The (Re)Construction of Communicative Pasts in the Digital Age

Changes, Challenges, and Chances in Digital Transformation

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> Everything not saved will be lost
> —Nintendo Quit Screen Message

Can contemporary history be written without pictures and sounds or without an adequate representation and incorporation of audio and visuals? Although this was a matter of debate only a couple of years ago, when historians were still engaged in a lively dispute about whether the history of the 20th and 21st centuries could be adequately written without properly taking into account the ubiquitous dissemination and reception of the mass media,[1] it already seems like the distant past. Meanwhile, we face a new period of transformation in the research into our communicative past, which makes it almost seem absurd that until rather recently the role of media was discussed predominantly with regard to their ambiguous value or validity as a source for historical work rather than as a crucial social and cultural factor playing a part in molding and shaping how historical processes developed.

Digital media have since had a massive impact on how we (can) do (media and communication) historiography on several levels. Digital media data or digitized analogue media as new sources that can be used and become relevant for the reconstruction of the past is only one of the levels affected. Against the background of digital change, many subjects of the arts and humanities as well as the social sciences are experiencing a radical structural

1 Classen, "Zeitgeschichte ohne Bild und Ton?"

change in their working routines and readiness to collaborate, their epistemological and methodological bases as well as regarding their topics of inquiry. Relatively new interdisciplinary formations like 'digital humanities' or computational social sciences' share the need for a reorientation and reevaluation of research procedures and research interests in increasingly digital research contexts. Humanities and social sciences alike face the question of how, in the context of digitization, disciplinary knowledge, research interests, and methods change and call for adaptation, as well as which specific problems (as well as opportunities) arise as part of these transformations.

In this chapter, I will try to contribute to this overall discussion by addressing how these broader and more general developments affect a particular field of inquiry, namely the area of media and communication studies. In doing so, I hope that the discussion of this particular subject matter will also provide valuable insights for research in other fields that engage with digital media. Therefore, I shall first provide an understanding of media and communication history from a media and communication studies perspective, and will argue why research into contemporary culture and society cannot be done without taking into account the particularities of digital media, which consequently also calls for expertise in the uses and analysis of digital media (communication).

I will then juxtapose how the impact of digitalization on (communication) historiography is debated regarding its revolutionary potential with the rather little effective change it has spawned so far. Furthermore, I will continue with a discussion (on the basis of examples) of how I think historical (re)construction is (and needs be) affected by digital change beyond revolutionary rhetoric. I conclude that the challenges and questions regarding the validity, reliability[2] and consistency of sources/data are not resolved by digital means, nor merely transferred into new technological and cultural environments. They pose genuinely new challenges and require new skills and literacies to be coped with.

2 Deacon, "Yesterday's Papers and Today's Technology."

Mediatization, Digitalization and the Expanse of Media and Communication Research

In media and communication studies, the so-called meta-process of mediatization[3] has become a relevant framework for the description of the profound and interrelated changes between society, culture, and the role played by the media and communication technologies and practices prevalent at the time. Just like other meta-processes such as individualization, commercialization or globalization, mediatization is not an empirical process that can be researched by considering the changes (or lack thereof) in a single phenomenon but must be understood by means of overall transformations. "By mediatization we mean the historical developments that took and take place as a result of change in (communication) media and the consequences of those changes. If we consider the history of communication through music or the art of writing, we can describe the history of human beings as a history of newly emerging media and at the same time changing forms of communication."[4] While the study of media and communication has long focused mostly on the public arenas of communication and communication mediated through the traditional institutions of mass communication, this limitation seems to no longer provide a feasible concept for the discipline.[5] With the advent and proliferation of digitalization and digitization, over the past several decades we also have witnessed a profound 'mediation of everything,'[6] i.e. an increasing qualitative and quantitative relevance and prevalence of mediated communication for processes of organization, coordination, and meaning-making in virtually all domains of society. Today, nearly all aspects of the social world are intermingled with and characterized by ubiquitous mobile media devices, digital communication, and data. This development has made inevitable the expansion of the field beyond 'journalism,' 'mass communication,' and 'public communication.' Since then, the very notion of mediated communication has become less clear and has expanded to nearly all areas of the human experience and encompasses a variety of technologies, tools, platforms, and intermediaries for communication.

