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# DIGITAL ROOTS

HISTORICIZING MEDIA AND COMMUNICATION  
CONCEPTS OF THE DIGITAL AGE

*Edited by Gabriele Balbi, Nelson Ribeiro,  
Valérie Schafer, and Christian Schwarzenegger*



STUDIES IN DIGITAL HISTORY  
AND HERMENEUTICS

## Digital Roots

# **Studies in Digital History and Hermeneutics**



Edited by  
Andreas Fickers, Valérie Schafer, Sean Takats,  
and Gerben Zaagsma

## **Volume 4**

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# Digging into Digital Roots. Towards a Conceptual Media and Communication History

The digital age did not arrive from nowhere; it grew from its own roots and even the roots of previous ages. It already has its own narratives, made up of key players and heroes, brilliant technological ideas, disruptive devices, spectacular forecasting and sometimes epic failures. But over the past few years, scholars have started to narrate these histories in new ways, challenging heroic and teleological narratives and underlining multiple temporalities, stakeholders and cultural reappropriations. New histories of the digital age have also adopted a critical perspective, focusing on issues like global and equal distribution of digital tools (and in parallel digital inequalities and asymmetries of access), maintenance of digital networks, devices and content, co-shaping of digital technologies, and connection and disconnection in different societies. This has expanded our knowledge of the digital past and, of course, of the digital present.

Nevertheless, a chapter in these histories is often missing. The digital age is also made up of theoretical concepts which are mostly taken for granted and used “automatically” in the academic literature as well as in everyday life. Concepts influence the way we look at social reality, they shape how and in what terms we think and speak about the digital era, and they affect the ways we communicate and live. So, it is high time that we set a new trend in research that focuses on the concepts of the digital age. Indeed, by grounding research in concepts that are not properly problematized, we run the risk of making erroneous assumptions, which may prevent us from looking in the right direction and impair our ability to see beyond simplistic narratives about technology and its immediate impact on society. For example, in the 1990s and early 2000s, utopian visions of how the internet would usher in a new era of cultural democracy and undermine the power of dictators concealed the fact that the concepts of digital

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participation and digital disruption were scarcely problematized. This led to faulty suppositions about the potential of technology to expand democracy (as demonstrated by Curran 2012, Morozov 2011 and several other scholars), while also reflecting a failure to recognize that in previous eras, other media were also greeted by utopian discourses in their early days (Ribeiro 2015).

This book aims to help avoid this trap by analyzing and historicizing some essential concepts of the digital age that have been widely used in the literature. In the introduction, we set out what we mean by historicizing digital concepts and digging into their roots, we explain the structure of the book, and finally we advocate for a conceptual media and communication history – a new way at looking at communication technologies, practices, and consequences over time, starting from their concepts.

## 1 Excavating the Roots of Digital Concepts

What does it mean to devote a book to the roots of digital concepts? The etymologies of these two words in the *Oxford English Dictionary* can help explain our approach. The word concept is derived from the Latin *conceptum* (*concipere*, to conceive); it refers to something people are able to think of, something imagined in their mind, an idea or mental image, as encapsulated in the Middle French term *concept*. In philosophy, the word is used as a “mental representation of the essential or typical properties of something, considered without regard to the peculiar properties of any specific instance or example,” meaning that a concept can be also considered as an ideal-typical image of the world.

Root has a different geographical origin: it is a borrowing from early Scandinavian, with Greek and Latin cognates. According to the *Oxford English Dictionary*, most etymologies indicate the botanical meaning: a root is “the part of a plant or tree, normally underground, which attaches it to the ground (or other supporting medium) and conveys water and nutrients from the ground to the body of the plant or tree.” Figuratively, a root can also be the source, the origin or the cause of something, as well as the essence and the core of it. There is also an emotional dimension of roots, in the sense of strong links and attachments to ancestors (the word is indeed used to denote “a person or family considered as the source of a lineage”).

Our project therefore aims to identify the origins, sources, lineage, and heritage of some of the most common mental images of the digital world. These images are often condensed in keywords or buzzwords that tend to be used widely, without any real reflection on their origins, development or even their

real meaning. By offering a detailed analysis of 16 relevant concepts, this book attempts to dig into the innermost part of digital age, to reveal when and where these mental images emerged (some of them in analogue times), and how they have changed in recent decades.

This volume is not a dictionary, nor does it mirror the series named “Concepts of the Digital Society” in the journal *Internet Policy Review* (Katzenbach and Bächle 2019). First, this is because it is an edited volume, in which there is a dialogue between the chapters and an interrelated network of reflections on the digital age. Of course, the reader can focus on single chapters, but reading all of them together and in order (the old linear model of books) will provide a deeper sense of the project and may lead to the emergence of unintended themes or threads, some of which are suggested in the last paragraph of this introduction. Second, and more importantly, this is a historical book. History is undoubtedly the discipline which is most capable of embarking on such a long and difficult dig into the mental images of the innermost digital world. The historical approach will help analyze some of the relevant concepts of the digital age by following them through time and rediscovering their lost or persistent meanings and genealogies. Several of the most well-known and frequently discussed concepts in the digital age predate digitalization itself, as demonstrated in this book, and were previously used in the “analogue era.” This may sometimes even challenge the opposition between analogue and digital, which in some cases is quite artificial (as Haigh 2019 and Sterne 2016 show). Other concepts were coined for the digital society but have changed and are continuously changing over time, in a clear demonstration of how meanings are social and cultural constructions. More generally, digitalization has had an impact on concepts: it has reintroduced or reinvigorated old concepts, or even changed their meanings. Concepts like networks, global governance and amateurism clearly have a pre-digital life, but they have been incorporated so fully into digital semantics that, when we think about them today, we immediately link them to the realm of digitalization.

With this book we aim to highlight the persistent changing nature of digital concepts (and any concepts) as a result of cultural reappropriation and transformation over time, and to analyze the flexibility of what we tend to see as frozen mental images. We are aware that concepts tend to change slowly, but they always change over time (see for example Bay 2017 and Hösl 2019 on the semantics of the internet). Since history is the discipline of continuity and change *par excellence*, this book aims to equip researchers in media and communication studies, general history, digital studies and related disciplines with flexible lenses to understand the present. A root always carries water and nutrients from

the ground to the surface plant, and digital history can similarly irrigate the digital present.

Finally, this book is rooted in history at several levels, as it also tries to provide a brief overview of the evolution of digital historiography for each specific concept. The readers will find essential literature reviews in each chapter and a state of the art of the ways in which scholars from different disciplines have treated each notion. This is a chance to rediscover and discuss some seminal approaches, such as those by McLuhan (1964), Negroponte (1995), Castells (1996), Turkle (2011) and several other digital champions.

To sum up, by historicizing digital concepts we mean identifying their roots and tracing the changes and developments they – or the phenomena they describe – have gone through over time and in terms of historiography. Historicizing is a way of complexifying, contextualizing, and entwining technological visions with mental images, social appropriations, and political and economic discourses.

## 2 Structure, Content, and Viennese Roots

The idea of this book emerged during a lunch in one of the most famous Viennese restaurants for *Wiener schnitzel*. This lunch was on September 11, 2019 and it predated the ECREA Communication History Section workshop “Jeopardizing Democracy throughout History,” held in Vienna and co-organized by the Austrian Academy of Sciences. At this workshop, the three elected section chairs and former chair Nelson Ribeiro wanted to create a symbolic bridge connecting past and present. At the same workshop, the first tangible publication by the Communication History Section, set up in 2010, was presented (Arnold, Preston, and Kinnebrock 2019), and so we decided to engage the section members in a new project. A call for chapters was later launched and disseminated via the usual academic channels and mailing lists. Consequently, we received further applications and we were able to make a selection from an ample base, complemented by experts that we contacted directly as editors to write specific chapters. In other words, the book emerged on a rolling basis, but as a rounded and consistent project. The result of this long process is a series of contributions from well-known scholars, coming from or working in Austria, Belgium, France, Germany, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, Portugal, Sweden, Switzerland, the United Kingdom, and the United States.

The reader may feel that some notions are missing and point out some silences. In 2016, no fewer than a hundred notions relating to digital civilization were briefly addressed in a book edited by Jean-Paul LaFrance (2016). And new notions

have already appeared since. However, our goal was to allow for a detailed analysis of concepts, relying on a strong diachronic perspective, historical sources and careful “gardening” of the roots, which made exhaustive coverage both impossible and undesirable. The book therefore also paves the way for further analysis and potentially one or more additional volume(s), but it already provides strong outputs in three directions that reflect the main sections of the book: *Technologies and connections*, *Agency and politics* and *Users and practices*.

Section one (*Technologies and connections*) is composed of five chapters focusing on the foundations and underlying infrastructures, as well as the connections and interactions of the digital age. This section reconstructs the paths that have led to the merging and integration of technologies. It starts from a period of functionally differentiated tools, technologies and devices and proceeds to a time when technologies and media seem to be overlapping and multiplying more than in any other previous age. In this latter era, prefixes such as inter-, multi-, net- denote a connecting and connective dimension of digitalization *per se*. Chapter 1, by Massimo Rospocher and Gabriele Balbi, is about one of the most symbolic and obsessively repeated concepts in digital literacy: networks. The authors reconstruct a history of road, postal, telecommunications, transportation, and broadcasting networks over the centuries, identifying two persistent dimensions that also characterize the digital age: the infrastructural and material aspect underlying all types of network, on the one hand, and the ability to create communities of people connecting over the new infrastructure, on the other. John O’Sullivan and Leopoldina Fortunati focus on the concept of media convergence, tracing its ramifications in cultural, technological, market and policy terms. By examining case studies such as newspaper supplementation and add-ons in the nineteenth century and the relationship between the telephone and broadcast media in the twentieth century, they rediscover processes of combination and adaptation in pre-digital media and the need to recognize them if we are to understand equivalent phenomena in the digital era. Katie Day Good retraces the origins of the term multimedia by focusing particularly on educational uses and tracing the emergence of a multimedia sensibility in US education in the interwar years. The chapter also demonstrates how early educational discourses and experiments helped pave the way for corporate and cultural visions of multimedia. The author further shows that not all concepts age well and describes how, with the progress of digitalization, the once progressive promise of multimedia began to feel dusty and the concept lost intellectual trajectory. Chapter 4, by Benjamin Thierry, is about interactivity. When this concept emerged in the 1960s, it was linked to computers and used in several fields like ergonomics, computer science, and psychology. It refers to the relationship between humans and digital (or analogue) machines, a relationship which the author believes has constantly changed

over time: from a simple dialogue to a broad framework for interpreting the digital world. Paolo Bory, Simone Natale, and Dominique Trudel scrutinize artificial intelligence. Their chapter reconstructs the historiographies of AI, starting with cybernetics and human-computer interaction, then irrigated by science fiction and gaming perspectives, and culminating in the pervasiveness we see today. They conclude by suggesting that AI historiography can give us new insights into the theoretical foundations of communication and media studies in a broad sense.

Section two of the book is entitled *Agency and politics*. The five chapters in this section look at digital concepts related to policy and the way in which cultural interventions have shaped the contemporary digital landscape. None of the five concepts is new or was created in the digital age, but all are emblematic of our times. The battle for the control and regulation of the internet is a matter of global governance. The process of generation, interpretation, and transformation of data as a means of understanding, describing, and predicting reality is called datafication. The idea of fake news has been obsessively alluded to by Donald Trump and other populist leaders but has also been extensively used in scholarship. It refers to the dissemination and spread of disinformation as well as the strategic discrediting of news sources to diminish citizens' trust in journalism and media outlets. Echo chambers refer to personalized information bubbles as alleged boosters of social fragmentation and polarization, which supposedly only resonate with preformed and coherent opinions. Finally, activism has re-emerged in the digital era with new and specific characteristics, often accompanied by premature claims that new forms of protests and activist participation were only rendered possible by the internet and digital communication. These concepts summarize processes that are shaping our everyday life.

