepreneur), previously dismissed as failures or dead ends. An apparent ‘loser’ in his time—Georges Demeny might be an example—could, in light of a media-archaeological rescue mission, turn out to have ‘anticipated’ uses of the cinematographe in the fields of science and education that would make him a ‘winner’ today. Likewise, an idea, whose ‘time had not yet come’ (e.g., the fantasy Edison’s telephonoscope drawn by George du Maurier for *Punch’s Almanack for 1879*) can be recognized as an uncannily prescient prototype of a video-voice communication system like Skype, adding to counterfactual history the pleasures of anachronism. Such conjectures also draw attention to what exactly had been anticipated at the end of the nineteenth century, what hopes had been invested in new media, and how these expectations came to differ from what eventually became a reality, once more making

81 Calling our media-archaeological research group “Imagined Futures” was intended to make room for the fantasies, dystopias, and anxieties always associated with technologies that are acting in proximity with the body and the senses but also to give due respect to absent causes or that which had not (yet) taken place. In this respect, we were in tune (even if we did not actively collaborate) with Eric Kluitenberg’s Amsterdam project of an “archaeology of imaginary media”, which investigated the role of non-existing media as imagined by futurologists and science-fiction writers. Also of interest to us was Jeffrey Sconce’s book on *Haunted Media: Electronic Presence from Telegraphy to Television* (Durham: Duke University Press, 2000) as well as media panics and media fantasies, such as Friedrich Kittler’s extrapolation from horror stories and vampire tales, notably Bram Stoker’s *Dracula*. See Kittler, *Draculas Vermächtnis* (Leipzig: Reclam, 1993), 11–57.

what did not happen also part of a history, or at least part of a historical imaginary, recoverable as and by media archeology.

The Deep Time of Media, or the Place of Cinema in (Media) History

Such recovery work need not restrict itself to a single country and not even to the century of cinema. On a grand scale of some two thousand years of media tools and technologies, Siegfried Zielinski's *The Deep Time of the Media*⁸² sets out to document the practical experiments and fantasy design of all those he calls "the dreamers and modelers" of media devices throughout the ages. Among them are Chinese scientists, Arab mathematicians, Greek philosophers, Renaissance alchemists, Jesuit priests, speculative thinkers from the Baroque period, all the way to Russian avant-gardists from the 1920s. Zielinski's deep time presupposes an enlarged horizon and thus a time frame and historical space that, if one tries to make his method fruitful also for cinema, not only goes beyond the hundred years that film history considers its proper domain but extends further even than the early cinema period, which had already included most parts of the nineteenth century as belonging to cinema's pre-history.

Zielinski's book posed a further challenge: if *film history as media archaeology* is to be more than the name of a nostalgic look back at a lost Eden of optical toys and vision machines, and more than cinephilia turned necrophilia (however innocent the beauty of schlocky B-pictures, or however attractive in their uselessness, the dead pieces of film technology displayed as sculptural objects now appear to us), then its practitioners face some intriguing and even disturbing questions. Foremost among them for me was why historians, philosophers, and thinkers of contemporary media tend to regard cinema as almost irrelevant within the larger histories and big-tree genealogies they now sketch for the technical media: a bias that echoes and confirms the diminished status of cinema with which I began this chapter. On the other hand, if some of the urgency behind the turn to media archaeology has come from needing a more complex historiographical model for understanding digital media, then where are we to locate the relevant epistemic breaks that separate the genealogy of cinema from that of digital media? And what would be the appropriate level of generality at which commonalities and differences should be discussed?

82 Zielinski, *Deep Time of the Media*.

The chapters “Cinema Motion Energy Entropy” as well as “Media Archaeology as Symptom” want to offer provisional answers.

Some scholars have tried their best to save cinema for the digital age and even make it the latter’s foundation. I have already mentioned Lev Manovich and his *The Language of New Media*, an early and highly successful intervention in the debate, in which Dziga Vertov’s MAN WITH A MOVIE CAMERA emerges as the film that now appears at the cusp of cinema’s multiple destinies and at the intersection of distinct cinema futures. Yet even Manovich has since moved on (to software studies), and now rarely refers to cinema. Others have been a good deal more radical and have come to the conclusion that cinema amounted to an aberration in the long history of technical media, that it was at best an “intermezzo” (Siegfried Zielinski), and at worst a “detour” (William Uricchio), delaying the development of what should have been the medium of modernity already in the 1920s: television. For Zielinski, the level of generality that assigns to cinema such a minor role is determined by all those who over millennia have tried to bridge distance, connect what is separate, and capture and preserve on a suitable material support what the human eye sees and the human ear hears—priorities more germane to television and the video recorder than cinema.⁸³ Uricchio also considers bridging distance and connecting people as one of the key motors of modern media but regards ‘simultaneity’ as the ultimate driving force behind many of the developments that have helped digital media to their dominance. For him, too, television is the more foundational media machine than cinema.