3 Krotz, "Mediatization;" Hepp and Krotz, *Mediatized Worlds*.
4 Krotz, "Media Connectivity" 23.
5 Hepp, "Kommunikations- und Medienwissenschaft in datengetriebenen Zeiten."
6 Livingstone, "On the Mediation of Everything."

Unlike other disciplines, media and communication does not have stable boundaries but experiences rapid and constant change and reconfiguration. Issues of media and communication research and the shifting boundaries of the field together with the (changing) relationships of communication research with distant as well as closely related disciplines are hence recurrent topics in internal debates in the field and question what remains distinctive about the field if purportedly everything is characterized by media.[7] More recent approaches to the mediatization of culture and society describe the individual lifeworlds and social worlds which make up the everyday life of people as mediatized worlds, regard media as a world in which we live our lives, which have become media lives.[8] In all these varieties, social experience and the construction of social reality is seen as inseparable from the media we use. Some authors refer to the notion of 'deep mediatization' to describe the latest stage of mediatization, which is heavily driven by digitalization and is characterized by the (even deeper) entrenchment of digital media and data in everyday life.[9] But why does this roundup of recent developments in media and communication research matter for the issue I aim to consider here? In my view, it is important because it does not only change the face of the field in question and the areas of its inquiry at present but also affects the data, sources, and resources it requires for the long-term preservation of its knowledge and the historical reconstruction of its area of interest. If we do not incorporate the history and prehistory of the phenomena we study despite their having arrived late and only recently becoming part of our research interests, we are tempted to overlook continuities and persistences in the newly adopted fields, which happen to also have a history, and to overemphasize newness and change. An obsession or fascination with the new can be a temptation for a discipline always engaging with the latest technological devices in its vicinity.[10] Periods of transition in the phenomena a field investigates, following Lunt and Livingstone, calls for a "heightened historical awareness" which pushes us to go beyond a simplistic polarization of 'now' and 'before,' or 'old' and 'new' media, or the twenty-first century and 'the past' (a challenge of particular importance as analysis of 'the digital age' threatens to eclipse or

7 Livingstone, "If Everything is Mediated."
8 Hepp and Krotz, *Mediatized Worlds*; Bolin, "Institution, Technology, World;" Deuze, "Media Life."
9 Hepp, *Deep Mediatization*; Couldry and Hepp, *The Mediated Construction of Reality*.
10 Menke and Schwarzenegger, "On the Relativity of Old and New Media."

obscure a nuanced analysis of earlier periods).[11] In general, historically oriented communication research aims for the reconstruction of political and sociocultural contexts, institutional forms, materialities, contents, and consequences of communication processes in the past—how they evolved over time and are remembered in the present. Therefore, communication research in a historical or long-term perspective asks what traces of media and communication can tell us about past events, past life, as well as changes and continuities in social communication and the organization of society. Communication history builds on mediated communication but is not necessarily media-centric. Relevant areas of interest include processes of communication in history as well as the representation of history in current communication and the communicative construction of memory in the present.

Historical media and communication research is dependent on finding, accessing, and critically evaluating sources, which allow for the exploration and understanding of the historical processes of social communication.[12]

Returning to the question raised at the beginning of this paper of whether the writing of history or the chronicling of past times can be done properly without audio and visual material, this expansion of the field of media and communication research also demands an expansion of the archives and reservoirs of sources considered for research. When the scope of research extends to mass communication, it clearly cannot be enough to limit the reservoir of pictures and sounds used as sources or as material objects of inquiry to the productions of traditional institutions of mass communication and the treasures they collect in their archives.[13] Researchers then also need to think about how to access the past of the private realms of communication they are interested in, the cultural artefacts of digital communication and the digital traces of interpersonal exchange, which are—at least until now—not systematically publicly recorded or stored and can only be partly covered by institutionalized public archiving initiatives. According to Balbi, "digitalization also signifies a turning point in the way our culture is stored, recorded and preserved, and this alters and will increasingly alter culture itself, making it 'digital dependent.'"[14] Such a change in culture, cultural forms, and cultural expression will then of course have consequences for research into both of

11 Lunt and Livingstone, "Is 'Mediatization' the New Paradigm for Our Field?" 465.

12 Schwarzenegger, "Exploring Digital Yesterdays;" Schwarzenegger, "Herausforderungen des Digitalen Gestern."

13 Behmer, *Das Gedächtnis des Rundfunks*.

14 Balbi, "Doing Media History in 2050" 134.

these domains and require researchers—in media and communication research, fields in which I am able to closely observe this, and surely also in other disciplines and fields—to acquire new skills and literacies to cope with the new challenges, benefit from the positive potentials, but also be aware of the limitations and problematic implications of a changed research environment.[15] But what will this mean in particular?

