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SHORT-CIRCUITING MEDIA HISTORY RESEARCH: CONVERGENCES BETWEEN MEDIA ARCHAEOLOGY AND MEDIA ART

Abstract

Since its beginnings in the 1990s, media archeology has established a fruitful exchange of concepts and methods with media art. The present article focuses on the mutual exchange between these two fields. It aims at reflecting on the commonalities and differences between artists' and scholars' work and, consequently, on the emergence of the figure of the artist-researcher, or researcher-artist, who practices media history through creative techniques. To do so, it first reconstructs how media archaeology and media art have cross-fertilized each other, and identifies two distinct phases of convergence between media-archaeological research and art. Then, by drawing on the relevant literature on the subject, the article examines the main strategies and methods adopted by archaeologically-oriented artists, highlighting how such methods have become increasingly relevant to media archaeologists and, more broadly, to media historians.

Keywords

Media archaeology; media art; hands-on practices; thinkering.

ISSN: 03928667 (print) 18277969 (digital)

DOI: 10.26350/001200 000108

1. INTRODUCTION

Over the last years, "media archaeology" has evolved from a marginal to a ubiquitous approach among researchers working at the intersection of media history and theory. It brings together scholars from different disciplines, ranging from cultural history and film studies, to media studies, archival studies and media art. It is characterized by heterogeneity, eclecticism and interdisciplinarity, and has been described as a "nomadic enterprise" or a "traveling discipline" rather than as a strict disciplinary approach. As Simone Natale observed in a review of media-archaeological publications, "given the varied approaches taken by scholars who worked under this label and the different ways it has been defined, providing a clear and definite account of media archaeology is a rather difficult task".

Albeit at the cost of reductionism, it can be argued that media archaeology focuses on revisiting the canons of media history and theory:

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¹ E. Huhtamo, J. Parikka, *Media Archaeology: Approaches, Applications, and Implications*, Berkeley, Calif.: University of California Press, 2011, 3.

² S. Natale, "Understanding Media Archaeology", *Canadian Journal of Communication*, 37, 3 (2012): 523-527.

- 1) by rejecting the notion of linear technical progress and renewing historiographical narratives;
- 2) by emphasizing and recovering the meaning of episodes in the history of media that are usually disregarded, through the construction of "alternate histories of suppressed, neglected, and forgotten media" as well as imaginary media⁴; and
 - 3) by taking into account the materiality of media technologies⁵.

Rather than being seen as a limitation, the theoretical and methodological eclecticism of media archaeology has been celebrated as a strength, to the extent that Siegfried Zielinski proposed to conceive it as an "an-archaeology", that is, a leaderless historical approach. In this regard it is worth noting how, since its beginnings, the undisciplined character of media archaeology led it to a fruitful exchange of ideas and methods between researchers and artists. In doing so, media archaeology highlighted parallels and connections between media research and media art, which have been further explored to the extent that media archaeology itself has been theorized as an artistic method.

The present article focuses on the mutual exchange between media archaeology and media art. First, it reconstructs how the two fields have cross-fertilized each other, identifying two distinct phases of convergence between research and art. Second, it closely examines the main strategies and methods adopted by archaeologically-oriented artists, with the aim of reflecting on the commonalities and differences with scholars' work. By doing so, it highlights the emergence of the figure of the artist-researcher, or researcher-artist, who practices media history through creative techniques.

2. THE CROSS-FERTILIZATION OF MEDIA ARCHAEOLOGY AND MEDIA ART

The connections between media archaeology and media art have been explored since the inception of the field in the 1990s. Scholars who contributed to the development of media archaeology, such as Siegfried Zielinski and Erkki Huhtamo, have primarily worked in art institutions, which has left its mark on their research. They both recognized similarities between their own research and the "archaeologically-oriented" work of an increasing number of media artists. It has been especially Huhtamo who elaborated on this connection, which has been later acknowledged as the basis of one of the key "branches" of media archaeology: namely, the one focusing on the ways in which media archaeological inquiries are executed through artistic practices.

According to Huhtamo, an "archaeological approach in media art" has emerged in the 1990s and in parallel with the first attempts to expand media archaeology beyond the field of film history, where it had originated, and to canonize it as a more general

³ Huhtamo, Parikka, Media Archaeology, 3-6.

⁴ E. Kluitenberg, ed., *Book of Imaginary Media: Excavating the Dream of the Ultimate Communication Medium*, Rotterdam: NAi Publishers, 2006.