Zielinski and Uricchio are not the first or indeed the only scholars who have been eager to find an overriding force or dominant impulse that can unify the field and give a central motif or theme to their media archaeological investigations. Other media archaeologists, even more explicitly concerned with tracking the digital rather than either cinema or television, have gone back to the origins of mathematics as mankind’s alternative attempt (alternative to language, that is) first to understand but then to mould and model the real world, thanks to the abstract magic of algebra and geometry, of “quantity, structure, space and change”, of zeros, ones and equations, of Boolean operators and algorithms. Friedrich Kittler, after

83 With respect to an ‘archaeology of television’, William Uricchio has done valuable research around the origins of television in Germany. See his “Television, Film and the Struggle for Media Identity,” *Film History* 10, no. 2, (1998): 118-127. A broadly conceived ‘archaeology of television’ is sketched in Andreas Fickers and Anne-Katrin Weber’s editorial for their special issue of *View – Journal of European Television History & Culture* vol. 4, issue 7 (2015) <http://journal.euscreen.eu/index.php/view/article/view/JETHCo76/194>.

first introducing cybernetics into literary studies and driving the human out of the humanities, returned later in life to the Greeks, to “mathematics and music”, in order to decipher the meaning and origins of digital media, and so left cinema—even in the form of Plato’s Cave—to one side, more intrigued and convinced by Heraclites and Pythagoras than by Plato or Aristoteles. His disciple Bernhard Siegert—also looking for what he calls “the passages of the digital”—has been studying the emergence of the postal system in the nineteenth century, the bureaucracy of the population census, double bookkeeping, and the biopolitics practiced on Spanish galley ships sailing to South America. More recently, he has re-interpreted the discovery and properties of electromagnetism, focusing attention on Michael Faraday and the induction experiments of James Clerk Maxwell and Nicola Tesla, as the basis for today’s electronics of grids, switches, and relays.

The Archive: Crises in History and Memory

The contest between teleological and archaeological models of media history highlight the fact that digital media have also revolutionized our concepts of storage and retrieval, of access and dissemination, and thus have automated both memory and recall. It is therefore not surprising that another point of origin, cited for the digital world we live in, is said to be the Memory Arts (the *ars memoria*, or mnemotechnics), possibly inaugurated by Chinese priests, systematized by the Greeks (Simonides of Ceos), and turned into a political instrument by the Romans (Cicero and Quintilian) before being revived by Christian monks—each time based on visualization as *spatial orientation*, on the *loci* (the places) and *testes* (witnesses), whereby recollection happens along the paths and perambulation through imagined but highly ordered and organized spaces.

The revival of the memory arts goes hand in hand with the rise of the concept of the archive, itself a reflection of the importance of databases, of networks and nodes, of stochastic movement and random access. It is the archive that has become the locus of power and agency: both emblem of and counterforce to machine memory, both avatar of history and its inheritor. The archive now shapes our view of the past more decisively than history, since the archive allows us at all times to revisit and thus to rewrite the past, *to reverse engineer our present*, and thus to fashion out of the archive also a different future. In this sense—and now we return to both Foucault and Benjamin but add Jacques Derrida’s *Archive Fever*

(and thereby Sigmund Freud)⁸⁴—the archaeology and the archive are very closely aligned, given that the Greek word *arche*, besides 'old', also means: first principle, the source of action, command, governance, and authority. It is the place, the space, and the realm that is intangible and undefined in itself, but as such, the *arche* provides the conditions of the possibility of any given phenomenon or thing to exist.