In their chapter, Francesca Musiani and Valérie Schafer focus on the history of global governance, from the telegraph to the internet. Media governance at worldwide level is not a digital invention, and back in 1865 the first international organization was founded to regulate (and govern) telegraphy: the Telegraph Union, today the ITU. A historical approach to the topic may help both to flesh out continuities through time and to historicize internet governance, since the concept has evolved in recent decades with the creation of other powerful international organizations like ICANN and WSIS. In Chapter 7, Erik Koenen, Christian Schwarzenegger, and Juraj Kittler approach the notion of data(fiction) from a long-term perspective. They analyze how, long before the “digital revolution,” data and datafication were already producing exclusive arrangements of infrastructures and ordering knowledge. They also retrace shifting and persistent institutions for data collection and processing and governance of access, while providing an analytical matrix to identify enduring questions and

changing answers through the ages. Monika Hanley and Allen Munoriyarwa address one of the most misused concepts of the past decade: fake news. As the chapter subtitle makes clear, this is a new term but a very old practice that has been prevalent since societies first started to share information. Nevertheless, the acceleration of communication distribution and new spaces and platforms that can be used to spread disinformation are changing its meaning, as contemporary populism and the Covid-19 pandemic have demonstrated. Fake news is a prototypical example of how (digital) concepts are constantly acquiring new semantic meanings and how terms coined in public debate or popular discourse can infiltrate and dominate scholarship. In Chapter 9, Maria Löblich and Niklas Venema historicize echo chambers. On the surface this concept appears to refer to recent changes in the digital media environment, but the authors demonstrate how it replicates past concerns about the fragmentation of public discourse. The history of echo chambers is indeed full of simplistic assumptions and unjustified worries about naive media audiences and “wrong” uses: from the print press in the nineteenth century to cinema and broadcasting in the twentieth century, the media have often been seen as forces serving both the aggregation and the fragmentation of the public sphere. Digital media are no exception, but the diversified communication offerings constituting people’s personal blend of information raise unprecedented challenges. The last chapter in this section is written by Emiliano Treré and Anne Kaun and engages with the notion of digital media activism. The chapter argues for the adoption of both a historical and a contextualized ecological perspectives. In their journey through the history of digital activism, they also demonstrate how the concept has been “constructed” by parallel ideas and terms used to emphasize particular technological aspects or to foreground particular modes of participation.

The third and final section of the volume looks at six digital concepts that are indicative of *Users and practices* often considered characteristic of the digital age. This section is related to user experiences in a broad sense and to new practices from below in the digital realm. These practices also have their own histories. The concepts in this section have become popular in recent decades because they embrace a new relationship between media and their users, especially the fact that users are increasingly “active” and actively involved in the generation and circulation of mediated content. Amateurism, user-generated content and fandom, for example, all refer to different ways in which users participate in the production of digital content or engage with existing content circulating in networks in creative ways. Other concepts are related to renewed experiences and practices by users, like telepresence or feelings of loneliness, both of which have a long history. Finally, the concept of authenticity diverges somewhat and considers the specific case of historians as users. Even historians

have to take into account how digitalization has changed their field, methods, and tools and to adopt new practices, especially digital hermeneutics, which our approach to concepts may also help deepen.

In Chapter 11, Jérôme Bourdon enlarges the meaning of (tele)presence to include historical forms of presence from a distance, like painting and correspondence but also telegraphy, newspapers, and broadcasting. Taking into account non-digital media and past experiences, it demonstrates how presence at a distance has created connections with a variety of creatures, both humans and non-humans, but always in some way humanized. This pre-digital past of the concept also involves several interlinked related concepts and semantic elements such as liveness, synchronicity, social presence, and virtual reality and their persistence across technologies and times. Edward Brennan historicizes the idea of digital loneliness. Paradoxically, digital media, which are defined as means of connection with the potential to link people, have also introduced and even promoted new forms of isolation and new feelings of loneliness. The chapter contextualizes digital loneliness as the latest manifestation of the type of polarized “hopes and fears” discourse that cyclically greets new communication tools, while also approaching it as a cultural phenomenon shaped by long-term historical processes. In Chapter 13, Susan Aasman, Tim van der Heijden, and Tom Slootweg explore the multiple meanings of amateurism in the ages of film, video, and digital technologies. In the current digital age, media amateurs seem to have taken over a large part of cultural production and revised traditional hierarchies between professionals and amateurs. But the concept is older and more complex: the associated mental images and meanings emerged in the late nineteenth century, if not before. In addition, in this chapter, the authors propose to develop an analytical tool to identify various amateur modes of practice, a kind of ontology of amateurism which requires a historical perspective. Göran Bolin deals with the related concept of user-generated content, also known by the acronym UGC – concepts are sometimes real “brands”, like this acronym shows. Popularized in the early 1990s to describe media content produced by users outside the traditional professional media institutions, UGC gained widespread popularity around 2005. But the chapter also situates UGC in the longer history of media production and suggests explanations for why the concept rose to popularity when it did and why it has been met with increasing criticism. In Chapter 15, Eleonora Benecchi and Erika Wang historicize fandom and look at the difference between Eastern and Western perspectives. Even though fandom has changed in the digital age, the authors argue that there has been an overestimation of the novelty of modern fan communities (this is quite typical of anything digital in media and communication research), since digital fan practices can often be traced back to the pre-digital era. Furthermore, fandom and fans



themselves are defined in several different ways, as the comparison between Western and Eastern cultures shows. In other words, this chapter demonstrates how a comprehensive history of any digital concept should be transnational and should also include meanings and ideas from the analogue era. In the last chapter of the book, Andreas Fickers proposes a new interpretation of a key concept of the digital era: authenticity. Instead of considering it as an apparent rise in authentic or less intermediated digital communication, the chapter investigates how digitality has affected the idea, concept, and meaning of the authenticity of historical sources. The chapter is particularly geared towards historians, as it advances a critical understanding of how digital infrastructures, tools, and technologies affect historical methodology. Digital concepts can also influence specific and narrow fields of work, and Andreas Fickers provides a clear example of this. The chapter symbolically echoes the name of the series, *Studies in Digital History and Hermeneutics*, thereby creating a bridge with future books in the series.

### 3 New Roots to be Explored

As already mentioned in the previous section, this book is intended to be more than the mere sum of its chapters. Just as roots can grow above the earth or run beneath it, there are some hidden and some more visible links among the concepts in this collection and the chapters historicizing them. In particular, the book proposes an agenda for how to approach media and communication studies through concepts. In this part of the introduction, we identify the main topics of this agenda, but of course we are eager to know if our future readers will find other more relevant issues.

First, several chapters address digital concepts from a *longue durée* perspective, making reference to the French historian Fernand Braudel (1960). In a telling metaphor, Braudel claims that seas are characterized by three degrees of movement: quasi-static deep abysses; undersea currents, which are moving and deep down; and constant surface ridges. Historical research should examine all three dimensions together but should especially focus on the first and second because it is only over the long term (*longue durée* in French) that the deepest and most meaningful social changes take place. What does it mean to study the *longue durée* of digital concepts? It means studying them even before they were commonly used, when they had different names, or even when societies were not able to name them at all. It means studying digital concepts from a diachronic perspective, looking at the present as just one of many options and maybe not the most enduring or meaningful. It also means recognizing how the frenetic daily



pace of digital innovation does not correspond to the slow and uncertain pace with which ideas and mental constructs evolve. The absorption of concepts in the mentalities and socio-cultural fabric of societies is a much slower process. The roots of apparently new concepts like networks, fake news, data(fication), and telepresence have grown deeper and deeper over the centuries and have evolved hand in hand with the development of human cultures and societies.

A second and related thread in the book has to do with repetitions, patterns over time, and therefore once again with the temporalities of digital concepts. Historicizing is more than just looking back. It enables us to trace continuity and change, to pinpoint shifts and identify differences in the meaning of concepts. Historicizing does not only mean following a concept back to its seed and its roots; it also means retracing this path and applying concepts with a greater understanding of the nuances they have carried through time, their dominant meaning at a given point in time, connotations they may have shed at other moments or may still omit today.

We often tend to emphasize the uniqueness of the world we live in. This tendency is known as “presentism,” “chrono-centrism” or “newness” (see for example Fischer 1970), and it has often been embraced by media and communication studies (for a critique see the seminal work by Marvin 1989). We tend to think that digitalization is an exceptional phenomenon (this attitude is also referred to as “digital exceptionalism”), that digital media are disruptive and unprecedented innovations which have radically changed the way we communicate and, consequently, the way we live (for a critique, see Balbi and Magaouda 2018; Menke and Schwarzenegger 2019). The same goes with digital concepts: digitalization must have produced new ways of thinking, with minor or no ties with the past, and so must have introduced “exceptional” concepts. This is simply wrong, and it is always refreshing to look at the continuities in which new media and technologies of communications were envisaged over time, how related concepts were born and how they have evolved. Networks have always had infrastructural and material dimensions, as well as the ability to create and destroy communities. The collection, distribution and conservation of data have always gone hand in hand with political, economic and symbolic power. People felt lonely when watching TV in their living rooms way before digitalization. Fans were considered “weird” and liminal audiences even when they exchanged paper newsletters to discuss their idols.

Very often these reflections on new media and communication technologies are stereotypical and recurrent: if we borrow the words of Umberto Eco (1964), media are often judged with a polarizing vision which he called “apocalyptic” and “integrated.” Apocalyptic visions are negative, looking at the development of new media as a dangerous phenomenon for societies, while integrated visions

tend to underline the benefits societies will have in using them. Eco wrote his book mainly focusing on the polarization of discourses around television in the 1960s, but the same claims can be adapted to digital media, digitalization, and digital concepts. Before the 2000s, digital visions were mainly positive and “integrated”: think about concepts like collective intelligence and frictionless capitalism, as well as the terms user-generated content and interactivity, included in our book. After the 2000s, maybe because of the burst of the internet bubble or maybe because of the rise in surveillance, there was a critical or “apocalyptic” turn in the ways we think about digital technologies. Consequently, concepts like fake news, echo chambers and digital loneliness (as well as others not included in this book such as digital solutionism and digital surveillance) have emerged. The book reveals how stereotypical ways of looking at communication and media re-emerge and persist over time, medium by medium, but also how concepts are born of their time and their meanings may change according to shifts in the political, economic, and cultural zeitgeist. Repetitions, patterns, and temporalities of digital concepts are lenses to take away from this book. They are closely intertwined and are prerequisites for the third way we suggest approaching the book, which may be the most relevant in theoretical terms.

Media and communication history is often focused on messages, technologies, politics, economics and other related aspects. This book proposes to launch a conceptual media and communication history, scrutinizing how concepts in the field of media and communication develop over time. This is also why we chose to use the term “concepts” for this volume, rather than keywords or ideas. A history of concepts emerges at the crossroads where keywords and a history of ideas intersect. In our understanding, keywords highlight what is considered as the shared and defining knowledge at the time of writing or editing a project. As Raymond Williams noted in his pioneering work on the keywords of culture and society, they reflect not the dictionary or glossary of a particular academic subject, but the “shared body of words and meanings in our most general discussions” (Williams 1983, 15). Decades later, the spirit of Williams’ seminal publication was evoked again in the anthology *Digital Keywords* edited by Benjamin Peters. Following in Williams’ footsteps, the book by Peters explains that keywords are indicative of social change and transformation in how we speak and think. Keywords can serve as a literal key and open up particular perspectives on the world, but they will only do so “if the work [they do] can be distinguished from and then connected to other terms – a keyword must serve as a discrete operator in a larger semantic system” (Peters 2016, xx). A key in this sense is used both to open and to lock doors: “They stand sentinel to the halls of knowledge and power” (Peters 2016, xiii). In the discussion of keywords, the role of language is paramount, as is the

core question of how it shapes, moves, and affects ways of being in the current media environment and what is hidden or revealed by the vocabulary used (Peters 2016).

A history of ideas is even broader and more general, as it sets out to trace theoretical ideas and perceptions of the world and the epistemic grounds on which they have been built through the ages, regardless of the verbal expression they find at a given moment and the ways in which particular ideas unfold in debates at specific times. Ideas can come in different shapes and sizes, and similar ideas can exist in different ages as well as in different cultural and geographical settings. However, it is in concepts that ideas are manifested – ideas travel loosely, but in concepts they take shape and form. Concepts give names to abstract ideas and hence become fundamental building blocks of thoughts and perceptions. The history of concepts allows us to identify how different ideas have manifested themselves in various (key)words over time and to find instances where a new term does not signify a new conceptual idea as well.

Conceptual history (*Begriffsgeschichte*) has a long theoretical tradition dating back to at least the 1930s in the German historiography, and especially to the work of Otto Brunner (Vogelsang 2012). We refer to this tradition, but we also propose something different for media and communication studies. Conceptual history is traditionally linked to semiotics and linguistics, since the meanings of concepts can be found in their semantics, in their definitions or in words and discourses. This literary approach, quite similar to the keyword approach outlined above, is not the focus of this book. Despite the fact that etymologies are relevant (and this should be clear even towards the end of this introduction), you will not find semantic trajectories of all the concepts. This book is not an etymological history of digital concepts.

We embrace a more extensive and social-historical approach to digital concepts, following in the footsteps of the German historian Reinhart Koselleck. He famously theorized the relationship between social history and conceptual history in two texts (Koselleck 1989, 2004), but we have particularly drawn insights from the one published in the book *Future Pasts*. According to Koselleck (2004, 76), “Without common concepts there is no society, and above all, no political field of action. Conversely, our concepts are founded in sociopolitical systems that are far more complex than would be indicated by treating them simply as linguistic communities organized around specific key concepts.” Adapting this idea for our book, there is no digital age without its concepts and, conversely, those concepts are not merely a linguistic reality but also a societal one.