⁵ W. Ernst, "Media Archaeography: Method and Machine versus History and Narrative of Media", in Huhtamo, Parikka, *Media Archaeology*, 239-255.

⁶ S. Zielinski, *Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means*, Cambridge, MA.: MIT Press, 2006.

⁷ G. Hertz, J. Parikka, "Zombie Media: Circuit Bending Media Archaeology into an Art Method", *Leonardo*, 45, 5 (2012): 424-430.

⁸ J. Parikka, What Is Media Archaeology?, Cambridge: Polity Press, 2012, 136-137.

⁹ W. Strauven, "Media Archaeology: Where Film History, Media Art, and New Media (Can) Meet", in J. Noordegraaf, C.G. Saba, B. Le Maître, V. Hediger, eds., *Preserving and Exhibiting Media Art: Challenges and Perspectives*, Amsterdam: Amsterdam University Press, 2013, 59-79.

approach to media historical research¹⁰. He explains its emergence as a result of the historically unprecedented media saturation of contemporary societies, which has increasingly pushed artists to investigate and put in critical perspective the relationship between technology and society. From this has derived a flourishing of technological art forms (as well as a plethora of new labels to designate them)¹¹, from which media-archaeological art can be distinguished by virtue of its specific way to approach the past and present of media. As Huhtamo points out, on the one hand media-archaeological art can be situated in a long history of artistic explorations of the relationship among art, science, and technology; yet, on the other, it represents a shift in this tradition, which he describes as a shift "from the artist-engineer to the artist-archeologist"¹².

In his essay "Resurrecting the Technological Past: An Introduction to the Archeology of Media Art" Huhtamo traces the origins of this phenomenon and mentions media artists such as Jeffrey Shaw and Toshio Iwai as fundamental antecedents who worked in the "archaeological idiom" already in the 1980s, anticipating the spread of archaeologically-oriented media art in the 1990s. This spread is exemplified by the increasing number of artists who have addressed archaeological concerns explicitly since the 1990s, among whom Huhtamo acknowledges artists like Paul De Marinis, Ken Feingold, Lynn Hershman, Perry Hoberman, Michael Naimark, Catherine Richards, and Jill Scott, among others. In general terms and with respect to the individual differences between their approaches, these artists found inspiration in media archaeology and developed practices consisting of "incorporate[ing] explicit references to machines from earlier phases in the development of technoculture" which were often combined with "new" technologies and cultural elements to enable the cyclical historical understanding of the relationship between technology and society that stands at the basis of media archaeology.

This has led to intriguing parallels between scholarly research and artistic creativity, which have been increasingly explored by both scholars and artists during the 2000s. In the last twenty years, several direct collaborations have been established: media archaeologists allied with artists to find alternative ways of demonstrating their findings¹⁶, and artists-archaeologists contributed to the development of the field with their own texts and reflections¹⁷. While the 1990s have witnessed an increasing engagement of artists with media-archaeological concepts and objects of study, the 2000s have been

¹⁰ E. Huhtamo, "Time Traveling in The Gallery: An Archeological Approach in Media Art", in M.A. Moser, D. MacLeod, eds., *Immersed in Technology: Art and Virtual Environments*, Cambridge, MA.: MIT Press, 1996, 233-268.

¹¹ C. Wahl, "Between Art History and Media History: A Brief Introduction to Media Art", in Noordegraaf, Saba, Le Maître, Hediger, eds., *Preserving and Exhibiting Media Art: Challenges and Perspectives*, 25-58.

¹² Huhtamo, "Time Traveling in The Gallery", 236-243.

¹³ E. Huhtamo, "Resurrecting the Technological Past: An Introduction to the Archeology of Media Art", *InterCommunication*, 14 (1995). Accessed September 10, 2020. https://www.ntticc.or.jp/pub/ic_mag/ic014/huhtamo/huhtamo e.html.

¹⁴ Huhtamo, "Time Traveling in The Gallery", 234.

¹⁵ Huhtamo, Parikka, Media Archaeology, 14-15.

¹⁶ See, for example, the performance *Musings on Hands: Media Archaeology Meets New Media* developed by Huhtamo with media artists Golan Levin and Zachary Lieberman, which was performed at the Ars Electronica Festival in Linz, Austria, in 2006.