What the extraordinary interest in the archive signifies is that media archaeology is thus also a symptom of a general distrust in history, of impatience with linear narrative, and of changes in our concept of causality. For instance, we now tend to consider memory more authentic than history and trauma more typical of human memory than objective recall. Not only because of all the historical traumata of the twentieth century (our immediate history and still, for some, events in living memory) but possibly also because human memory finds itself increasingly compared to and measured by machine memory. Machine memory may well be part of the reason we are so obsessed with trauma, because it seems that in almost every way other than trauma, machine memory is superior to human memory, while at the same time, paradoxically, machine memory does share certain features with trauma: for instance, repetition and randomness—in one case, random access, in the other, random return.

If media archaeology can be seen as part of a crisis in our understanding of history itself, then it also responds to an altogether too ready reliance on certain kinds of narrative as a mainstay of (cinema) historiography. In the 1970s, Hayden White's *Metahistory* demonstrated that since the middle of the nineteenth century, recurring rhetorical and narrative tropes have been at the core of the argumentative modes that for historians secured plausible historical explanations.⁸⁵ Perhaps no more: the days may not be far off when narrative—not only under pressure from game theory—comes to be seen as only one of several possible ways, even if widely used, of ordering or organizing perceptual data, actions, and events in a comprehensible and easily communicable way. At which point history, already besieged by memory studies and the archive, may have to be rethought even more radically than I am doing here, especially in the light of media arts and the manner in which history now oscillates with obsolescence. Obsolescence, as I show in the chapter 11, is itself filled with ambiguous potential, having become the reference point of so much media art, where it finds itself configured

84 Jacques Derrida, *Archive Fever – A Freudian Impression* (Chicago: Chicago University Press, 1996).

85 Hayden White, *Metahistory* (Baltimore: Johns Hopkins University, 1973).

as a form of retroactive anticipation, which is itself a particular form of narrativization in the register of revisable and reversible temporalities.⁸⁶

The Crisis in Narrative: Transmedia Studies and Participatory Culture

One of the tasks of media archaeology, so the argument has been, was to be an alternative to—or the deconstruction of—traditional film history. But besides attacking the teleology implied by classical historiography, media archaeology has also promoted itself, when focusing on early cinema, as a challenge to the normativity of linear narrative. In this, it was supported by two historical factors. First, a majority of early cinema films was non-, para-, or barely narrative: views, comic sketches, actualities, phantom rides, etc. And second, the turn to narrative was by no means a natural or inevitable progression but came about through a complex set of social, demographic, and economic factors.⁸⁷ Among these was the economic need to attract middle-class audiences and thus better paying patrons, as well as the desire to move cinema from fairgrounds and musical halls into the vicinity of shopping streets and bourgeois theaters, mirroring middle-class tastes and catering to aspirations of refinement.⁸⁸

Robert C. Allen, Charles Musser, and Tom Gunning, among others, debated these issues around narrative versus spectacle, distribution versus exhibition, sometimes quite polemically.⁸⁹ It was Gunning who eventu-

86 On obsolescence and contemporary art, see “Obsolescence: A Special Issue” *October* 100 (Spring 2002), notably the Roundtable Discussion, “Obsolescence and the American Avant-garde Film” (pp. 115-132) and Matilde Nardelli, “Moving Pictures: Cinema and Its Obsolescence in Contemporary Art”, *Journal of Visual Culture* no. 8 (2009): 243-264.

87 For some of the economic and demographic data on the turn to narrative, see “The Transition to Story Films, 1903-04,” in Charles Musser, *The Emergence of Cinema: The American Screen to 1907* (Berkeley: University of California Press, 1994), 337-369.

88 See Robert C. Allen, *Horrible Prettiness: Burlesque and American Culture* (Chapel Hill: University of North Carolina Press, 1992) and Richard Maltby, Melvyn Stokes, and Robert C. Allen (eds.), *Going to the Movies: Hollywood and the Social Experience of Cinema* (Exeter: Exeter University, 2009).

89 Internal to the emerging institution of cinema was another development favouring narrative, namely the conflict of interests and the struggle for control between distributors and exhibitors, which the former were able to decide in their favor, partly thanks to introducing longer films, made irreversible and non-interchangeable through coherent narratives. Some of the key arguments of this debate can be found in “Story Films Become the Dominant Product, 1903-04,” in Charles Musser, *Before the Nickelodeon* (Berkeley: University of California Press, 1991), 235-290.

ally carried the day with the coinage ‘cinema of attractions’ (originally an elegant alternative to exhibitors’ control, contrasted by Gunning to the ‘cinema of narrative integration’, indicative of distributors’ control). His term thus not only underlined the non-narrative character of early cinema, but also—in the way it began to be applied to contemporary Hollywood, to video games, and digital media more generally—revived other challenges to linear narratives by reinserting the 1970s avant-garde debate about anti-illusionism and non-narrative forms of cinema into the discussions around contemporary cinema and media, where interactivity, non-linearity, navigability, spectacle, and scripted spaces became key words, often (problematically) subsumed under the umbrella term ‘attractions’.