Conceptual history helps us understand the political, economic, and social struggle to impose new ways of thinking. We have already said that this book tries to retrace the histories of concepts even before they were created or imagined, and

Koselleck claims that “concepts no longer serve merely to define given states of affairs, but reach into the future. [. . .] positions that were to be secured had first to be formulated linguistically before it was possible to enter or permanently occupy them” (Koselleck 2004, 80). Concepts have politics and stakeholders fighting to impose them. This is especially relevant in the digital age, when several of the key concepts conceal power, economic interests and cultural hegemony.

Conceptual history is also a method for source criticism, and Otto Brunner (1946, 187) proposed that we look at the past through a terminology derived from sources themselves, “so that the meaning of these sources may be correctly interpreted with the help of these concepts.” When engaging in media and communication history, we should always ask ourselves if a nineteenth century concept that has apparently lasted over time really means the same today. This is a difficult but necessary exegesis of the sources we use and can help us to avoid incorrect historical parallelisms and, in the final analysis, anachronism. In every conceptual history, there is a risk of overusing current mental categories to analyze past concepts, just as there is also a risk of negating the particularities of the current moment when applying well-established concepts to them. This is a paradox for a conceptual media and communication history: it can cause us to overstate change while underestimating continuity or, on the contrary, to overemphasize persistence and negate transformations in the concepts we use. We are conscious that this is a risk we took when we started editing this book, but we think that there would be more at stake if we had failed to do so. Furthermore, the chapters in the volume are intended to start conversations rather than end them.

Conceptual history focuses on “persistence, change and novelty” (Koselleck 2004, 84) and takes the diachronic perspective very seriously. Concepts that appear not to have changed for a long time may actually have acquired an entirely new meaning, but their redefinition may have been overlooked or unrecognized. Moreover, “Concepts not only teach us the uniqueness of past meanings, but also contain structural possibilities, treating the concatenations of difference invisible in the historical flow of events” (Koselleck 2004, 91). Concepts can reveal the contemporaneity of non-contemporaneous events, linking them at different points in time.

Applying these ideas to our field, as already mentioned, with this book we propose to launch a conceptual media and communication history of the digital age. This is a first attempt to make digital concepts (and not devices, gurus, politics, business, etc.) central to reflections on the digital age. It is also a plea for concepts to be understood in the social context in which they emerge and develop, as well as a means of urging scholars to consider shifting realities and mentalities and different ways of envisaging and imagining media over time.

This approach is different from that of conventional media history and can bring to light new narratives regarding media and communication. The difference is that research is not guided merely by phenomena related to media and communication but by how we (used to) think about them, approach them and make sense of them. For instance, looking at media convergence in its analogue forms, starting with the press, the telephone and broadcasting means revisiting established assumptions of digital media convergence and thereby redefining an idea that is often taken for granted. A conceptual history of artificial intelligence can help us to reconsider and discuss the theoretical foundations of communication and media studies as a whole. Examining the concept of fandom calls for sensitivity towards transnational and transcultural differences and illustrates how conceptual histories can bring to light a global perspective which is somewhat rare in media historiographies. The same concept can have different meanings – Koselleck (2004, 85, 90) calls this a “plenitude” or “diverse strata” of meaning – in different cultures and geographical areas; it can be evaluated according to different social and academic normativity and hence guide research in various ways. Concepts can also travel in peculiar ways from one cultural setting to another, re-enter via different neighboring fields and find fresh reception and application in another context (Pooley and Schwarzenegger 2017).

A conceptual media and communication history should therefore also highlight how concepts emerge, become hidden, are transformed and re-emerge over time. Concepts are like streams which can flow under the surface of social recognition for a long time and burst forth abruptly at specific moments in time. Artificial intelligence is a typical concept that has gone through summers of visibility and obscure winters (Natale and Ballatore 2020), but this also applies to concepts such as telepresence, multimedia, and interactivity, which were all very popular in the 1990s and 2000s but have since declined in favor of others. Concepts always influence each other, both diachronically and synchronically, and digital concepts are no different. Concepts can even shape the future. Digital concepts symbolize political and economic tensions and negotiations, and if powerful stakeholders want to reuse and re-semanticise them for their purposes in the future, they will probably be given a second birth. French scholars André Gaudreault and Philippe Marion (2005) have introduced the “double birth model” to describe and explain the re-emergence of media technologies over time, but this model can be applied to concepts as well. Furthermore, processes of reinvention and re-birth always entwine different concepts, especially when their meanings seem to be written in stone, well defined and accepted. So, historicizing digital concepts which are presumably expressions of a current state of affairs and disentangling them from the digital realm allows us to straighten out their roots and trace them back to previous

eras. This can help scholars avoid historical blindness and make them less receptive to suggestions of exceptionalism.

A conceptual media and communication history can be beneficial for “traditional” media and communication history and also for media and communication research in a broader sense, showing both where the political, economic, socio-cultural and technological mental images applied to our media come from and also how concepts in media and communication can be changed, used, instrumentalized and co-shaped over time, how different cultures interpret them, and their ascending and declining popularity. Concepts are always fragile and, as expressed in the famous poem *Soldiers* by the Italian Giuseppe Ungaretti (1918), they are “like leaves on the trees in autumn.”

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## **Technologies and Connections**





Massimo Rospocher and Gabriele Balbi

# Networks

## Infrastructures, Materiality, and Communities from Ancient Rome to Social Media

**Abstract:** Network is one of the most symbolic and obsessively repeated keywords in digital literacy. But networks are obviously not exclusively digital. In Ancient Rome, transportation networks were built and maintained to link a dispersed and immense empire. Postal networks were crucial in the early modern period to foster communications and acted as a premodern info-structure. Electric telegraphy, telephony, and then wireless allowed instantaneous communication from the nineteenth century, changing the sense of speed and place, and acting as info-structure for nascent train and plane systems. The word network was then applied to radio and TV in the twentieth century.

After an overview of what we call digital network studies, this chapter aims to historicize and deconstruct the arguments surrounding networks in a long-term perspective, highlighting continuities and changes over time. We will focus specifically on two dimensions: networks as infrastructures and networks as socio-cultural tools to build communities.

**Keywords:** infrastructure, space and time, nodes and hubs, social network, *longue durée*

The word “network” is neither new nor native digital, but this lemma has acquired multiple meanings over time. One of the oldest connotations – the word *networke* appears in the 1530 Tyndale Bible – was with “Work (esp. manufactured work) in which threads, wires, etc., are crossed or interlaced in the fashion of a net” (Oxford English Dictionary Online; henceforth *OED*). The network is a net that needs human work to be made, for example fishermen’s nets which require a long process of sewing to be completed and especially maintained (Musso 1997).

It was only from the nineteenth century that the concept became widespread and directly connected with communications. Indeed, the second etymology of network deals with “Any netlike or complex system or collection of interrelated things, as topographical features, lines of transportation, or telecommunications routes (esp. telephone lines)” (*OED*). Translated in contemporary research fields, the Macro-Systemic and/or Large Technical Systems (LTS)

dimension of networks is a second and relevant character. Communication networks are both made of several interrelated technologies and social practices, as Thomas Hughes (1983), Alain Gras (1993) and several other authors have shown.

A third etymology of network emerged in the twentieth century, as “an interconnected group of people; an organization; spec. a group of people having certain connections (frequently as a result of attending a particular school or university) which may be exploited to gain preferment, information, etc., esp. for professional advantage” (*OED*). A network, then, is not only a socio-technical and material system made of interrelated technologies assembled by humans, but it can also symbolize social groups where humans meet face-to-face, in virtual settings, or groups that never meet but to which people belong (for example the alumni of a prestigious college). From this perspective, networks create profitable and invisible connections, social ties and links among people both inside and outside the network itself.

Even if networks are embedded in human societies for centuries, this concept became a buzzword in the digital age: we might think about terms like network society and social network (site). Or, again, we can consider how the suffix *-net* was used as the extension of web dominions (.net), in digital neologisms (*netiquette*), in the names of digital corporations (Netscape, Netflix) and in relevant political debates (*net neutrality*). Networks seem to be at the center of digital culture and to drive it metaphorically.

In the first section of this chapter, we offer a concise overview of the ways in which the concept of network has been used in digital literacy over time. Then, in the second section, we historicize the ideas surrounding networks and deconstruct its meanings with historical examples from Ancient Rome to the twentieth century. Continuities and differences in the way networks are considered are addressed specifically in the conclusion.

## **1 *Digital Network Studies. A Brief Overview***

There are various, and sometimes conflicting, ways of naming studies about digital networks. For example, network science is an academic field examining complex networks mainly through mathematical models. Social network analysis investigates social structures using networks and graph theory. Network analysis aims at creating maps and graphs of the degrees and intensity of connections among people in different settings.

We decided to use the term *digital network studies* to label a branch of media and communication studies dealing with digital networks. This is neither a discipline nor an academic field, but a way to grasp how digital literacy, especially from the 1990s to today, has used the concept of networks in very different realms. Providing an overview of all these research fields is nearly impossible and, consequently, we focus only on some of the media and communication “classics” in digital network studies.

As already mentioned, network society is probably one of the most renowned concepts in digital network studies. In 1996, Manuel Castells wrote *The Rise of the Network Society*, becoming probably the best-known scholar in the field. Castells focuses on five interrelated phenomena which, according to him, have changed contemporary societies since the 1970s. First, the trend of liberalization and deregulation of financial markets, which caused economic and financial transformations. Second, the pressing need for skilled and highly educated workers changed the job market – in line with Daniel Bell’s idea of post-industrial societies. Third, the emergence of connected cities and places in the global architecture of networks (e.g., New York becoming a hub able to attract wealth, power, culture, innovation, and people) has created different “spaces of flows” where “the material arrangements allow for the simultaneity of social practices without territorial contiguity” (Castells 1999, 295). Thanks to infrastructures made of nodes and hubs, social actors operating the network and electronic spaces such as websites for exploiting interactions, people can experience new forms of geography and spatial interactions. A fourth and similar transformation emerged with what Castells called “timeless time”: from the end of the twentieth century, societies started to be no longer characterized by the “clock time” of the industrial age or by the “natural” rhythm of pre-industrial ages, but by a constant tension and desire for instantaneity, a minimization of time-lapses, and by the flexibility of timeslots. For Castells, this time-space compression is mainly caused by new digital communication technologies: this is the fifth transformation creating contemporary network societies, with the expansion of the internet, wireless technologies and, more generally, interactive, peer-to-peer and horizontal media instead of vertical and hierarchic ones. These media, according to Castells, favor a “mass self-communication,” where audience/users decide and create their own schedules or timetables, fragmenting their media consumption.

A second champion of network society is Jan van Dijk who, in a book written in Dutch in 1991 and then translated into English at the end of the decade, claims: “With little exaggeration, we may call the 21<sup>st</sup> century the age of networks. Networks are becoming the nervous system of our society, and we can expect this infrastructure to have more influence on our entire social and personal lives than did the construction of roads for the transportation of goods

and people in the past” (van Dijk 1999, 2). In other words, a new form of society based on digital networked media is gradually replacing or complementing previously existing personal communications. The so-called networked media have economic, legal, socio-cultural, psychological, and political “effects” on contemporary societies, transforming them into network societies, where people become linked to one another and have access to information and communication continuously and on-demand. As well as providing a historical overview of networks in “ancient history,” van Dijk argues that “A network can be defined as *a collection of links between elements of a unit*. The elements are called nodes. Units are often called systems” (van Dijk 1999, 24).

*Link* is also the title of a famous book (subtitled *The New Science of Networks*) written by the physicist Albert-László Barabási and which is another classic work in digital network studies. Barabasi (2002) compared how networks operate in very different spheres like biology, physics, mathematics, virology, and communications, among others. There are similar characteristics: the presence of hubs (key nodes of communication, highly interconnected) and links (connections); the fact that big and very well connected hubs tend to grow over time, while small hubs tend to decrease their relevance (“The rich get richer and the poor get poorer”); and, finally, the fact that nodes in different networks require just a few steps to be accessed, according to the well-known “small world” and “degrees of separation” theories. Barabasi’s book is relevant for digital network theory not only because he analyzes the Internet and the Web, but especially because he reminds us that the ways in which networks are designed (their so-called architecture) can shape flows and power dynamics of communication.

From the mid-2000s, the explosion of so-called social network sites (SNSs) like MySpace, Facebook, LinkedIn, Instagram, and others changed the paradigm of digital network studies. danah boyd and Nicole Ellison (2007, 211) were among the first scholars to define SNSs, claiming that “What makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to *articulate and make visible their social networks*. [. . .] participants are not necessarily ‘networking’ or looking to meet new people; instead, *they are primarily communicating with people who are already a part of their extended social network*. To emphasize this articulated social network as a critical organizing feature of these sites, we label them ‘social network sites’”. If in the 1980s and especially the 1990s, computer networks were used to meet new people and to perform new roles and personalities (possibly anonymously), from the mid-2000s SNSs have been studied as places where the personality and the inner self of people could be built in the public sphere. Not by chance, Zizi Papacharissi (2011) has introduced the acronym “networked self,” while Alice Marwick (2013) has focused her attention on the practices of celebrities in SNSs.