¹⁷ Artists Paul De Marinis and Casey Alt, for example, contributed to the book *Media Archaeology: Approaches, Applications, and Implications*, edited by E. Huhtamo and J. Parikka in 2011. P. De Marinis, "Erased Dots and Rotten Dashes, or How to Wire Your Head for a Preservation", in Huhtamo, Parikka, *Media Archaeology*, 211-238. C. Alt, "Objects of Our Affection: How Object Orientation Made Computers a Medium", in Huhtamo, Parikka, *Media Archaeology*, 278-301.

characterized by a need for exploring the other way around, that is, the ways in which artistic practices might provide researchers with alternative and new ways of *doing* media archaeology.

This shift, which Jussi Parikka sees as a fundamental part of media archaeology's "second act" was grounded in the idea that media archaeology "needs to be executed, not constructed as a narrative. History is the form of narratives, while media archaeology is a non-linear engagement with devices and concrete apparatuses that physically carry the past into the present" As early as in 1996, Zielinski, who first adopted the term "media archaeology" in its current usage, suggested that the archaeology of media should be thought of as a *practice* rather than a literary enterprise: a "form of activity", in his own words, entailing a "continuous action" of excavation into the media's past(s), present(s), and future(s)²¹. This proposition has been later supported by most scholars in the field and has led to an increasing understanding of media archaeology as "media history in practice", which in turn has attracted more attention to the ways in which artists develop "practices that not only write about past media in new ways, but execute it as well"²².

In the 2000s, this perspective has been further developed, in particular, by drawing on the practices of media artists and designers to elaborate new experimental methods of inquiry that directly engage with the materiality of media. Exemplary in this respect is the collaboration between Parikka and artist/designer Garnet Hertz. Hertz and Parikka have fostered a reconception of media archaeology by developing a laboratorial approach where theories are mobilized into media cultural design through creative practices such as hardware hacking and circuit bending²³. In their view, media archaeology's central aim of rethinking media temporality, materiality and potentiality can be accomplished more effectively by physically engaging with technology. Through hacking, technical artifacts can be creatively subverted and obsolete pieces of technology can be recombined, reworked and revitalized, making actual the potential alternatives studied by media archaeologists. Such arts-based techniques thus offer researchers additional and effective tools to open up the "black box" of socio-technical assemblages and imagine potential alternatives²⁴. Even more importantly, they extend the historiographically oriented field of media archaeology into a methodology for excavating the present by addressing, in concrete forms, political and ecological issues related to technological progress and obsolescence²⁵.

Hence, in this "second act" media archaeology has found inspiration in the working methods of media artists – who, according to Parikka, have been keener than researchers to address political concerns²⁶ – and it has been itself "hacked" by being turned into

¹⁸ Parikka, What Is Media Archaeology?, 14.

¹⁹ J. Parikka, G. Hertz, "Archaeologies of Media Art", CTheory, (2010). Accessed September 15, 2020. https://journals.uvic.ca/index.php/ctheory/article/view/14750/5621.

²⁰ S. Zielinski, "Medienarchäologie. In der Suchbewegung Nach den unterschiedlichen Ordnungen des Visionierens", *Eikon*, 9 (1994): 32-35.

²¹ S. Zielinski, "Media Archaeology", *CTheory*, (1996). Accessed September 15, 2020. https://journals.uvic.ca/index.php/ctheory/article/view/14321/5097.

²² Parikka, What Is Media Archaeology?, 157.

²³ Circuit bending consists in dismantling, unwiring, and rewiring electronic devices (usually, battery-powered children's toys) in order to create new musical instruments. Hertz, Parikka, "Zombie Media".

²⁴ M. Goddard, "Opening up the Black Boxes: Media Archaeology, 'Anarchaeology' and Media Materiality", *New Media & Society*, 17, 11 (2015): 1761-1776.

²⁵ See Parikka, Hertz, "Archaeologies of Media Art", and Hertz, Parikka, "Zombie Media".

²⁶ Parikka, What Is Media Archaeology?, 149.

both an artistic method and a political strategy. In the last years, the connection between research and art has led to the further establishment of a variety of experimental methodologies and "hands-on" approaches to media history, which share a focus on the physical exploration of technical objects as a means to understand the relationship between technology and society. Wanda Strauven argues that the development of experimental methods has turned media archaeology into a *research laboratory* for "history hacking", and summarizes this evolution as a shift from "what" to "how": a shift of interest from the final results of historical reconstruction to the *process* of history making²⁷.