Within the wider debate around the future of narrative across the different platforms of digital media—ranging from television series, feature films, essay films, and documentaries to interactive games, alternate reality games, animation films, comic book graphic novels, art installations, and YouTube clips—the term that is in the process of replacing “cinema of attractions” seems to be the coinage ‘transmedia narratives’, inaugurated by Henry Jenkins in his influential *Convergence Culture: Where Old and New Media Collide*.⁹⁰ Just as the ‘cinema of attractions’ summarized the different debates around early cinema in a resonant formula, ‘transmedia narratives’—itself a sub-category of what Jenkins calls “participatory culture”—subsumes some of the decades-old debates around intertextuality and intermediality, along with multimodality, i.e. the way narratives can migrate across media. Other relatively new locutions such as “additive comprehension” and “narrative world-building” try to go beyond (narratological) categories such as ‘metalepsis’ and ‘paratexts’ (Gérard Genette’s terms for narratives crossing textual boundaries), expanded cinema (Gene Youngblood’s term of cross-media cinema), or the idea of extended diegesis (the ‘here-me-now’ discussed in one of the essays below). Jenkins’ terms also want to address the questions of audience engagement and subject positions, of how to maintain narrative coherence across different platforms, the phenomenon of narrative expansion in serial formats, as well as how to differentiate between the ‘viral’ propagation of stories and video clips, and the promotion of brands and the marketing of commodities—all of which takes place across social media as the channels of choice.

Again, there are many examples of boundary-crossing modes of reception in early cinema and of interactive participation (e.g., film quizzes and

90 Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006).

puzzle film)⁹¹ and para-textual commentary (e.g., the lecturer).⁹² Once regarded as trivial and transitional by film historians, these phenomena are being re-evaluated in the light of contemporary practices, enacted at a vastly expanded scale and driven by solidly organized corporate interests but also—as Jenkins insists—supported by solidly organized fans and digitally native ‘prosumers’. It would allow transmedia studies to be more inclusive, bringing together the fan bases from film and television (Jenkins’ textual poachers), with gamers, software developers, and hackers to create communities of content providers, net activists, and cultural producers.

Jenkins has recently proposed to reframe his transmedia studies and participatory culture within the larger context of “media archaeology”, which he sees—similar to the perspective here adopted—as neither focused on the technology nor determined by specific narrative formats. Instead, a media archaeology of participatory culture would elaborate and excavate what he calls “the 200 years of grass-root movements trying to gain access to the tools of cultural production” by tracking the cultural technologies that have enabled content (stories, images, ideas, etc.) to circulate by means of “systems of spreadability”, his term for mechanical mass reproduction.⁹³ Not surprisingly, the Gutenberg printing press and texts in the vernacular are among his examples, too, so that the printing press becomes (jokingly, one hopes) “web minus 10.0”—a neat example of teleology in reverse and thus perhaps not the most persuasive proof of media archaeology (as defined in this chapter).

More promising but similarly dictated by hindsight is the assumption, regarding the history of cinema, of a change in default value. Starting from contemporary evidence of transmedia and interactivity, Jenkins would argue that audio-visual media like cinema have always been potentially or actually participatory. This would make the period of classical narrative cinema—i.e. the projection of moving images in purpose-built theaters with a darkened auditorium and separate séances—a relatively short interlude

91 Michael Cowan “Learning to Love the Movies: Puzzles, Participation and Cinephilia in Interwar Film Magazines,” *Film History* 4 (2016): 1-45.

92 Andre Gaudreault, “Fonctions et origines du bonimenteur du cinéma des premiers temps”, *Cinémas* (vol 4, nr 1, Autumn 1993): 132-147.