In the last decade of digital network studies, the political, social, and especially economic relevance gained by the SNSs has led to the triumph and then decline of digital networks as a buzz concept of our age. A triumph because network has become an obsessively repeated buzzword even outside academia. “Networking,” and related concepts like connecting, are used in everyday language and by digital corporations to explain their missions: for example, a 2006 Facebook tagline was “Facebook is a social utility that connects you with the people around you [. . .] made up of lots of separate networks – like schools, companies, and regions” (Reagan 2009). Despite (or maybe because of) its success, digital network studies have started to rethink the role and substitute the concept of network with other ones. Due to the transformation of SNSs into enclosed “walled gardens,” where users can spend their entire navigation experience, platform is probably the next attractive and popular concept which has started to replace or integrate “network” in digital studies (e.g., van Dijck, Poell, and de Waal 2018). Platforms have been defined in different and sometimes contrasting ways, but they share several elements with networks: the material and socio-technical dimension, the power to shape and control flows of information, the speed and acceleration in social relationships, among others.

This does not mean that network will soon disappear in digital and media studies. This concept is too embedded in how people think about and represent their communication practices. For this reason, asking why and how the concept has emerged over time, how it was imagined in past societies and which characteristics are enduring is an essential task for contemporary media studies.

## 2 Deconstructing and Historicizing Networks: Two Long-standing Ideas

Two main ideas and characteristics of networks emerge both in the etymological definitions provided at the beginning of this chapter and in the overview of digital network studies. On the one hand, networks have an infrastructural dimension; they are complex systems that help, process and shape flows of information through nodes and hubs. This represents a material notion of network, focusing on networks of transportation, technological networks, networks of cities. On the other hand, networks have a social dimension, being used by individuals to interact with each other or to build communities. The latter is more a metaphoric conception of networks, focusing on the social networking allowed by networks (a tautology) and on the communication flows generated by them.

## 2.1 Networks as Infrastructures: The Shape of Materiality

This section introduces the infrastructural dimension of communication networks over the centuries and the discourses generated by them: what are their “effects” and how do they shape or are shaped by political issues, economic interests, and cultural ideas?

### 2.1.1 Infrastructure, Politics, and Power

First of all, the ways in which communication networks are built is not neutral but politically driven; understanding the materiality of networks means understanding the political ideology behind them. In this regard, the high-speed courier service and road networks of ancient Rome are often described as the earliest examples of network infrastructures that allowed people to connect, interact, and communicate, with information and goods transmitted and shared from the Iberian Peninsula to Asia, from Italy to Britain. These information and administrative infrastructures were designed to link a dispersed and immense empire (Innis 1950) and they shared some common characteristics: used by the Roman army to conquer new territories or immediately after to link them to Rome, they had to last over time (and some of them are still visible and usable) and were designed to maximize the speed of communication (with stations for the exchange of horses, for example). This network infrastructure was mainly centripetal and the Latin *Omnes viae Romam ducunt* (“all roads lead to Rome”) is a metaphorical way of expressing the infrastructural design of the Roman road networks.

Nowadays, as in the past, the architecture and organization of networks can shape the flows and power dynamics of communications. For this reason, administrative structures represented another important infrastructural element in the formation of communication networks by pre-modern political or religious authorities. For empires like that of Philip II of Habsburg (1527–1598), which extended from Spain to the Philippines and South America, reliable communication networks were crucial elements for the government of the state. Philip II established various communication infrastructures and an information network which spanned over oceans in order to rule over the Spanish “Global Empire.” “Monarchy without letters, Empire without light,” commented the Spanish bishop Bravo de la Serna in 1674, underlining the importance of the correspondence network to rule over the vast territories of the Spanish Habsburgs (Castillo Gomez 2006, 7).

The regular exchange of documents had a similar importance for the administration of international religious orders such as the Jesuits, which operated via

a communication system on a worldwide scale, encompassing various hubs and transmission nodes of the Society of Jesus's network. The Jesuits made limited use of commercial post and couriers, but "diplomatic, mercantile, and maritime networks all intersected with Jesuit communication at key points" (Nelles 2015, 440). The Society's bureaucratic infrastructures of information originated from their institutional hub in Rome, transmitting administrative correspondence and newsheets via strategic nodes such as Lisbon and Seville in order to communicate with their overseas missions in the New World, Asia, and Africa. In order to support communication within such a wide topographical range, and also to store all of these rivers of paper, the Jesuits created a complex "network of archives" that closely mirrored the institutional framework of the Society bureaucracy (Friedrich 2010). This was a network of coordinated and subsidiary archives designed to irradiate administrative knowledge from a central hub to specific locations, aiming to create a delicate (and not always effective) balance between centralizing and decentralizing power.

Establishing and controlling information and knowledge networks was interpreted as a form of power also for all the colonial empires in different historical times, for example, the Colonial administration of the British Empire, stretching from the Atlantic to the Pacific. Adapting Manuel Castells' concept of an information order, Christopher Bayly has shown that between the eighteenth and nineteenth centuries British colonial authority over India was based on a dense informative network of spies, messengers and local scribes. Preserving the same time-space relation of the early modern period, this information system was still mostly based on human runners and horse posts. Despite showing several dysfunctions and sometimes creating disconnections, this information network persisted well into the 1850s, when it was then replaced by new material infrastructures such as the railways and the electric telegraph which permitted the survival of British power (Bayly 1996).

The electric telegraph is another example of how networks encompass politics and power. Nineteenth-century maps of submarine cables clearly show how the global infrastructure of communication was centered on London. The city was, symbolically but also materially, the center of the world, the place from and to where a network of cables crossing the Oceans and the whole world was connected. Those cables brought information and communication from all over the British Empire and were mainly owned by British companies, which had a dominant position in this market. The network of submarine cables, still relevant and driven by political dynamics today (Starosielski 2015), has been considered by scholars like Daniel Headrick (1991) as the "invisible weapons" of the nineteenth- and twentieth-century empires. In the last two centuries, countries owning submarine cables and, more in general, telecommunications infrastructures have



always played a leading role in global politics. Not by chance, there was a “change of the guard” in cable dominance between the United Kingdom and United States of America in the twentieth century and today China is slowly replacing the US, with infrastructural projects like the “One Belt One Road” initiative.

In the twentieth century, radio and TV networks symbolized the growing power of the media themselves. In the *OED*, a fourth etymology of network etymology is “A broadcasting system consisting of a series of transmitters able to be linked together to carry the same program; a group of radio or television stations linked by such a system; (chiefly U.S.) a large (esp. nationwide) broadcasting company which produces programs to be relayed to affiliated local stations. Also (occasionally): a nationwide broadcasting channel.” This infrastructural definition gradually became metaphorical and, for a long time, the word network has been associated with broadcasting, probably the most important medium of the twentieth century. Not by chance, one of the most symbolic movies on the media is entitled *Network* (1976). In this movie, the director Sydney Lumet focuses on the “powerful effect” that TV had on its audience.<sup>1</sup> TV was (and still is) considered a political weapon, so dangerous that its ownership is regulated strictly: in several countries, specific laws forbid private companies to own a certain quantity of channels and networks and so to establish dominant positions in the broadcasting market. Like in the case of the Internet today, networks of communication have always been tools of power and have been driven by political needs and worries.

### 2.1.2 Complexity: Nodes, Hubs, Flows

A second defining feature of networks as material infrastructures is their configuration as complex systems characterized by the presence of highly interconnected hubs, links and nodes of communication. In this respect, as pointed out by Wolfgang Behringer, the dynamics of the early modern postal network share many similar elements to Castells’ description of the (digital) network society: “a ‘space of flows’ consists of, first, a ‘technological infrastructure of information systems, telecommunications, and transportation lines’; secondly, ‘nodes and hubs’ at which exchanges of all kinds can take place and whose functional logic is dependent on their position within the network; and thirdly, the ‘habitats of the social

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<sup>1</sup> In the 1970s, media research also experienced a (re)turn to focusing on the powerful effects of the media (think about the “cultivation”, the “spiral of silence” and the “knowledge gap” theories).

actors who operate the network” (Behringer 2003; Castells 1999, 19–20). Despite the irreducible differences between the contemporary “information age” and the pre-industrial period, such a theoretical model based on the “space of flows,” “nodes and hubs” and “social actors” could be effectively applied to the period from the fifteenth to the seventeenth centuries and even later.

While in the contemporary digital age the term “space of flows” represents apparently deterritorialized spaces, early modern cities were instead territorial spaces that acted as networking hubs of exchange where flows of news and ideas were processed and transmitted. Within the already mentioned “Taxis Galaxy,” for instance, a number of cities emerged as major points of exchange or key nodes (for example, Rome, Venice, and Milan; Antwerp and Brussels; Madrid and Lisbon; Constantinople; Lyon and Paris; Augsburg, Cologne and Frankfurt), along with secondary nodes that were nonetheless important in the architecture of the network for the regular flow of information (like Naples, Genoa, Florence). As a strategic commercial node with the Orient, a political capital of a large state and home to the largest printing industry in Europe, Venice in the sixteenth century was at the crucial intersection of vast regional and international communication and information networks (de Vivo 2007). As one of the most cosmopolitan metropolises of the time, Venice became a hub able to attract wealth, power, culture, innovation and people, similar to contemporary cities like New York.

It is often said that Internet networks of today are part of a composite infrastructure of other networks and that this complexity is hard to grasp and, consequently, to control. Again, this distinctiveness is historically inaccurate as networks of communication have always interacted with other networks of communication or of transportation. This was the case of the widespread news market that emerged during the pre-modern period and which depended on the creation of a series of interrelated hyper-networks of communication overlapping each other. For this reason, the concept of network was adopted as a metaphor to conceptualize early modern news (Raymond and Moxham 2016). Tangible transport infrastructures were built to support the pre-modern news network and to link the various hubs. Waterways, for instance, played a part in the transport revolution, making European information and postal networks increasingly more efficient, more accessible and geographically widespread over the continent. In the seventeenth century, for example, the Dutch Republic developed a system for transporting newspapers, letters, books, and people between Amsterdam and other cities, using canals and barges. On a global scale, new maritime routes and improvement in oceanic navigation expanded the transportation network that connected Europe, Asia, and the Americas and through a collection of links between different nodes produced a truly worldwide cosmopolitan web

of communication (McNeill and McNeill 2003). Similarly, from the nineteenth century, train and telegraph networks started to be seen as interlinked because, through the telegraph, train traffic could be regulated and the circulation of trains began to be safer and more rational (Schivelbusch 2014).<sup>2</sup> Communication and transportation networks, for a long time, have often been interrelated, have shared the same topographical features or routes and combined technologies and social practices. Not by chance, these networks have been built to favor flows of information, people, and goods and they can be melded in the concept of mobility (Balbi and Moraglio 2016). Therefore, their symbiosis started much earlier than the digital age, as did the complexity of the infrastructural dimension.

### 2.1.3 Acceleration: Compressing Time

Network infrastructures have always been considered as ways to accelerate the human experience. This is one of the most recurring arguments when a new network of communication is established.

It is acknowledged that, during the fifteenth and sixteenth centuries, a new acceleration of processes of communication took place and a comprehensive network of post routes and relay stations was (re)created in order to foster the political needs of European monarchs. The development of faster and more reliable postal services was fundamental to establishing an interconnected communication network embracing the whole continent (and beyond). The growth of this infrastructure was not brought about by any fundamental technological invention, but it responded to commercial and administrative needs, and was fostered by wide-ranging organizational improvements. This structural revolution in communications also accelerated the speed of old media – handwritten letters or correspondence networks – and increased their communicative power. By means of a dense network of postal stations connecting the Mediterranean to the North Sea, the horse-mounted couriers of the Taxis family (who in the fifteenth century created the first transregional high-speed postal service) linked the principal cities of Europe with the “empire of paper” of the Habsburgs, their principal patrons. Couriers offered their clients various services that differed in speed (and cost): the *cavalcata* was an ordinary mode of mail delivery, while in the sixteenth century a faster mode of transportation based on changing horses was introduced,

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<sup>2</sup> This “classic” vision is confronted with recent revisionist histories of the relations between train and telegraph networks, in which the two are less interconnected and inter-functioning (Sidney and Schwantes 2019).

the *estafette*. Thanks to this infrastructure, the average travel time between Rome and Paris was around 20 to 25 days but, depending on the urgency of the information, could be reduced to ten days.