Fast Hype but Slow Revolutions? The Digital Transformation of a Dedicated Few

So far I have argued that digitalization has the potential to cause change at all levels of the research process and tried to elaborate on this vague assumption regarding changes in the field of inquiry, i.e. regarding the formal and material objects of media and communication research as well as sources and data relevant for such investigations. Beyond that, the process of research as such and the working routines of scholars can also be affected and prompted to adapt or—phrased more positively—to embrace the new opportunities. Not only does the digital transformation of communication and culture which we observe in our research stimulate a shift in research practices and call for adaptation, but a digital transformation of the modes, methods, and possibilities of observation also has an impact on the research we can do and are doing. The increased availability of 'old communication' and analogue media in digitized form as well as digital tools of scrutinizing, reading, evaluating data, and distilling insight and patterns from these sources allow and call for new forms of academic engagement. Balbi summarizes:

> "Media historians, as well as all other historians, must be willing to accept significant changes in their profession: they will have to approach the digital heritage differently than the analogue one, because digital data are volatile, interconnected, unstable and abundant; they will seek new tools to manage this great mass of data; they will use technological systems […]; they will interact with new institutions and they will learn new methods of access to sources; they will have to learn new methods to reconstruct the past from

15 Koenen et al., "Historische Kommunikations- und Medienforschung im digitalen Zeitalter;" Birkner and Schwarzenegger, "Konjunkturen, Kontexte, Kontinuitäten."

> these digital sources; and, finally, they will face new difficulties, such as accessibility, ownership, fragility, originality, and contextualization of digital sources."[16]

Clearly, doing media historical work in the digital age comes with continuities and changes regarding historiographical practices, greeted with hype and revolutionary aspirations by some and indifference or composure by others.[17]

For instance, in 2012 the historian Toni Weller argued in his edited book *History in the Digital Age* that "[h]istory, as a field of inquiry, is standing at the edge of a conceptual precipice;"[18] and he is one among others who sees fundamental changes in the understanding of a practice or a profound paradigm shift in the wake of the digital revolution. Also, in German-speaking countries the challenges presented and chances offered by doing history in the digital age were debated;[19] there was a search for ways of mastering the digital instead of having researchers become overwhelmed by it, and the perils were addressed as well. Back in 2018, the Digitizing Communication History Initiative, cofounded in 2016 by Erik Koenen and myself, presented a conceptual paper in which we argued for the need for historical expertise in the study of digital media on the one hand as well as digital literacy and skills in the historical study of media and communication on the other.[20] We are currently editing a cooperative volume on digital communication and communication history to elaborate the potentials and perils of this endeavour in more depth. In the same year, when my colleagues and I organized a conference about media and communication history in the digital age for the *International Communication Association*, a leading academic society in the field of communication studies, an anonymous reviewer wrote that "If communication historians aren't addressing these issues, we will be left behind in the dust." So there seems to be wide agreement that changes are imminent and that they will indeed be profound, run deep, and maybe even revolutionize the field. But if we look more closely, it also becomes evident that these discussions are characterized by a strong emphasis on what historians are (allegedly) not yet doing and what they would have to become in order to compete and be

16 Balbi, "Doing Media History in 2050" 152.
17 Jensen, "Doing Media History in a Digital Age."
18 Weller, *History in the Digital Age* 1.
19 E.g. H–Soz–Kult, please note that there is a big difference between doing historical work in the digital age and being a digital historian.
20 Schwarzenegger et al., *Digitale Kommunikation und Kommunikationsgeschichte*.