The work of media historians Andreas Fickers and Annie van den Oever is significant in this regard. They stress the need to complement discourse-oriented analyses with experimental methods that bring to the forefront the materiality of technologies. In particular, they propose historical *re-enactment* as a heuristic methodology for grasping the materiality and sensuousness of media, which can help re-sensitize historians to overlooked issues such as the sensorial and tacit dimensions of media use²⁸. In so doing, Fickers and van den Oever plead for new forms of experimentation and collaboration between artists and scholars. Their plea has been answered by the subsequent development of a wide range of "hands-on" approaches. Exemplary of this tendency are two recent books: *New Media Archaeologies*, edited by Ben Roberts and Mark Goodall²⁹, and *Hands on Media History*, edited by Nick Hall and John Ellis³⁰. Both books start from the assumption that physical interactions with technical objects produce forms of knowledge that cannot be easily translated into concepts, and explore new and alternative ways of reimagining media history through creative, experimental practices.

This evolution has opened up new opportunities for researchers to collaborate with artists, as well as new possibilities for the emergence of the figure of the artist-researcher (or researcher-artist) practicing media history "archaeologically" through creative techniques. Given the increasing interest in "hands-on" historical approaches, the figure of the artist-researcher is likely to gain more relevance in the near future. To further elaborate on the implications of this convergence, in the next section I will examine the main strategies and methods adopted by artists to practice media archaeology, to then reflect on the commonalities and differences with scholars' works as they have been discussed by the literature on media-archaeological art.

3. A MEDIA-ARCHAEOLOGICAL METHODOLOGY FOR ARTISTIC PRACTICE

What are the main elements and methods that define the archaeological approach in media art? Parikka underlines that, despite the recent increase of the number of media artists who adopt and adapt ideas from media-archaeological theorists, there is still a need for a stronger articulation of media archaeology as an artistic methodology. He points out that, in general terms, media-archaeological art "deals with engaging with the

²⁷ W. Strauven, "Media Archaeology as Laboratory for History Writing and Theory Making", in B. Roberts, M. Goodall, eds., *New Media Archaeologies*, Amsterdam: Amsterdam University Press, 2019, 23-43.

²⁸ A. Fickers, A. van den Oever, "Experimental Media Archaeology: A Plea for New Directions", in A. van den Oever, ed., *Technē/Technology. Researching Cinema and Media Technologies. Their Development, Use, and Impact*, Amsterdam: Amsterdam University Press, 2014, 272-278.

²⁹ B. Roberts, M. Goodall, eds., New Media Archaeologies, Amsterdam: Amsterdam University Press, 2019.

³⁰ N. Hall, J. Ellis, eds., *Hands on Media History: A New Methodology in the Humanities and Social Sciences*, Abingdon: Routledge, 2020.

past and learning from the past media cultures in order to understand present mediated, globalized network culture through artworks executed in various media"31.

To illustrate in more concrete terms what media-archaeological art refers to, Parikka identifies six different kinds of artworks that variously draw on media archaeology's kev themes:

- 1) artworks that visually engage with historical themes;
- 2) artworks that invoke alternative socio-technical histories;
- 3) artworks based on the reusing or hacking of obsolescent technologies;
- 4) imaginary media that are actually constructed;
- 5) artistic practices informed by archival work and historical materials; and
- 6) projects that focus on opening up the machines and intervening into their processes and protocols³².

Clearly, such a classification functions as a heuristic tool to identify artworks that "engage with the past" archaeologically by including references to media archaeology's privileged objects of study: imaginary media, alternative media that might have existed, "old" media that are reinvented, or overlooked archival materials. Yet, as Parikka points out, these categories overlap with each other, and several works of art can be ascribed to more than just one category. Hence, to better understand what media-archaeological art is, we need to examine the *methods* deployed by archaeologically-oriented artists: what do they have in common? How are media archaeology's concepts translated into creative practices? What are the similarities and differences between the methods used by researchers and those adopted by artists?

If we turn back to the aforementioned general definition of media-archaeological art, we find that it encompasses three key elements, intertwined with each other:

- 1) the engagement with *past* media cultures;
- 2) the objective of understanding *present* media cultures; and
- 3) the concrete execution of the connection between the past and the present through artworks based on media.

By using these three elements as points of reference, and by reviewing the literature on the subject, it is possible to identify the main strategies and methods adopted by artists to practice media archaeology, to then reflect on the commonalities and differences with scholars' works.