According to several scholars, a further moment of acceleration occurred with the spread of the electric telegraph in the first half of the nineteenth century. As noted by James Carey (1989, 203), this “permitted for the first time the effective separation of communication from transportation” or, in other words, accelerated the transportation of messages up to the speed of light (freeing itself from the speed of the carrier, whether man, horse, or stagecoach). Telegraph networks transfer communications instantaneously and, for this reason, their invention was considered a remarkable acceleration of human experience. Contemporary observers claimed that the telegraph changed the ways in which people did business (accelerating the market stock exchange); the way they obtained information (speeding up and even creating a news business); or improved how people understood each other (in the words of a British ambassador in 1858, “What can be more likely to effect [peace] than a constant and complete intercourse between all nations and individuals in the world?” (Standage 1998, 90).

Similar acceleration effects were imputed to other networks of communication like the telephone, the wireless, satellite networks, and of course the Internet in the digital age (Cairncross 1997). Consequently, the re-emergence of the discourse about acceleration in communication networks should be addressed historically simply because time is a historical construct. Andreas Fickers and Pascal Griset claim that “This phenomenon of acceleration or speed lies at the very heart of the modernization process and is responsible for experiences of de-synchronization in the last two centuries” (Fickers and Griset 2019, 333). The “cult of speed,” the idea that “modernity is speed” in the nineteenth and twentieth centuries was intrinsically paired with the emergence of new networks of communication. These infrastructures have been considered so powerful as to accelerate the daily lives of millions and then billions of people, or to even produce pathological effects like neurosis in the nineteenth century or the desire to disconnect (also called digital detox) today. In conclusion, acceleration is another long-term “effect” and, at the same time, another stereotype linked to the building of networks.

### 2.1.4 New Geographies: Compressing and Decompressing Space

There is a fourth and connected “effect” of the material dimension of networks, which emerged before the digital era. Whereas it is true that the emergence of connecting nodes and hubs in the global architecture of digital networks has transformed the geographic space of human experience, new networks of

communication have always shaped space, changed spatial interactions and created new geographies. For instance, while in the sixteenth century hubs such as Antwerp and Nuremberg were strategically located within the postal network, and consequently increased their relevance as fundamental nodes of communication, in the seventeenth century a city like Augsburg lost its position as the most important postal center in Germany and was replaced by Frankfurt.

By privileging some nodes and hubs over others, network infrastructure displayed one more time its political dimension and shaped a new geo-political map. As in the sixteenth century, one could dispatch letters from Rome as far as Russia with reliable postal services, but not to the nearby town of Tivoli because the local delivery network was not connected with the transregional postal network (Fedele, Gerosa, and Serra 2014). On the other hand, Tivoli could suddenly become a well-connected central node of an extended news-network when the pope was visiting the town. A seventeenth-century Londoner would know that on Thursdays “letters were sent to Brussels, Heidelberg, Cologne, Frankfurt, Prague, and the Paris-Turin-Madrid route,” while “letters for the Hague and Holland left on Saturday night or very early on Sunday mornings” (Schobesberger et al. 2006, 58). In other words, some cities were closer or more distant on certain days than others, configuring a temporal geography made by networks. With electric telegraphy, this process of both space compression and new disconnections persisted: as Jonas Harvard (2011, 48–49) has shown in the case of the telegraph in Sweden, “When the telegraph worked as it should, in the 1870s Oresund-Posten could get news faster from cities far away than from nearby locations in the province. The telegraph placed news from Berlin, Paris, London and Vienna on a single temporal scale, and regional news was left behind.” In sum, networks of communication like the post and the telegraph have a double and co-existent effect: on the one hand, they connect previously disconnected places (so compressing space) but, on the other, create more disconnection, privileging some nodes and hubs over others.

Radio and especially TV networks also had a similar and significant impact on contemporary geographies. John Thompson (1995) theorized the idea of “despatialized simultaneity,” claiming that for the first time in history radio and TV audiences could enjoy the same programs live (or simultaneously) despite being at home (despatialized). In other terms, thanks to broadcasting, people became more synchronized even at a global level if we include events like the Olympics. In a similar vein, Joshua Meyrowitz (1985), in a book entitled *No Sense of Place*, theorized how TV networks undermined the connection between physical and social “place,” reconfiguring the link between local and televised communities. Again, radio and TV networks have always been seen as electronic media able, on the one hand, to compress and annihilate space and, on the other, to create a new sense of place, made of de-territorialized connections and “televised” realities.

Compressing and decompressing, disconnecting from real geographies and connecting to virtual ones are the same asymmetries that digital networks are producing today. But this process is far from new.

## 2.2 The Social Network: Creating and Maintaining Communities

Beside their material dimension (made of roads, cables, technologies and cities), communication networks have a social dimension, and they create interconnected groups of people or organizations (remember the third etymology in the *OED*).

### 2.2.1 Being Part of a “Network”: Advantages and Problems

Communication networks are part of and contribute to creating social networks (and vice versa). Social networking is probably one of the most familiar concepts for contemporary digital scholars and digital historians, but again this is clearly a pre-digital concept. Neville Morley (2010, 125) claims that “One way of thinking about the processes of Roman globalization is as the expansion and proliferation of networks, shared forms of social co-ordination which require the acceptance of certain standards in order to be accepted into membership.” The Roman Empire was based on several networks: the already mentioned road and post infrastructures, but also social networks with access to social and economic benefits like the imperial elite, networks of Latin speakers or the users of Roman law, networks of trade, military networks, and others. The “membership of a network brings an individual into contact with new information, interpretations and practices, whether that individual likes it or not” (Morley 2010, 25). Resembling the theory of the strength of weak ties (Granovetter 1973), also in the Roman Empire joining exclusive social networks provided more chances to the members, even chances to be better informed.

By challenging this traditional view, which saw individuals as members of social groups, societies, institutions or nations, in the last two decades historians began to analyze the network of relations that defined social spaces. This coincided with a growing interest in associative a relational culture and to the social mechanisms and practices involved in communication and social networks. The *respublica litteraria* from the fifteenth to the seventeenth centuries, a transregional socially mixed community of learned people, is a classic example of social networking. The ways to define this pre-modern network society often adopt a digital

terminology: for instance, the epistolary network linking all the interconnected nodes seems to work as “a proxy for a social network” (van Miert, Hotson, and Wallnig 2019, 28). Moreover, quantitative network analysis has been consistently employed by historians to describe the complex system of relationships within this network. The Republic of Letters was an “imagined community” (Mayhew 2004) bound together by a combination of old media (correspondence) and new media (newspapers and journals) overlapping with each other: the personal networks created by letters were added to the wider webs created by the printing press. Through the publication of their own epistles, humanists could use this social network as a space to build their personality and inner self in the public arena (here we are explicitly reusing the same sentence of the paragraph on digital networks studies).

Other socially heterogeneous communities appeared in the early modern period, such as the network of “friends of friends” that connected migrant communities (Prajda 2018) or the travelling and highly mobile network of merchants. A network science approach has been used to analyze these trade networks that traversed commonly defined geographical, political, and cultural areas in the pre-industrial world. These non-hierarchical networks were operated by economic and commercial communities that stretched all over Europe and beyond. By sharing news and useful information (but also fears and emotions) through the same routes employed for their trade, immaterial “*weak ties* linked external individuals with shared business goals and expectations” (Ribeiro 2016). These informal social networks created that sense of “familiarity among strangers” (Trivellato 2012) that could echo contemporary digital forms of social interaction.

Nonetheless, connection with strangers was not always a positive experience. In the late nineteenth and early twentieth centuries the telephone allowed people to interact over long distances and, potentially, to be called by strangers. This created new “etiquette” problems: especially young ladies could be sexually harassed by unknown voices and so, in order to solve this issue, specific rules were introduced. At the same time, the telephone was considered a tool able to cure loneliness. As reported by Fischer (1992, 50), the American 1907 Census of Telephone argued that “a sense of community life is impossible without this ready means of communication [. . .] The sense of loneliness or insecurity felt by farmers’ wives under former conditions disappears.”<sup>3</sup> Other twentieth-century observers claimed exactly the opposite: the telephone caused an increase in fear and loneliness because virtual meetings over telephone wires replaced physical ones (Balbi 2013). According to the economist Robert Gordon (2016), the telephone

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3 On loneliness, see Brennan’s chapter in this book.

(with electricity, gas, water, and sewer) was one of the five connections which made the house “networked.” According to him, this revolution happened between 1870 and 1940 and it was more relevant than the digital revolution itself: in this period, houses in Western countries radically changed and people could profit from a series of overlapping networks without leaving their living rooms or bedrooms. Among these networks, Gordon forgets to mention radio and TV: thanks to them, the house became a self-sufficient place also in terms of information. This idea was theorized by Raymond Williams (1974), who coined the concept of “mobile privatization”: thanks to radio and TV networks, from their sofa and without leaving the house, the audience could travel and adopt a “mobile” lifestyle. Audience could “see” and “visit” places, get information and entertainment, satisfy its need for mobility. Being part of a material and especially social network linking the world directly to your house is probably one of the least acknowledged changes in the history of communication – and a change that occurred in the years before digitalization started.

### 2.2.2 Materializing Social Networks

Communities could also coalesce around material objects, rather than around shared intellectual, financial or political interests. Material objects provide the most direct way to grasp examples of social network tools before the arrival of social media apps, as in the case of the formation of social networks around artefacts like sixteenth- and seventeenth-century friendship albums (*alba amicorum*) that invited encounters with friends or strangers. The *alba amicorum* were blank albums designed to collect signatures, mottos, coats-of-arms, portraits and visual imagery of acquaintances and encounters as students (but also merchants, artists, and humanists) moved between different places. “Albums were forms of social media that connected individuals to a network, sometimes of strangers,” open to future members or readers (Wilson 2012) 206. Humanists’ emblem books performed a similar function. Containing a motto, an image, an epigram and (sometimes) a dedication associated with fellow members of the scholarly community, *Emblemata* represented intermedia dictionaries of human relations (Almási 2009). Analogous to contemporary digital social networking (the *album amicorum* can be framed as a direct ancestor of Facebook, also because *amicus* in Latin means friend), these tools of communication constituted spaces of sociability, opened up possibilities for new encounters, connections, and associations, but at the same time also enabled users to articulate and



make visible their extended social networks – to use danah boyd and Nicole Ellison’s SNS definition.

Other material objects such as seeds or porcelain could also act as central elements of global networks connecting individuals, as recent global histories of material culture have shown in relation to the circulation of artefacts in the early modern world (Gerritsen and Riello 2016). The same happened in the nineteenth century (and still today) with photographs travelling all over the world thanks to postal networks, as reminders of love affairs. In other words, communication devices have always had the power to re-activate or even to create social networks long before our smartphones.

### 2.2.3 Virtual and Real Networks: Replacement or Reinforcement?

For long-time *digital network studies* have believed that digital media could replace personal interactions and hence that “virtual” networks could replace “real” ones. This is now recognized as untrue, as the lockdown experience of the Covid-19 pandemic has dramatically demonstrated in recent times. On the contrary, humans experience an interrelated web of in-person and distant forms of communication through different and overlapping networks.

Even in the premodern period individuals could be part of overlapping networks (local, national or global), interconnected by multiple types of social relations: some based on face-to-face communication, others connected through different media or technologies. Within early modern urban society, for example, the advent of new media (e.g., print) made it possible to establish immaterial networks overlapping with (but not replacing) a widespread “culture of presence”<sup>4</sup> based on social media spaces such as streets or squares, markets or salons (Schlögl 2019). John-Paul Ghobrial (2013) has analyzed a similar interweaving of virtual and real networks, showing how the information flows that connected Europe and the Ottoman world were themselves the product of interpersonal exchanges that took place at the small-scale level of everyday practices of communication in cities like Paris, London and Istanbul during the seventeenth century. In the early colonial American South, a region that lacked a regular postal service or a printing press until the 1730s, Indians, Africans, and Europeans created oral communication networks that linked together people who otherwise shared no physical relationships (via spies, scouts, traders, missionaries, and other improvised couriers, such as sailors or hunters,

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<sup>4</sup> On (tele)presence in historical perspective, see Bourdon’s chapter in this book.

see Dubcovsky 2016). Similarly, by illustrating how in eighteenth-century Paris oral poetry and word of mouth represented an ephemeral communication network that intersected with more established news networks, Robert Darnton (2010) challenged many assumptions about today's new and unprecedented information society. Finally, one of the most famous theories in the field of media studies has to do with issues of replacement and reinforcement. When Katz and Lazarsfeld (1955) introduced the two-step flow of communication model, they wanted to test how mass media (and especially radio and TV) influenced personal opinions. They concluded that most people form their opinions under the influence of opinion leaders, who in turn are influenced by the mass media (a two-step process). This was also a way to discover (or rediscover) the relevance of private networks, to contest the powerful effects of media and, especially, to underline that radio and TV networks and social networks are integrated sources of information and not opposing ones.