viable in the digital age. But these debates do not appear to resonate strongly, aside from with a dedicated few, and are often relegated to special sections or niches within the respective fields. We can also observe that there is a divide between those who engage with digital technologies in their research in terms of topics, tools, and methods, and those who do not. These divides are only in part generational in nature; it is accordingly not necessarily the younger ones who are more open to the digital. This is partly also caused or sustained by a lack of attention to such issues in the current education of historians or media and communication scholars. In the case of media and communication research the limitations are twofold: there is a lack of institutionalized training in computational or digital methods and digital research literacy on the one hand and a lack of institutionalized training in historical research methodology and historical source criticism skills on the other. In this regard, a majority of (historically oriented) media and communication scholars seem ill-prepared for revolutionary ambitions. The absence of a revolution can however in some instances contribute to the widening of a gap. For instance, PhD students and early career scholars in media and communication studies today are very likely to engage with digital media communication as a field of inquiry. For historically oriented researchers within the field, not taking these topics into account, at least partially, may steer them away from the remainder of the field. However, if the revolutionary spark is confined to the circles of a dedicated few, does this mean that the projected revolutions will not take place? From my point of view, there will not be a sudden and broad upheaval, but change will instead likely come in the form of a slow and tedious process. If there will be a revolution, it is going to be a tiny but steady one.

Concepts—Sources—Literacies

But what are the areas that are likely to be most affected and where our understanding of media, memory, and history in its current state will be contested? In my perspective, digital transformation challenges historically oriented media and communication research (and broader inquiries into society and culture) on an epistemological level to revisit a number of fundamental concepts. However, reimagining concepts of media and communication is not an unusual exercise but occasionally necessary.[21] Media environments and

21 Filimowicz and Tzankova, *Reimagining Communication: Meaning*.

communication practices evolve over time and in relation to overall processes of social change, making media and communication 'moving targets' for research. In this sense, following the classic distinction proposed by Blumer, it is sensitizing rather than definite concepts that we are dealing with—concepts indicating general directions in which to look rather than telling us precisely what to see.[22] On the level of concepts, the digital transformation of research provokes us to rethink the temporality, translocality, and transmediality of media and communication.

Rethinking temporality suggests that through and in digital media the very sense of time or what we understand as 'the present,' 'a short while back,' or 'long ago' can change. Digital communication often appears to be accelerated, with an increase of communicative events in a given period of time—communication history hence moves closer to the present, and quite recent communication is dismissed from contemporary research, relegated to the long-term memory of communication history. In other words, the 'now' or the 'moment' of digital communication becomes shorter and the past starts earlier. This is also due to the fast pace of innovation in media and communication technology and, consequently, the high degree of technical instability and obsolescence in media technologies. Hickethier, back in 2003,[23] saw the continued existence of media history as such at risk because of the ephemeral character of the sources and communication's becoming ever more volatile. Paradoxically, while digital media are in fact somewhat elusive, there is a tendency in research to speak of digitalization as a still frame, as if once digital transformation began, digitalization in itself was a stable concept that did not change very much. In contrast, rethinking the temporality of digital media also requires one to think about the transformation of the digital over time and to acknowledge that digital media has referred to quite a lot of different things over the past few decades.[24]

Rethinking translocality in addition to this means that besides the temporal, the spatial or local dimension of media and communication needs to also be revaluated. As I have described elsewhere,[25] with the advent of digital communication the sense of space for media and communication research has been affected as well. Media and communication have previously mostly been

22 Blumer, "What is Wrong with Social Theory?"

23 Hickethier, *Einführung in die Medienwissenschaft* 358.

24 Histories of digital media are still scarce, one relevant exception: Balbi and Magaudda, *A History of Digital Media*.