With regard to the first issue, it needs to be highlighted that media archaeologists approach history from a non-linear perspective, which implies both a conception of time as cyclical and the rejection of the notion of linear technical progress³³. Media-archaeological research is thus conceived as an "excavation" into the "deep time"34 of media, whose goal is twofold: the study of the cyclically recurring elements underlying and guiding the development of media, and the "excavation" of the ways in which these elements have been "imprinted" on specific media machines in different socio-historical

³¹ Parikka, What Is Media Archaeology?, 137-138.

³² Ibid., 138-141.

Huhtamo, "From Kaleidoscomaniac to Cybernerd".
Siegfried Zielinski introduced the concept of "deep time" to criticize the idea of technical progress. The concept is borrowed from paleontology and geology, where it is used to illustrate the non-linear evolution of species and the Earth. Similarly to what paleontologists and geologists do, media historians, according to Zielinski, should grasp the crucial moments in the history of technology represented by individual variations and qualitative turning points, instead of looking for progressive trends. See Zielinski, Deep Time of the Media.

contexts³⁵. To reach this goal, media archaeologists need to travel across multiple temporalities and spatialities, looking for both recurrences over time and specific historical occurrences. As a consequence, they give importance not only to "successful" technologies that are universally adopted but also "dead", failed, or even non-existent media. In fact, it is the construction of "alternate histories of suppressed, neglected, and forgotten media" that allows historians to trace temporal connections between media technologies and cultures36.

Connections and recursions across different times and media can be identified through the study of what Huhtamo defines as topoi: discursive formations enveloping socio-technical assemblages that can be activated, deactivated, and reactived many times, and which can be instantiated in different forms across history³⁷. Though Huhtamo's approach is only one among the many developed by media archaeologists to "rethink temporalities" , it is useful to this discussion as it sheds light on one of the commonalities between scholarly and artistic practices. As Huhtamo suggests, the gaze of media archaeologists "scans incessantly the historical panorama of technocultural forms, moving back and forth in time, looking for correspondences and points of rupture"39. Like historians, artists-archaeologists "time-travel" to identify and explore the topoi of technocultures, drawing them from different temporalities. Archaeological artworks can thus be seen as sorts of "time machines", which put in conversation the past (actual or imagined) with the present by playing, more or less consciously, with the recursive elements of media history⁴⁰.

Providing an example of how artists adopt this approach, Huhtamo discusses Ken Feingold's artwork OU, which is an interactive "fortune telling machine" with a coin-operated speaking dummy under a glass jar. In archaeological terms, this machine connects early forms of interactive objects, such as vending and slot machines, with contemporary interactive technology. It explores the topos of "interactivity" by connecting physically and conceptually "new" technological elements, which are nowadays familiar, with the "old" vending machine, which was among the first technical objects to establish a one-to-one relationship with people⁴¹. This illustrates how the work of both archaeologically-oriented artists and researchers takes the shape of a historical detour.

Connecting the past with the present (and future) is not only a consequence of media archaeologists' "cyclical thinking", through which they criticize the "hegemony of the new" and the myth of technical progress. It is also, and equally importantly, a way to reflect critically on the present. Indeed, media archaeology adopted the idea, drawn from Foucault's "archaeology of knowledge", that archaeology is always about the present⁴². It is intended to be a conversational discipline, which puts in dialogue the past with the present and enables "navigations" in the "realm of past-present and present-past" 43. The objective of such a conversation is primarily that of understanding *present* media cultures. Researchers and artists thus share an interest in unveiling technology-related

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35 Huhtamo, "From Kaleidoscomaniac to Cybernerd", 223.
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³⁶ Huhtamo, Parikka, Media Archaeology, 3.

³⁷ Huhtamo, "From Kaleidoscomaniac to Cybernerd", 222. ³⁸ Strauven, "Media Archaeology", 68.

³⁹ Huhtamo, "Time Traveling in The Gallery", 244.

⁴⁰ Huhtamo, "Resurrecting the Technological Past".

⁴¹ Huhtamo, "Time Traveling in The Gallery", 254.

⁴² Parikka, What Is Media Archaeology?, 10-11.

⁴³ Huhtamo, "Time Traveling in The Gallery", 248.

ideological issues, such as class, gender, and power, to shed light on the technologically saturated present44.