## Conclusion

This chapter has historicized the concept of networks over time through two main axes. Firstly, the infrastructural/material dimension has always been a fundamental characteristic of communication networks: infrastructures have symbolized power to control information flows, have always been complex systems (often interconnected with other non-communication networks) and have been considered tools of compression and acceleration of time and space, even creating new geographies. The second axis deals with communication networks creating sociality/sociability and shaped by social interactions. Concerns and opportunities like strengthening or maintaining connections, exchanging material tools of social interaction and finding a balance between “virtual” and “real” meetings have been continuously discussed over the centuries. While the infrastructural and socio-cultural dimensions of networks are usually considered distinctive of the digital era, we have shown that similar arguments and characteristics of networks emerged much before.

So far, we have mainly underlined continuities, but with these final remarks we want to answer a simple question: has nothing really changed in the concept of networks during the digital era?<sup>5</sup> Of course, concepts and humans change

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<sup>5</sup> Beside the “newness ideology,” claiming that everything related to digital is unprecedented and disruptive, there is indeed an opposite but similar alienation: an attempt to find historical antecedents and “constant continuities” (see Balbi and Magauidda 2018).

continuously, slowly or fast, in transparent or hidden ways and historians are well aware of it. They are also aware of the limits and strengths of the network concept applied to historical analysis and that the metaphor probably has been overused to draw (often anachronistic) historical comparisons, in particular in the wake of the “global turn.”

The material/infrastructural and social dimensions in networking have also changed over time. We conclude by mentioning two possible lines of research for networks’ historians. On the one hand, digital networks have increased the interconnections of previously separated networks: the Internet itself is an example of “networks of networks,” but digital networks of communication are increasingly crucial to transportation, electricity, water, and other webs’ functioning, as those non-communication networks are constantly digitized and changed by digitalization. This growing interconnection is creating a hyper-structure of hyper-networks that can no longer function separately. From a social perspective, there is a clear tendency towards the mobility of previously geographically fixed networks. Take the smartphone (and its network) or our social media profiles which follow us as we travel or relocate to other countries. Every single person is becoming a hub and a node of her/his social connections, while in the past cities or houses were the key places from where and to where information was produced and distributed. We are not arguing that all nodes are equal, because there are still people (and thus nodes) or servers (and thus hubs) that are more important than others. Nonetheless, we are saying that, theoretically, the power of networks has been re-distributed from politics to people and especially corporations. To understand these and other changes (as well as continuities), networks must be studied in long-term perspective.

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# Media Convergence

Expanding Perspectives Beyond the Digital

**Abstract:** In this chapter we analyze the now pervasive appropriation of the concept of media convergence to encapsulate processes of digitalization in media. We interrogate this almost universally adopted notion, tracing its ramifications as delineated in cultural, technological, market, and policy terms, while also drawing attention to complementary and generally much less recognized processes of divergence. More fundamentally, we draw attention to the long-standing independence of media convergence from digital technology, illustrating processes of combination and adaptation in pre-digital media. Historical cases of newspaper supplementation and add-ons, the changing form of the serialized novel, and the relationship between the telephone and broadcast media are invoked to demonstrate the extent, variety, and dynamism of change, bringing into focus processes of remediation that have long pertained in analogue media. We conclude that a view of media change is needed that better recognizes historical convergences and that, consequently, is less inhibited by the often dualist and positivist underpinnings of much recent thinking that sets the analogue and the digital in opposition.

**Keywords:** media convergence, digitalization, remediation, newspapers, talk radio, television phone-in

The idea of convergence has a normalized, taken-for-granted status across disciplines concerned with the study of media. It gained its current prominence in the ICT developments of the 1990s, but its roots lie in the previous decade, most influentially in the thinking of de Sola Pool (1983). Convergence, perhaps most visibly, has motivated business mergers across media sectors and massively scales ICT enterprises, is assumed or implied in domestic uses of technology, underpins approaches to new cultures of participation – breaking down barriers between producers and users – and, in the political realm, is seen as a powerful motor for democratization or for tyranny.

Most of the time, if not invariably, discussion of convergence in media has centered on the digital, to the extent that the qualifier safely can be omitted without compromising this understanding. Often freighted with the analogue (“old”) and digital (“new”) working distinction, it has been associated with a similarly assumed notion of progress led by technology. More recently, with the deleterious effects of social media and platform capitalism becoming more manifest, a backlash – the so-called “techlash” – is under way (Doctorow 2019).



In this chapter, we trace some of the main contours of the development and application of the idea, which has grown to a point of importance, beyond media, in framing understandings of society in late capitalism (Hassan 1999) and liquid modernity (Bauman 2000). Deploying relevant case studies and associated scholarship – newspaper supplements, add-ons and serialization of the novel; and live calls in television and radio – we demonstrate how, in spite of its centrality to discourse around ICTs, convergence has had a longer-standing, more fundamental role in media and in human affairs more generally. Indeed, the incorporation in newspapers of different media formats within print and the fusion of broadcast and the telephone are of their essence forms of convergence. If the concept strictly is confined to digital media, it does, of course, disqualify this account and analysis from any consideration of convergence. Instead, however, we propose a wider understanding that does not take the digital as its first point of reference.

## 1 Convergence and Digital Media

The notion of the transcendence of boundaries between media forms and, with it, the wider overcoming of social, economic, and political boundaries, permeates discussion of digital media across all of its dimensions. It has moved to the core of consideration of the production and consumption of meaning and content, including economy, labor, organization, formats, diffusion, audiences, regulation and wider politics but, as articulated by Balbi (2017) in his categorization of convergence discourse, it is the technological perspective that has attained the most volume. The then optimistic idea of formerly discrete fields coming together by virtue of the possibilities of the fluid articulation of information in zeros and ones, as opposed to rigidly in atoms, found powerful institutional and popular expression in the writings of futurist Nicholas Negroponte of MIT (1996), part of the wider anticipation of the potentialities inherent in digital technologies (Dyson 1998) and the sometimes shrilly euphoric celebration of their revolutionary power. A sense of escape and liberation from material confines underpinned this digital sublime (Mosco 2005), encouraging a rehabilitation of the medium-centric, deterministic thinking of Marshall McLuhan (Levinson 1999).

Parallel to the technologically and economically inflected discussion of the overthrow of the old, broadcast model media order, a theme of openness, connectivity, and free communication was cultivated, echoing in part the American counterculture of the 1960s which survived, in spite of a complex of contradictions, within the palette of predominantly conservative values comprising the

Californian ideology of Silicon Valley (Barbrook and Cameron 1996). The sense of community and flattening of hierarchy perhaps was expressed most resonantly in the cultural impact of the Whole Earth 'Lectronic Link (Rheingold 1993). A more substantial theme of participation and power was brought within a structured framework by Henry Jenkins' *Convergence Culture* (2006), placing the melding of media formats at the heart of the new era of "user" activity usurping the unidirectional communication supremacy of big media. Where once audiences could be viewed as passive, or else exercising autonomy through their reception of seemingly pre-determined media texts (Hall 2006), now users could become active subjects and media producers themselves. The user-centered theme has been developed and sustained as a core characteristic of networked and converged media (Deuze 2006; Jenkins and Deuze 2008), with the widespread adoption of the neologisms of prosumer (Toffler 1980) and produsage (Bruns 2005) aimed at capturing the blurring of the demarcation between producer and audience.

Focusing on interactivity, user-generated content, and fan communities, such participation traverses categories including news, entertainment and gaming, and has been strengthened enormously by the advent of Web 2.0 and social or "spreadable" media, with a strong element of business-oriented thinking (Jenkins, Ford and Green 2013; Fuchs 2014). Hardware, software and now platform intermediaries converge yet further in a networked system where categories such as quality or significance may not automatically apply, and where the emphasis is firmly on the needs of the individual (Miller 2008). The negative consequences of such accessible communication (excluding the realities of the digital divide) in turn raise the need for regulation, especially of the now near-monopolistic power of the digital intermediaries whose highly concentrated success depends on the network-enabled affordances made available to citizens, bullies, propagandists, data manipulators and pornographers alike (Siapera 2018). Where convergence had been the premise for deregulation of media industries in a global wave of liberalization and marketisation (Jin 2008; Holt 2011), it has become viable, arguably for the first time since the digital turn, to raise the prospect of stronger democratic control of networks, artificial intelligence, data and algorithms (Foer 2017). As observed by Meikle and Young, convergence has exacerbated pre-existing tensions in the "complicated and disputed realm" of media policy (2012, 195). Now, in a period of crisis for capitalism (Duménil and Lévy 2011), and as the notion of a self-governing, convergence-charged media landscape recedes, part of the discussion around reasserting societal priorities in systems of communication centers on the advocated separation of the activities of the platform behemoths (Coyle 2018). These developments are occurring simultaneously with the well-established but less recognized trends towards divergence

shown by Peil, Sparviero, and Balbi (2017) as a complementary, rather than simply opposing, process of media convergence, and as manifested in the record of industry mega-mergers and subsequent demergers (Jin 2012). Market deconvergence, perhaps most memorably instanced in the 2008 break-up of AOL-Time-Warner, therefore fits within a more fundamental configuration of deconstruction and splitting apart.

## 2 More than Digital

We will focus in this chapter on two elements, the convergences, firstly, within print newspapers and magazines and, secondly, between the telephone and broadcast media, aiming to demonstrate that there are forms of convergence occurring before the exclusively digital, and that the prior concept of remediation effectively captures such pre-digital evolution. The extraordinary momentum behind the concept of convergence and its generally assumed association with digital networked media has meant that the term has come to be used as shorthand or even as a synonym for the digital, carrying with it the sense of a definitive breach with the past. “New” media sells. Digitally-driven change now is orthodoxy, unquestioned by many in the academic community, with a paradoxically familiar characterization of novelty and iconoclasm. According to Balbi and Magaudda, one of the persistent myths of digital media is that digitalization is an “irresistible force” of permanent revolution and change (2018, 216). However, regardless of the original intention, it is now clear that the appropriation of the concept of convergence to capture processes of digitalization disregards its essentially non-digital nature. Convergence can be digital, but it has also been analogue, or pre-digital, and it can be postdigital (O’Sullivan et al. 2017), in the sense that the essence of a medium platform, whether it be printed news or streamed video, rests other than on whether it is digital. What is in play in convergence is not, therefore, simply the overcoming of boundaries by digital technology, but something more essential, and a persistent feature of media communication. Drawing from Boccaccio (1956, 1348–1353), we can recognize the universal opposing forces of diversification and unification as the basis for a broader theoretical and historical understanding of processes of convergence. As outlined above, this concept has been taken up and systematized within the debate on media deconvergence, as a complementary phenomenon, by Peil, Sparviero, and Balbi (2017). In this wider and deeper perspective, the tendency toward the unit historically has occurred in multifarious ways between varying domains of human activity, industries or media platforms, sometimes stemming

from similarity, as in the established case of broadcast media, whereby radio programs are re-aired, with the radio studio becoming a set for television, but also from dissimilarity. Tourism, for example, represents a convergence of the distinct spheres of travel and hospitality that occurred in advance of ICTs. In other cases, convergence stems from complementarity, as in the disparate instances of fashion and the motor industry fusing the domains of design and production. Industrial and post-industrial societies have been replete with such convergences, with little or no digital basis, even though they can later have been digitally inflected. Media convergence, now often seen as occurring within the framework of the technology, fits within this broader phenomenon.

Shortly prior to the rise of the idea of convergence, and its wide sharing as a common theme among scholars, as outlined above, the evolution of media through incorporation already was comprehensively captured in Bolter and Grusin's conceptualization of remediation (1999), which moderated ideas of the overthrow of older media, such as radio, by new ones, such as television. This more considered model of continuity privileges the clear historical lineage of media forms and has been an effective counterweight to ahistorical fetishization of the new in media studies. Within discussion of participatory culture and the practice of bricolage, Schmidt and de Kloet (2017) integrate the perspectives of Lévi-Strauss (1962) and Derrida (1978) to capture the functional expression of convergence in the production of media content by a process of incorporation, or cannibalization, of materials, formats, and styles. Viewed this way, the creation of the unit from pre-existing elements of both media and media practices and uses owes more to social construction, rooted in historical processes, than to the unalloyed force of technology (Bijker 1995). In similar vein, Nail's explication of Deleuze and Gattari's theory of assemblages (2017) can be applied to media add-ons, such as those offered with newspapers, where, rather than producing a single, unified entity, what matters is the relationship between elements brought together. A newspaper is still a newspaper, and a book is still a book; their assemblage addresses their relationship to one another. Such theorizing forces a confrontation with the materiality and the meaning of objects (Friedman and Forde 2015), routinely overlooked in thinking confined to the digital. It is, therefore, when we look at situated instances of convergence, with their material particularities, that we can appreciate its non-technological, or not purely technological, nature and apprehend the deeper historical processes that come into play in the analogue, the digital and in-between.