25 Schwarzenegger, "Exploring Digital Yesterdays."

studied in relation to the nation-state, but it is quite obvious that digital communicative networks are less likely to be congruent with national boundaries. Instead, digital media platforms and the corporations behind communicative services are global in scope and decentralized and transnational in their organizational form. It is not by chance that the comprehensive *History of Digital Media* approaches the topic from a 'global perspective.'[26] On the level of topics, future communication history will need a sense of space to explore yesterday's questions concerning the mobility of people and devices, ubiquity, cross-border civic engagement, transnational community formation, and connectivity as well as a series of questions related to globalization and to the distribution, circulation, and appropriation of media contents and technologies. Besides the features of digital communication per se, the relationship between research and the local has changed as well. Digital archives allow access to data from afar and distant reading has become a feature for many different questions and research interests of media and communication scholars.[27] Rethinking locality is, however, far from implying that research collaboration or access to archives is no longer confined by space or local presence. To the contrary, researchers working with digital archives frequently report that physically being there can still be a decisive element in the success of archival work.[28]

Rethinking transmediality tempts us to question the very concept of research units, the multimodality of research material, and the interconnected character of data. We can only capture the consequences of mediatization if we do not focus exclusively on single media but rather on media environments and media ensembles of specific social domains and how they are entangled, interrelated with one another, and partly contesting or complementing each other. For instance, the radio broadcast is no longer limited to the audio transmitted via airwaves but embedded in a transmedia ensemble comprising, for instance, digital content, social media coverage, and audience interaction. Perhaps music recordings also pose prime examples of how we need to think in terms of transmediality instead of closed entities. A particular piece of recorded music available on a streaming portal can be embedded in a

26 Balbi and Magaudda, *A History of Digital Media*.

27 Koenen, "Digitale Perspektiven in der Kommunikations- und Mediengeschichte;" Ben-David, "What does the Web Remember of Its Deleted Past?"; Birkner et al., "A Century of Journalism."

28 Ben-David and Amran, "The Internet Archive;" Jensen, "Doing Media History in a Digital Age."

web of references, links, reactions, and recommendation systems or playlists as new cultural forms. An approach that would consider music in terms of single recordings or files would miss some of the particularities of its reception and proliferation within a specific media environment.

Besides the examples of concepts, we can also observe an important change with regard to the sources of research. This is however not specific to the digital age. Media and other histories have always been dependent on the archival material available for research purposes, testimonies, and relics which were collected with varying levels of completeness, integrity and reliability. Archives are agents of memory and historical preservation; they contribute to our understanding of the past and provide a sense of order and hierarchy of knowledge. But in doing so, they are not merely neutral institutions of preservation, but they are institutions of power and reflect power structures in societies, nations, or organizations. They keep a selective, curated, and by no means comprehensive record of past events, and in doing so each archive wields a "particular bundle of silences."[29] Archives possess "the power of the present to control what is, and will be, known about the past, about the power of remembering over forgetting…., it is essential to reconsider the relationship between archives and the societies that create and use them."[30] Archives are just as much about the preservation of records and relics as they are about forgetting, excluding, and silencing. Forgetting is the conjoined twin of all memory. The archive hence plays a crucial role in the construction of historical facts and the imagination of the past.[31] In other contexts, together with my colleagues I have discussed the challenges of building a research corpus based on digital archives, hence I do not want to go into much detail regarding the detailed work with digital archives. In line with other authors,[32] however, we conclude that the actual work with digital archives, due to legal, institutional and technological hindrances is still tedious and does not necessarily allow us to fully benefit from the advantages and potentials they theoretically harbour.

A further promise of digital communication in many areas was the purported democratization of access and participation. In the sense of digital media, the very notion and idea of the archive has also been affected by such

29 Ankerson, "Writing Web Histories" 389.
30 Schwartz and Cook, "Archives, Records, and Power."
31 Birkner et al., "A Century of Journalism."
32 Keute and Birkner, "Digital Wiedergeboren?"