Yet, as Parikka notes, media-archaeological artists have adopted a stronger political orientation than researchers⁴⁵. According to him, media archaeologists have been generally reluctant to be political, while artists have viewed the point about socio-technical politics as fundamental. He argues that media archaeologists should express a similar activist stance towards technical media, by engaging more with issues of politics and power relations that are relevant to the present context. The political orientation of media art has become increasingly significant to researchers as it has been identified as a fundamental element of media archaeology's "second act". Exemplary is the earlier-mentioned collaboration between Parikka and artist Garnet Hertz, which focuses on the creative repurposing of discarded technologies to address issues related to the politics of "planned obsolescence" ¹⁴⁶. In their view, the critique of technical progress and obsolescence should be expressed not only theoretically, but also concretely by adopting the creative techniques artists deploy to create new media objects from obsolete and discarded technologies.

These considerations lead us to examine the third element of media-archaeological art. Both scholars and artists share the goal of "resurrecting" the technological past to understand the present; yet, since the latter ones use their art rather than historical writing as a terrain for confrontations with socio-technical issues, there are fundamental differences in the ways in which this goal is achieved. One major difference relates to the limitations of the textual medium: although media archaeology is intended to be a non-linear, multilayered excavation, the textual medium inevitably limits historians' work to linearity and narrativity⁴⁷. On the contrary, the artistic approach moves beyond what can be done in text as it is based on physical work. Artists operate in direct, physical contact with technologies and their materiality. This facilitates multilayered excavations into time and space by enabling their concrete execution, for example through the assemblage of artefacts from different times and contexts⁴⁸. The way artists work thus expands media archaeology's ability to grasp the non-linear lives of media, and provide researchers with new ways to engage with the materiality of technology, which is one of the pillars of media archaeology.

The creative approach emerged from media-archaeological art is thus characterized by a combinatory methodology, where two main components from different spatio-temporalities are combined: cultural formations like the topoi studied by Huhtamo, and objects discarded due to technological obsolescence. This combinatory approach reflects the way in which media are "assembled together from various pieces" through processes that are studied by historians, but which artists appropriate concretely to understand media in fresh ways: they not only deconstruct, but also (re)construct alternative histories that shed light on the present⁴⁹. Huhtamo points out that this approach enables "thinkering" (thinking+tinkering), i.e. a process where critical reflection is fostered by physically experimenting with technology⁵⁰. In the scholarly field, the adoption of sim-

Huhtamo, "Resurrecting the Technological Past".
Parikka, What Is Media Archaeology?, 149.

⁴⁶ Hertz, Parikka, "Zombie Media".

⁴⁷ Parikka, What Is Media Archaeology?, 137.

⁴⁸ Parikka, Hertz, "CTheory Interview: Archaeologies of Media Art".

⁴⁹ Parikka, What Is Media Archaeology?, 146.

⁵⁰ E. Huhtamo "Thinkering with Media: On the Art of Paul DeMarinis", in I. Beirer, S. Himmelsbach, C. Seiffarth, eds., Paul De Marinis: Buried in Noise, Heidelberg: Kehrer, 2010, 33-39.

ilar "hands-on" approaches might facilitate a deeper involvement with political issues, as invoked by Hertz and Parikka. Furthermore, by overcoming the limits of language, the direct exploration of media materiality can help re-sensitize historians to overlooked issues relating to past media, such as the sensorial and tacit dimensions of their historical uses⁵¹.

4. CONCLUSIONS

By reconstructing how media archaeology and media art have cross-fertilized each other, the article sketched some common paths followed by scholars and artists in addressing issues relevant to media history research. It showed how such cross-fertilization has been beneficial to both fields: during the 1990s, an increasing number of artists engaged with media-archaeological theory and adopted its cyclical perspective to short-circuit media past(s) and present(s); in the 2000s, researchers found inspiration in the creative methods developed by artists for finding new ways of practicing media archaeology.

In the last years, this connection between research and art has generated a variety of experimental methodologies and "hands-on" approaches to media history, due to an increasing attention to the advantages offered by the physical engagement with technology. Yet, methods based on repurposing, modifying, and subverting technology to investigate media historical issues still appear to be less common among researchers than they are among artists. More work has to be done, which might eventually lead to the establishment of the figure of the artist-researcher, or researcher-artist, who practices media history through creative techniques. Yet, the cross-fertilization between media archaeology and media art represents a first step toward such a convergence, which might gain more relevance in the near future.

⁵¹ A. Fickers, A. van den Oever, "(De)habituation Histories: How to Re-Sensitize Media Historians", in Hall, Ellis, eds., *Hands on Media History*, 58-75.