93 Henry Jenkins et al., *Spreadable Media: Creating Value and Meaning in a Networked Culture* (New York: New York University Press, 2013). See also Fabrice Lyczba, “Conference Report: Contemporary Screen Narratives” (University of Nottingham, 2012), *InMedia* 2/ 2012 <http://inmedia.revues.org/482>. A book inspired by Jenkins and using the term ‘archaeology’ is Carlos Scolari, Paolo Bertetti, and Matthew Freeman (eds.), *Transmedia Archaeology: Storytelling in the Borderlines of Science Fiction* (Basingstoke: Palgrave Macmillan, 2014).

lasting from 1917 to 1977, i.e. some 60 years, out of a history of projected spectacle that roughly goes back to the late eighteenth century.⁹⁴ What speaks for such a limited periodization is that contemporary cinema has seen a proliferation of locutions indicative of a crisis in linear narrative: modular narratives, multi-character narratives, forking-path narratives, multiple draft narratives, fractal narratives, database narratives, multiple choice narratives—not to mention puzzle films, mind-game films, or the complexly interwoven and criss-crossing storylines of US quality television series such as *LOST*, *THE SOPRANOS*, *THE WIRE*, *MAD MEN*, *BREAKING BAD*, *HOMELAND*, or *HOUSE OF CARDS*, commissioned with high production values by cable networks such as HBO and Bravo or a streaming service such as Netflix.

Yet especially in these large-budget television series, narrative as a vital cultural form has not disappeared, however much it might be under siege, and on the contrary, has merely gained in complexity, layeredness, and intricacy. From within a media-archaeological perspective one can usefully cite a few of the pros and cons of narrative that both keeps it alive and predestines it to change. Narrative has been mankind's privileged storage mode for at least 5,000 years, modelling itself on the human experience of time as a succession of sequenced events and thus following the logic of the "post-hoc ergo propter hoc" (what follows x is caused by x). Narrative often takes as its dramatic arc, as well as its default value, the life cycle of beginning (birth), growth (change, transformation), middle (maturity), and end (death), and proceeds from a steady state, interrupted by a disturbance, which necessitates actions (moves and countermoves) until a new equilibrium is re-established.

Why is this model so prevalent and so persistent? There are some evolutionary reasons. Humans are creatures of anticipation: knowing what happens next is a matter of survival; we are goal-oriented and purposive, i.e. we internalize thinking in terms of means and ends and project these along linear trajectories; we rely on causality, and our actions are shaped by anticipated consequences; we live and experience time's arrow as irreversible. All this predisposes us to narrative as a way of organizing information, and to linear narrative as its main vector, since physiologically, we have an upright-forward orientation, and we speak of time (especially the future)

94 The first fully documented phantasmagoria presentations date from around 1797. See David J. Jones, *Gothic Machine: Textualities, Pre-Cinematic Media and Film in Popular Visual Culture, 1670-1910* (Cardiff: University of Wales Press, 2012).

in spatial terms, as in 'going forward', 'the years ahead of us', 'the decisions facing us', etc.

What, then, are the countervailing forces that have put narrative into crisis? We are also creatures of mimesis, of learning by imitating: we 'mirror' one another. We may wish our life to progress in a steady and straight line, but we know it to be full of accidents and random events, which can radically change our course. Also militating against linearity is the fact that we rely on memory for our sense of identity; but memory is backward-oriented and is moreover non-linear, intermittent, traumatic, compulsive, prone to repetition, but also dependent on place and space. Yet the challenges to narrative also derive from less anthropological factors and reflect our environment and the technologies we utilize to communicate and to orient ourselves in space and time. Living in cities means a different kind of 'cognitive mapping' than in a village built around the church: the modern cityscape necessitates both different motor skills in order to navigate successfully a densely built-up environment and other perceptual skills for mastering its multi-directional movement and flow of people and vehicles. The mind-machine symbioses also militate against the linearity of print: database logic is non-linear and thus challenges narrative as a medium of storage and access of information. Machine memory and search engines work most efficiently through batch, sort, and sample rather than with sequential and causal links. Our brains, considered as neural networks, rely on connections, nodes, conjunctions, as do other kinds of networks: what counts is not causality but connectivity, not consequence but correlation. Similarly non-narrative or anti-narrative are the feedback systems that regulate so many of our sensory responses and input-output interactions with the environment, whose dynamic real-time tracking is the object of intense technological and economic investment. As I have argued elsewhere,⁹⁵ positive and negative feedback loops are increasingly important also in understanding how contemporary media function in the competitive commercial world of the Internet, where the kind of information gathering, storage, sorting, and retrieval made possible by digital tools has enhanced the value and purpose of feedback loops for tech companies, social media aggregators, and online retailers.