aspirations in terms of the web and of digital and social media as the biggest archive the world has ever seen—albeit one that lacks most of the features of a professional archive. Nevertheless, we find numerous accounts that nothing is ever forgotten on the web. At least allegedly, this is true. Over the past several decades it has become sort of an—albeit errant—commonplace that whatever something may be, once it exists in digital form, will forever remain available for everyone to access and for no one to hide. Archiving, this instrument of power, is allegedly made more democratic, allowing for a polyphony of voices to take part in the communicative reconstruction and evocation of the past.[33] Making collections available online and curating them as a collaborative process is seen as an "unparalleled opportunity to allow more varied perspectives in the historical record than ever before. Networked information technology can allow ordinary people and marginalized constituencies not only a larger presence in an online archive, but also generally a more important role in the dialogue of history."[34] Similar statements were made more than a decade later and until very recently, with regard to social media, which—like Twitter in this example—provide "a platform for people who might traditionally be excluded from public discourse to have a voice in representing themselves as well as their perceptions of the world around them."[35] Media historians Myers and Hamilton have accordingly argued that the history of our current times cannot be written in the future without taking into account the many voices and testaments of social media as one complementary source.[36] It may be true that "[o]ne of the important implications of our current digital society is that so much more of our political and social lives are captured and stored through media technologies."[37] The consequences for research however are ambiguous. The question for many aspects of the historical reconstruction of communicative pasts is hence pushed away from whether we want to take audio and visuals into consideration with regard to questions of how we can access the data which would be relevant for analysis. We may produce more data and records about past communication than ever before, but in this post-scarcity culture,[38] the sheer volume of material makes it hard to comprehend what

33 Schwarzenegger and Lohmeier, "Reimagining Memory."
34 Cohen, "The Future of Preserving the Past."
35 Humphreys, "Historicizing New Media" 414–15.
36 Myers and Hamilton, "Social Media as Primary Source."
37 Humphreys, "Historicizing New Media."
38 Hoskins, "The Right to be Forgotten in Post-Scarcity Culture."

is relevant and what isn't, and the ability to separate treasure from trash becomes an important skill. In this "age of abundance"[39] or "age of profusion"[40] for digitally available sources, questions regarding the availability, accessibility, and usability of this data for research purposes are more pressing than ever before.[41]

However, it remains arguable whether a history which relies heavily on digital media and traces of digital communication as sources will truly be more comprehensive or democratic. In their current state, we cannot even say that all the myriad data produced by digital media will be available at all. Due to the lack of public archiving or proper publicly accessible repositories as well as technological obsolescence, we might instead be on the brink of the Digital Dark Ages, as some gloomy prophecies maintain. Historical information could then, as a result of being outdated and unreadable, of corrupt software, updated systems, or unavailable, scarce, or inaccessible hardware and technologies, be beyond our reach. Rather than remembering everything, future media historians may face inaccessible sources locked away in unreadable software or on obsolete physical storage devices like floppy disks or, increasingly, CD-ROMs or DVDs. Researchers have further demonstrated that the web has in fact only limited recollection of its own deleted past;[42] with regard to the durability of records and archived information, it can at times be easier to find a film from 1924 than a webpage from 1994.[43] In place of the idea that nothing is ever forgotten on the web, when it comes to digital archiving I therefore prefer the Nintendo Entertainment System quit screen message: "everything not saved will be lost," which seems to be more accurate. If everything not saved will be lost, however, it becomes evident that questions about what is saved, who decides what is to be saved, and who shall do the saving become paramount.

The rhetoric surrounding studies of and with digital media suggests not only an increased equality among the voices represented, but also a heightened level of authenticity for digitally preserved data, for attainable completeness of data collection, and an increased immediacy of the data, i.e., the proximity of the data to the actual event it is meant to represent. In research,

39 Fickers, "Towards a New Digital Historicism?"
40 Birkner et al., "A Century of Journalism."
41 Ibid.
42 Ben-David, "What does the Web Remember of Its Deleted Past?"
43 Ankerson, "Writing Web Histories."

notions and metaphors (like digital traces), which become resources for research and are allegedly left behind like a trail of breadcrumbs through the mere use of our digital devices (and which will then become 'found data') suggest improved genuineness. Digital data is imagined to be something simply left behind that researchers will be able to pick up just as it was, as real as it ever was—in digital humanities and computational social sciences, rhetoric data is collected, stored, mined, and harvested from the web just as it was when the crop (so to speak) was grown.