### 3 Historical Convergences

In this section, we look in particular at analogue-to-analogue convergences that serve to demonstrate that the concept is not exclusively or predominantly digital. Convergence has long been part of human communication. If we consider writing to be the first communication technology (Ong 1982, 2007), then it is clear that it incorporated language to produce a new medium that not only laid the foundation for modernity but also changed the nature of orality. This change is evidenced in the early history of human societies, but also in the progression to print, for example, in the production of verse chapbooks in Ireland in the late eighteenth century (Carpenter 2010). Print, in turn, represents a particularly significant convergence of the technologies of writing, type and the press, but extending to the use of color in painting, as well as the inheritance of the press from wine-making (Eisenstein 1979), with the invention of moveable type, ironically in retrospect, routinely invoked in the digital context as precursor of the revolutionary power of digital media, and most markedly since McLuhan (1964) taken as a point of comparison for newer, cooler, or more liquid media. Another key phase in medium-focused theory concerns the much-aired interplay beginning in the nineteenth century between the press and the telegraph (Carey 1983; Winseck 1999), with its effects on time and space forming a theme that endures in the digital (Castells 2009). In the arena of visual culture, the connection between theatre (in all its forms, including the cabaret and the opera) and television is clear, as is the convergence between cinema and television seen in the rise of the TV movie, but this latter incorporates previous forms such as the magic lantern and the moving panorama (Huhtamo 2013). In similar vein, Walter Benjamin's consideration of the nature of art as reproduced in print (1935, 2004) instances a convergence as widely diffused as those in which the technologies of the lens and chemical processes are incorporated in photography and, later, with other technologies, in cinema.

Where convergence is centered on technologies and cultural practices, it also inevitably is framed by economic regulatory dispositions, sometimes promoting coalescence, as we have seen, but historically also sometimes aimed at suppressing trends towards monopoly (Hochfelder 2012) or, more recently, in anti-trust policies to contain the power communication of giants (Haucap and Stühmeier 2016).

From this rough survey of medium change, it is clear that convergences, sometimes incorporating, and sometimes assembling, are present throughout the evolution of media forms. Where digital convergence processes have been perceived as categorized around platforms, content and protocols of use by audiences (Stenport et al. 2014), these processes also can be seen as applying

pre-digitally, setting in doubt the notion that convergence is exclusively digital. To illustrate analogue-to-analogue convergence more deeply, we can look at particular instances of the supposedly ill-fated print newspaper, along with the use of the telephone in conjunction with mass media.

### 3.1 Flexible Form in Newspapers

While their encounter with the digital domain has been comprehensively documented and interpreted in a multi-faceted array of literature and public debate, newspapers' continuous and varied record of pre-digital convergence demonstrates a resilient malleability, matching the flexibilities associated with convergence that arguably has been overlooked. The print news platform, typically seen as the static foil against which digital dynamism is made salient, has both maintained its essential formal characteristics and altered the composition of its offering to readers. A seventeenth century newspaper, in its language, layout, and typography, may be slightly unfamiliar to the late modern audience, but it is readily recognizable as a newspaper, while in its current form the object is augmented either via supplements, elements to varying degrees taking the form of a magazine contained within the newspaper, or add-ons, objects such as books or promotions offered with the edition to make a single offering on the newsstand or in the subscription package. These augmentations provide a clear demonstration that change is not wrought simply by enabling technologies, digital or analogue, but is animated in response to social and, in the immediate context, often market conditions, as part of the ever-present process of evolution of news culture (Barnhurst and Nerone 2001).

#### 3.1.1 Magazines and Supplements

While supplementation has been especially marked over the most recent decades, its origins are older. Brake (2010, 111) explicates the serials carried in Victorian periodicals and newspapers, discussing the object's identity as one that "articulates a reference to a prior, primary text to which it is 'supplementary,' but not always preserved allied to its host." Supplements extend the range, physically and temporally, of content types and presentation modes beyond the core body of the edition, as conceived in the mass ritual of newspaper reading (Anderson 1983). Their use facilitates departmentalization, both in terms of editorial organization and consumption of content (Weibull and Nilsson 2010). Typically, news is augmented with culture, art, lifestyle, business and sport,

offering longer, deeper reading and sometimes more graphically presented content, but also palpably and economically transforming the materiality of the paper object (Stamm 2015; Fortunati et al. 2015).

This format growth is convincingly situated by Smith (1980), as being connected to advances in color printing, with gloss paper and fast-drying ink, most dramatically shown in the remarkable rise of *Life* magazine. But he emphasizes that the newspaper “mosaic . . . is a reflection of the society that gave rise to the form and the kind of technology that was available” (Smith 1980, 157), and one can observe that the magazine’s fortunes in the longer term have been determined by influences other than printing affordances.

Farmer (2019) traces the deep changes in the 1960s in the material characteristics of British newspapers, led by the introduction of color supplements in three broadsheet newspapers, *The Sunday Times*, *The Observer* and *The Daily Telegraph*. Supplementation, in the form of standalone elements, offered a solution to the incorporation of color. Apart from organizational and professional considerations, new spaces were opened for an intensification of photography’s convergence with print. Perhaps in keeping with the notion that good design is invisible, changes in layout associated with these developments are often superficially remarked upon beyond specialist literature. Farmer, however, insightfully captures the significance of longer forms covering multiple pages, which licenses a new relationship between advertising and editorial.

To this extent, supplementation also can be seen as a form of convergence, in material but also economic terms, in which newspapers respond to the previously distinct media form of the magazine by attempting, with some success, to cannibalize it. In a recent example, the Italian daily newspaper, the *Corriere della Sera*, has incorporated the formerly weekly independent and literary review *La Lettura*, so that the latter now is integrated as a non-optional supplement in the newspaper’s Sunday edition, with a price increase of 50 cents. Here, the physical, editorial and economic natures of the two publications are fused in an altered entity. Almost inevitably, and albeit enmeshed with other considerations, it is the imperatives of the market that most pressingly are the occasion of change. Supplements represent a competition response to magazines, even if that form has developed in the context of wider social change. Weibull and Nillson (2010) point out that they also are an attractive business proposition for publishers because they are cheap, with pre-produced, often freelancer-sourced content, and they generate revenue. They record that, in one week in 2000, Sweden’s *Aftonbladet* carried 324 pages over five supplements, compared with *Expressen*’s equivalent of 60 in 1980.

Supplementation also has drawn normative commentary. With the opening up of the space for editorial in the publication comes a perceived softening of

content, with journalism extending beyond news (Bacon 1999), with the sense of a loss of purity encapsulated in the idea that newspaper have been magazine-ified (Brett and Holmes 2008). The freeing of space also allows ingress, beyond the traditional firewall, for advertising within texts, and, less explicitly, advertorial, which became evident to readers of British supplements in the 1960s (Farmer 2019). While criticism of such commercialization is common, Farmer argues that the supplements of the period allowed more diverse political expression than had previously pertained.

Contrary to longstanding ideas of digital impetus bringing revolutionary change to a previously static or even “dumb” medium (de Sola Pool 1982, 30), the processes of adaptation that newspapers historically have implemented around supplements demonstrate that the transcendence of boundaries between media formats is not digital in essence. Convergence can and has occurred beyond the question of whether platforms, content, or uses are digital. Moving beyond pure supplementation, another instance from media history signifying the long-extant potential for convergence is that of the combination by the *Chicago Daily News* in the 1920s of a high-quality color picture supplement with matching radio commentary (Good 2017). Here, the newspaper was engaging not only in supplementation, but also, at a distance, an early experiment in combining with an external object, or add-on.

### 3.1.2 Add-ons

Insofar as a clear distinction between incorporation and assemblage can be assumed, where supplements represent an expression of convergence as the former, add-ons belong to the latter category. Other than the printed novel, further discussed below, the objects most often attached to European newspapers, starting in the current period from the 1990s, have been CDs and DVDs, and, among pre-digital media, VHS tapes, books, and encyclopedia volumes. A related material and cultural coming together between print and the digital was the inclusion of computer program disks in IT magazines.

For newspapers in Italy, for example, the paid add-on was used directly to create revenue. In the case of *L'Unità*, the offer to readers of paid-for VHS movies instanced a business convergence, as the newspaper leveraged its ownership of film rights. *La Repubblica* successfully offered bound encyclopedia volumes, allowing readers to pay in stages. Finch and Geiger, viewing the newspaper-DVD hybrids offered in Britain and Ireland from a marketing perspective, refer to a slippery object that makes use of porous boundaries (2010). Here, again, the physical and economic natures of the newspaper object, or product, are in



tension with its normative and cultural existence. In the case of *The Observer*, Finch and Geiger observe that its free movie add-on, rather than solely working to attract new readers, served to underline the publication's elite cultural status. In the UK, the prominent former editor and media academic Roy Green-slade decried those who bought the hybrid and threw away the edition, keeping the DVD, asserting that newspapers participating in the add-on fray were doing so not on purely commercial grounds but also to win influence. In Italy, journalists condemned the reverse cannibalization of the newspaper by "the gadget", an object that devalued their work (Cortese and Marabese 2004). Eventually, the longer-term commercial irrationality of the add-on frenzy receded for some time, both in the UK and Italy, where publishers collectively supported tax measures discouraging the practice.

### 3.1.3 The Serialized Novel

Attaching novels to newspapers is a specific occasion of the add-on representing cultural but also technological and market-led convergence. French newspapers and magazines in the 1800s began to publish serialized novels in the form of the "feuilleton" – the term is a diminutive of "feuille," or sheet, indicating the lower part of the page of a newspaper, otherwise called the footer, or "rez-de-chaussée." The *Journal des Débats* created a section in the lower parts of its pages devoted to literary matters, carrying articles that previously had been printed without a fixed location in the newspaper. Other newspapers imitated the format when the initiative was well-received by the public. Honoré de Balzac was the first writer who understood the potential of this specific space in which to promote novels, when in 1831 he flagged in advance chapters on which he was still working. However, the true origin of the feuilleton came in 1836, with the foundation of the newspaper *La Presse* by Émile de Girardin. To keep costs down and build readership, de Girardin used space devoted to literary criticism to carry as yet unpublished stories in instalments, at first in the appendix, then in the last or second last page, and only later distributed in the classical form of the book. In its first year, *La Presse* published *La Comtesse de Salisbury*, by Alexandre Dumas, and *Miss Cormon (La Vieille Fille)* by Honoré de Balzac (Pellini 2015). In the following year, the *Journal des débats* published *Mémoires du diable* by Frédéric Soulié. Other cornerstones of the genre from this period were *Les Misérables* by Victor Hugo, *The Mysteries of Paris* by Eugène Sue, and *The Three Musketeers* by Alexandre Dumas, which appeared in instalments in *Le Siècle* in 1844. *Il Capitan Fracassa* was published by Theo Fracassa between 1861 and 1863 in *Revue Nationale et Étrangère*. Flaubert's *Madame Bovary* was carried in instalments from 1856 in *La Revue de Paris*.

The appendix novel prospered in other countries such as England – most famously in the case of Charles Dickens – the United States, Russia, and Italy. Robert Louis Stevenson published *The Black Arrow* in the magazine *Young Folks*; excerpts from Joyce's *Finnegans Wake* were carried in the Paris periodical *transition* under the title of *Work in Progress*. In the US, Edgar Allan Poe's *Manuscript Found in a Bottle* won a literary competition organized by a Baltimore magazine. *Crime and Punishment* and *The Brothers Karamazov* by Dostoevsky, and Tolstoy's *War and Peace*, were first seen as appendix novels in *The Russian Messenger*. In Italy, Emilio Salgari first published as newspaper appendices his *Sandokan* cycle of novels, as did Carlo Collodi, with *The Adventures of Pinocchio*.

After the Second World War, the genre declined. It was almost entirely replaced by the more immediate picture story (fotoromanzo) and the television drama or, later, telenovela (teleromanzo), the serialized story, a sort of police cut, which remained in use in a few newspapers until the end of the 1970s. In cinema, the influence of the appendix novel extended to the melodramatic genre in vogue in the 1920s and to the European neorealism of the 40s and 50s.

Its dismemberment into short newspaper articles represented a cross-fertilization of form that was particularly beneficial to the development of the nineteenth century novel, in that it demanded the creation of suspense. Another resulting convergence was that occurring between newspapers and literature, perhaps most markedly in the case of Emile Zola with his famous *J'accuse* in the socialist newspaper *L'Aurore*. Close relations between newspapers and novels, and between journalists and novelists, can be seen in a continuum of further remediations. Appendix novels' seriality came to be reflected in the 1930s in the broadcasting of radio adaptations of such works, such as *The Four Musketeers*, and the format persists through to the digital in the rise of the podcast. For many decades up to the end of the last century, before consolidation of cultural content in supplements, the structural convergence between journalism and literature was evidenced on the third page of Italian newspapers, which had long been established as a literary and cultural space (where, by contrast, elsewhere Page Three has been infamously associated with tabloid titillation).