However, just as one might think that the scales are tipping in favor of non-narrative forms of storing, organizing, and accessing information, the strengths and advantages of narrative make themselves felt once more.

95 Thomas Elsaesser, "Reflexivity, Feedback and Self-Regulation," in *The Persistence of Hollywood* (New York: Routledge, 2013), 319-340.

Not only, as pointed out above, does narrative provide the time-space coordinates and linguistic markers (shifters) where readers, viewers, users, and players can insert themselves as unique and singular 'subjects'. Narratives, by eliminating 'noise' and by linearizing the perceptual field through suspense and anticipation, also act as 'filter' mechanisms that allow us to process data and to cope with the sensory overload that the mechanical and electronic media have brought into the world of human perception. While filters other than stories are conceivable and are being applied, narrative's persistence as storage medium, as protective shield, as mode of address, as form of recall, and as mnemotechnic device suggests that the multi-functionality of narrative will be hard to match in economy as well as in efficiency. Narrative is thus one of those areas where the deconstructive fervor of media archaeology risks overreaching itself, and where the conviction that media archaeology is either a liberating force or a method that produces new knowledge must be weighed against the possibility that it is itself no more than the ideology of the present: reflecting but also disguising the material conditions of our digital culture and its technical-technological infrastructure.

The Limits of Media Archaeology

Is media archaeology then merely the positivist ideology of digital media, while it mistakes itself for their critique? In the mode of retrospectively discovering—or setting out to prove—that 'we have always been digital', media archaeology would indeed, possibly unwittingly, draw its own limits as a critical intervention. Or can it serve as a placeholder in the current turf war between the human and the machine? Similar to Walter Benjamin's 'allegorical' method discussed earlier, for whom revolutions came to be seen as the 'emergency break' applied to the express train called 'progress', the media archaeological method might act as the emergency break whose friction of resistance causes some sparks to fly between the tracks and the wheels, where machine logic and algorithms are rushing to model the world (of experience and of action) in their image and according to their priorities.

This would confirm the perspective taken in the subsequent chapters. There, cinema remains the central reference point, even where—as digital cinema—it redefines itself as a thoroughly hybrid and impure medium, one that preserves the associationist, interactive, connectivist dimension of living organisms that stand in a feedback relation to their respective environments. Nourished by very diverse aesthetic, psychological, physiological,

and scientific problems and inquiries, cinema is no longer (just) an art form; it approximates a life form whose time is yet to come—in the age of electronic machines and artificial intelligence. While the very question of what is a life form is being urgently posed by both the humanities and social sciences (not to mention biology or chemistry), cinema is part of this spirit of the time and yet it also resists this spirit of the time, which may actually mean that it is also ahead of the game. Thus, rather than being overly concerned by it being deemed obsolete, we might consider the possibility that precisely because cinema is no longer the vehicle of so many of our current commercial priorities, political ideologies, and technological utopias, it can emerge as pivotal: especially if media archaeology has as one of its ambitions to help shape a different future out of differently understood pasts.

My particular form of media archaeology therefore does not revel in chaos and chance *per se* as much as it pleads for connectivity and interaction, often on the basis of what could be called antagonistic mutuality, rather than relying on either collaboration or convergence: that is, seemingly antagonistic or heteronymous forces can nonetheless work in ways that jointly reinforce underlying tendencies of a more general—epochal or epistemic—sway. In fact, such antagonisms may turn out to be working in separate spheres but produce similar results: for instance, both the filmic avant-garde and mainstream cinema since the 1970s have been expanding or subverting what we understand as classical narrative and perspectival space, as I try to show in the chapter entitled “The Return of 3D”.⁹⁶

I want to resist a media archaeology that mainly concerns itself with the retroactive recovery of the past for the immediate (practical) uses of the present. We would indeed be ‘forgetting’ the past if we thought we ‘owned’ this past, just as we would be *forgetful of the present* if we could not see ourselves in some constellation with a past. It brings me to a suitably paradoxical but in the end also quite logical conclusion, namely that film history as media archaeology is not an attempt to talk up cinema in order to restore it to its former glory but a way of fully embracing the possibility of its diminished significance. In the digital media landscape of today, so apparently forgetful of cinema, cinema may itself be ‘the dog that doesn’t