However, it is an important lesson to learn that digital archives and preserved digital data do not allow us to access the digital past as it was. Data is never raw, but always cooked; it changes fluidly and collaboratively over time[44] ("Raw data is both an oxymoron and a bad idea"[45]). Data has always been produced and gathered with a particular purpose and aim, or as Nicholson puts it, digital reborn data[46] is not composed of preservations or simple representations of digital or analogue material in digital form, but remediations—sources are remediated and not just reproduced. The data we find in digital archives are not preservations or simple representations but become unique originals through the process of being archived, coming to have particular features which characterize their value as a source.[47] The nature of data is dynamically linked to the process of its collection and is subject to change and inconsistencies through this process. Search engines and filtering processes generate data as custom-made products and provide only very little insight into how the data were gathered.[48] Similar concerns were raised about the lack of transparency regarding the data which is made accessible through collaboration with digital media providers and corporations: the integrity, completeness, the logic of its composition and the blind spots of the materials remain non-transparent.[49] All in all, digital media

> "provide a complex source of historical insight that represents many dichotomies. These sources are authored by individuals, but regulated by elites; they are used for political articulation, but are part of a larger movement; social media use a new form of communication, yet rely on standard

44 Gitelman, *'Raw Data' Is an Oxymoron*.
45 Gitelman and Jackson, "Introduction."
46 Nicholson, "THE DIGITAL TURN."
47 Brügger, "When the Present Web is Later the Past."
48 Andrejevic, "Cultural Studies of Data Mining."
49 Pfaffenberger, "What you tweet is what we get?" 61.

> communication practices; social media are new media, but retain old media qualities."[50]

For researchers doing media historical work, dealing with the peculiarities and affordances of their sources as well as the contexts of their initial collection or recording are a usual exercise. In digital media environments, the usual skills in source criticism need to be complemented by data literacy. In my view, it is also essential for researchers, even if they do not plan to follow the path of computational methods or digital humanities, to have this kind of literacy. Being able to reflect on the peculiar challenges of digital media as an object of research, or source for interpretation, or regarding the tools they provide is vital even if digital media remain rather peripheral in a researcher's working routine. In addition to literacy, I would also argue that 'doing data' and doing digital becomes important, i.e., that researchers have at least some kind of experience in navigating digital research environments in order to really internalize the requirements.

Conclusion

I have discussed some of the challenges, opportunities, and changes digital media bring for engaging with history, especially the history of media and their contents. It is partly a challenge, a chance, and a consequence presented by pending change, that through digitalization new questions, new perspectives, and insights are made possible. Digital media help us think anew about the old, to address the established media and the traditional questions we asked about them using new tools and means and thus to broaden or deepen the scope and understanding of the past and the present.

Among the challenges we are about to face, we can see that methodological debates (e.g., digital methods vs. traditional approaches and their genuine limitations or potentials) can be revitalized or take on new, nuanced features. Digital humanities approaches and computational methods will however continue to benefit from being complemented by qualitative analysis, hermeneutics, close reading, and special in-depth scrutiny of particular sources.

Additionally, research is likely to demand new interdisciplinary configurations. For instance, computer scientists may become collaborators with

50 Myers and Hamilton, "Social Media as Primary Source" 450.

scholars in fields where the solitary mind is still considered the academic ideal or norm. Furthermore, media and communication scholars are beginning to share their knowledge with scholars from other fields, e.g. musicology, and since the field of communication has expanded, they also need to rely on the expertise of others. Another challenge, which affects the social form of the academy (i.e., scholars and researchers), is to prevent new digital divides among scholars to be drawn or existing gaps to be widened. Adapting to changes in the course of digital transformation will call for skills and competencies in dealing with innovations. But equally important will be the acceptance of innovations as something that can help us do better research or address some questions in more suitable or convenient ways. Therefore, it will be necessary to (re-)establish required skills and literacies in the teaching and training of scholars as well as making them accessible for more senior scholars. Digital archives and digital sources create new challenges and perpetuate others, as I have argued, so a familiarity with the potentials and problems that digital research environments may bring does not only enable dialogue between digitally savvy and digitally averse scholars but also helps prevent embellished expectations. I mentioned interdisciplinary configurations and new grounds for cooperation. And I do indeed believe that working routines and typical workflows could be affected the most. Historical research in general as well as in cultural studies or media and communication research in particular has been characterized by individualized researchers. The historian Jon Olsen argued[51] that digital history is dependent on team effort rather than individual talent. One major impact of the digital age could hence be that media historians also become increasingly dependent on and open to collaboration with those who can add particular competencies to the blend of skills required for engaging with digital research situations.

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51 Olsen, "Digital History als Mannschaftssport."

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