96 I shall return to this point in the concluding chapter when discussing some of the commonalities, such as the exploration of different modes of causality and the extension of temporalities backwards, sideways, parallel, and forward. The (re-)conversion of technology and industry into culture (Bruno Latour, Bernard Stiegler) and of culture into nature (ecology) are part of a similar realignment where formerly opposed spheres and categories are regarded as complementary in their very antagonisms.

bark' but whose presence at the scene provides a clue to the identity of the 'villain', in this case the source and the agency behind the momentous changes we have been witnessing. On the one hand, in the essays that follow, I shall be arguing that sometimes cinema is most prominent where it has become invisible and ubiquitous—or rather, it is invisible because its presence has become ubiquitous. This invisibility, on the other hand, requires media archaeology to become once more palpable and traceable, across the parallax of *untimeliness* and the interference of *obsolescence*. It was Nietzsche who argued that only untimeliness allows us to understand the present because only those who are untimely (*unzeitgemäß*) can “act counter to our time and thereby act on our time and, let us hope, for the benefit of a time to come”.⁹⁷

Giorgio Agamben, who in a somewhat different context also rediscovered the topical uses of Nietzsche's untimeliness, takes this idea into the social and the political realm. The untimely, the obsolescent, and what he calls 'inoperativeness' are needed, according to Agamben, to alert us to the timely urgency of our condition:

Precisely when something has outlived its usefulness can it be really current and urgent, because only then does it appear in all its plenitude and truth. [...] When I speak of the past, I do not mean either a timeless origin or something that is irrevocably bygone, consisting of irrefutable facts whose sequence needs to be recorded and stored in archives. Rather, I understand the past as something that is still to come and that needs to be wrested from the dominant idea of history, so that it can take place.⁹⁸

Agamben invokes Foucault's legacy regarding an archaeological perspective and the tactical use of anachronisms as the suitable tools of resistance that preserve the potential for radical change: “Given the interest of the powers that be to put the past into storage in museums, and thereby to dispose of its spiritual heritage, any attempt to establish with the past a living relationship is a revolutionary act. For this reason, I believe with Michel

97 Friedrich Nietzsche, “On the Uses of Disadvantages of History for Life,” in *Untimely Meditations* (Cambridge: Cambridge University Press, 1997), 60.

98 Giorgio Agamben, “Europa muss kollabieren”, Interview mit Iris Radisch, *Die Zeit*, 13. September 2015, <http://www.zeit.de/2015/35/giorgio-agamben-philosoph-europa-oekonomie-kapitalismus-ausstieg> [my translation].

Foucault, that archaeology—in contrast to futurology, which by definition, is in the service of power—is above all a political practice.”⁹⁹

Media archaeology could thus be a strategic intervention in further making cinema invisible, to such a degree that it becomes once more critical in the post-Nietzschean episteme of Foucault but also of Jean Luc Nancy, Jacques Rancière, and Giorgio Agamben—i.e., that of inoperativeness and non-utilitarian existence. To put it in terms of an antinomy: cinema’s strength would be to transform its (media-archaeological) marginality and (ideological) irrelevance into disinterestedness, because that which today thinks itself relevant—digital media with its stretching of the horizon, its colonizing of the future, its relentless projection of the new, of perpetual growth and limitless productivity—may fail us because it is ecologically but also epistemologically unsustainable. In this sense, the most appropriate motto for media archaeology today is the one we owe to André Bazin who, after reading Georges Sadoul’s *Histoire du cinéma*, wrote: “Every new development [that is] added to the cinema must, paradoxically, take it nearer to its origins. In short, cinema has not yet been invented.”¹⁰⁰ Cinema has yet to be invented because what is human may once more have to be invented. Film history as media archaeology is, among other things, dedicated to this invention.

99 Ibid. A similar thought can be found in T.W. Adorno when he argues that we should ask: “what the present means in the face of Hegel” rather than “the loathsome question of what [...] in Hegel [...] has any meaning for the present.” Adorno, *Drei Studien zu Hegel* (Frankfurt: Suhrkamp, 1969), 1.

100 André Bazin, “The Myth of Total Cinema”, *What is Cinema I* (Berkeley: University of California Press, 1967), 22.