Further developments in television have followed a similar trajectory of convergence.

### 3.2 The Telephone and Broadcast Media

Another historically significant form of convergence that arose in advance of digital media is that between the telephone and broadcast media. Preceding the phase

of more direct union, telephony had been used in a form of proto-broadcasting from the late nineteenth century, with the so-called circular telephone bringing entertainment and cultural events to elite audiences and distributing news to subscribers of networks in several countries, beginning in Hungary in 1893 but quickly adopted in the US, and surviving up to World War II (Marvin 1988; Balbi 2010). Whereas in these instances the telephone incorporated mass media, later, the relationship was reversed, when broadcast incorporated the telephone. In the US, on-air radio discussion of music occurred as early as 1945, extending to political coverage in 1949 (Bobbitt 2010). Elsewhere, live telephone content has become widespread internationally as a key form of programming in entertainment, cultural and political domains, both in television and radio (e.g., Simonelli and Taggi 1985 regarding Italy; Katriel 2004 on Israel; O'Sullivan 2005 on Ireland; Lee 2014 on Hong Kong). In particular, in the context of developments in the digital domain, it has been observed that key figures in partisan websites in the US have emerged from talk radio (Newman et al. 2018).

To bring new empirical material to this topic, we report here results from formerly unpublished research by Fortunati and Manganelli in 1994 (Fortunati and Manganelli 1995). In Italy, this convergence began when, in 1969, the radio program *Chiamate Roma 3131* took the initiative to include live calls from the audience. The show's creator, Luciano Rispoli, inspired by a live phone-in segment in a French radio show hosted by a psychologist, created a two-hour daily broadcast with live calls, with the aim of including diverse, natural voices. Calls were "deferred live," i.e., a direct call with a delay of a quarter of an hour to allow time to intervene in case of foul language or abusive content. The introduction of the telephone collapsed the wall around radio as an academy of phonetic and linguistic perfection, and the beginning of a medium in which people could express themselves at home, in the streets and at work.

Based on the study's analysis of a week's broadcasts, in which 474 live calls were logged, it can be extrapolated that there would be about 25,000 annually, mixed with other narrative units, so that the identity of radio can be viewed as shared between the microphone and the telephone. Since both devices are "voices," the relation between radio and telephone has always been closer, historically and structurally, than that between the telephone and television. This makes a less unequal, and potentially more participative, discursive contract between host and listener. The invitation to call or contact the radio station is oral only and responds to three basic functions of the palimpsest as macro-text. The first is the self-referencing function, i.e. the creation, strengthening, and improvement of the network image, enhancing the quality of domesticity and familiarity between the network and its "loyal audience." The second is the phatic function, shown in the continuous quest for contact with the listener,

repeatedly invited to be part of the “big radio family.” The third is pragmatic, in the sense that the invitation to call is a commercial communication practice, widely used in advertising. The live radio call expands the phatic function most of all. To the cold, unidirectional language of mass media, the live call adds the warmth of intimacy and relationality.

In the case of television, the study logged 269 live calls, equating to 14,000 annually. A fifth of those surveyed said that they had tried to call a television program, but only 3.4% of these had succeeded in getting through. The majority said they had called in the hope of winning a prize or taking part in a game, and only 7.8% said they had telephoned to express their opinion. This can be understood as relating less to a lack of interest in participation and more to the operation of television, which called for the staging of live calls. Calls took on only the phatic function. They lowered the iconicity of the television text and enriched the audio band, which on the small screen is otherwise sacrificed to subordinate functions (Giaccardi 1995). In this sense, the phone-in had the potential to effect change through converging not only technologies but also audience and producer roles, even as the immediate and spontaneous live call ultimately has been subordinated to the rigid medium demands of TV.

From its convergence with television, the telephone, now including the mobile phone (Goggin and Hjorth 2014), has acquired a new form of existence in the world of entertainment and mass communications, from the screen overlay telephone (and fax) numbers to the telephone interviews and to the live telephone dialogues with the public. The telephone also acquired a public dimension. From its existence as a medium of personal communication, it has moved to also being a medium of mass communication, positioned as a bridge between audiences and electronic media. The language of the telephone has powerfully added a personal dimension to public dialogue. In the digitalized world, television and radio, as digitalized analogue media, have experienced divergent evolutions in this respect. While television has dropped live calls as a means of engaging the audience, radio has continued on this path. Television has achieved the involvement of the public by proposing new broadcast formats, such as reality or entertainment shows including the audience by means of tele-voting, often via smartphones (Hay and Kanafani 2017), or by leaning more on already tested formats such as talk shows and quizzes. The process of convergence now persists into the digital, as both television and radio have acquired new space and time through the use of the internet and, especially, social media.

## Conclusion

This discussion of convergence has attempted to place the concept in a broader historical context of media history and theoretical evolution, and to problematize its near-exclusive latter association with the digital. We have used a number of historical case studies centered on specific media platforms to demonstrate processes of convergence that are pre-digital but that spring from or relate to aspects of media change commonly associated with the digital, namely evolving formats, content, and uses, with implications for producers, institutions, markets, and audiences. Convergence is as old as the earliest mass medium but connecting in cultural terms from the medieval period to the nineteenth century romantic novel and, hence, beyond to the twenty-first century (Gabriele 2016). It has been seen to be agnostic as to the “digitalness” or otherwise of media types: it has occurred in many guises, and will continue to arise within digital media, within analogue forms, and, post-digitally, between the two, depending on many forces including but not confined to the technological. Convergence has proven useful as an analytic tool to understand media change, but it is not the first or only such concept to have done so, and its often technological and market-led framing carries with it a risk of narrowing understanding and, consequently, the discourse around such processes. Many of the categories of media springing from the more positivist interpretations of convergence and related concepts, such as commonly-deployed dualities of “legacy” and “new,” “static” and “dynamic” or “traditional” and “digital,” are limited in scope, unhelpful and misleading. Convergence and remediation, both of which capture change and the relationships between diverse media forms, are not mutually exclusive, and it is perhaps wise to consider them together to support a more nuanced, inclusive and historically-based view of evolution and continuity in media communication.

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Katie Day Good  
**Multimedia**

How Educators Made Sense of New Media Multiplicity

**Abstract:** The term “multimedia” is associated with the proliferation of audiovisual and computational media technologies in the second half of the twentieth century, but visions of orchestrating a plurality of media devices, particularly for educational purposes, appeared earlier than this. This chapter traces the emergence of a multimedia sensibility in U.S. education in the interwar years. Offering the concept of media litanies, it describes how educators made sense of the multiplicity of new media and resisted commercial claims about the transformative teaching power of singular technologies by calling into focus the wide variety of devices that teachers could use and combine according to their pedagogical needs. The chapter also discusses early “multimedia” experiments in schools, such as illustrated radio, in which educators synchronized radio broadcasts, lantern slides, and filmstrips to produce audiovisual lessons. Together, these early educational discourses and efforts helped pave the way for corporate and cultural visions of multimedia to gain valence later in the century.

**Keywords:** multimedia, education, educational technology, new media, audiovisual media, twentieth century, pedagogy, users

The term “multimedia” is already a historical artifact, its usage bound up with the proliferation of new media technologies in the second half of the twentieth century. In the United States in the 1960s, the word “multimedia” (variously written as “multi-media” and “multi media” and used as a noun and an adjective) took root in the fields of education, advertising, and the arts to describe new media texts, experiences and installations that intentionally deployed more than one medium of communication. Amid rapid advancements in consumer technology and America’s growing preoccupation with demonstrating its technological prowess in the context of the Cold War, “multimedia” became a flexible and futuristic descriptor for a range of efforts to make formerly discrete media apparatuses both more ubiquitous and fluidly integrated into various spaces, processes, and sectors of society (Olivero 1962; Anonymous 1969a; 1969b; 1970a; 1970b).

In a 1960s classroom, for example, multimedia might refer to a “transmission center” or an “integrated materials center” of multiple instructional A-V devices, such as an overhead projector, portable screen, tape recorder, and record player, that a teacher could use in various combinations in her lessons (Rurark 1961;

Olivero 1962). In advertising, “multi-media” described the “multichannel sound and light shows” and multi-screen projections that became fashionable at international expositions and sales expos. Developed by young creatives and inspired by emerging theories from artists and academics, particularly Marshall McLuhan, that equated the era’s new “electric media” of television, movies, radio, and computers with heightened perception and expanded consciousness, such expositions celebrated technological innovation and media proliferation while tethering notions of multi-mediated living to Western ideals of individualism, liberalism and free-market capitalism (Glueck 1967; Turner 2013).

While the use of the term “multimedia” remained somewhat stagnant in the 1970s and 80s, it surged in popular discourse in the 1990s along with the rise of personal computing, taking on new meaning to describe the “new types of media made for computers” (Rockwell and Macktavish 2004, 108). By then, “multimedia” had largely shed its early associations with panoplies of media hardware and discrete devices and was more commonly used as a synonym for “new media,” or the converged, mixed-media texts and software, such as interactive encyclopedias, games, digital journalism and works of digital art that were being created and consumed with computers (Lombreglia 1997). But remarkably, around 1997, multimedia’s upward trajectory made an about-face, and by the early 2000s, its usage in popular discourse plummeted (Google 2020). Perhaps multimedia had an “old-media” tinge to it in the new millennium, as an emerging class of born-digital media, including websites, blogs, digital news platforms and social media, combining sound, images, videos, and text, became ever easier to access, create, and share on the Internet and personal digital devices. By the 2010s, as single media devices, such as smartphones or digital tablets, became capable of accomplishing what multiple devices, such as television, video audio players, telephones, and typewriters, used to do separately, the multiplicity of new media and the distinctions between them no longer seemed as noteworthy as they once were.

But while the word “multimedia” is thus associated with the advent of computing, the explosion of postwar consumer technologies, and the arrival of the information age, the ideas and cultural visions that it indexes are significantly older than that. As early as the 1910s and 20s, conversations about the changing technological environment often focused as much on the plurality of new media of communication, and their points of potential connection and integration, as on the novelty or social implications of individual devices (Popp 2011). This chapter will focus on U.S. educational literature in the 1910s-1940s to trace how a multimedia sensibility emerged in schools and the educational field. It argues that the ability to acquire and marshal together various types of media and machines to accomplish a single communicative objective; to think of such devices as potentially

more useful in combination than in isolation from each other, and to imagine the user as a commanding orchestrator rather than a passive consumer of the sensory stimuli produced by multiple media, can be traced to the proliferation and cultural adoption of popular media technologies in the first decades of the twentieth century. Back then, the multiplicity and variability of emerging media forms, and the possibilities they offered to ordinary people, were a source of both wonder and anxiety for many observers (Czitrom 1982).

These sentiments were particularly salient and well-documented in the world of education. In the first decades of the twentieth century, educators in North America and Europe grappled with how to incorporate a variety of new and popular technologies, from electricity to film projectors to record players and radio, into a range of educational settings, including adult education, universities, and domestic and colonial schools (Moser 2019; Goodman 2016; Gregory 2016; Orgeron, Orgeron and Streible 2012). In the U.S. in particular, rising immigration and urbanization led the public educational system to rapidly expand and become more bureaucratized, prompting many in the educational field to rethink how schools delivered instruction. This period also saw the implementation of progressive reforms aimed at rejecting the rote, verbalistic and “passive” approaches to instruction that had predominated in the nineteenth century in favor of more engaging techniques that would educate the “whole child” through activating her interests and senses.

Beginning in earnest in the 1910s and 20s, the emerging media industries in the US attempted to woo educators by deploying a techno-utopian promotional rhetoric that aligned with the concerns of progressive reformers. Each argued that their respective devices could modernize instruction, “bring the world” into the classroom, make teaching more engaging and efficient, and deliver the kinds of virtual or “vicarious experiences” (of world travel, scientific, and industrial processes and the workings of government) that would mold youngsters into good citizens and future workers. Newspapers largely reproduced this industrial narrative that new media technologies would soon revolutionize education (Good 2020).

But educators reacted to these claims with ambivalence, at various turns enticed by the prospect of making their work more efficient and effective, and in other moments concerned that new media gadgets could render their profession obsolete. Educational researchers and teachers were also concerned that teaching with new media gadgets—then largely associated with leisure and entertainment—would make the classroom into a space of amusement or “passive” reception, rendering it a “substitute for the theater” (Knowlton 1930, 195; Crumly 1919). Drawing on their professional expertise and the burgeoning field of progressive educational theory, some educators began to criticize the notion

that any single commercial device would transform education. Instead, they developed a uniquely broadened, user-centric and “active” vision of mediated instruction where teachers and learners would mindfully make use of multiple devices, including high- and low-tech aids, according to their curricular needs.

I suggest that this amounted to the beginnings of a multimedia orientation in U.S. educational discourse and practice, one that helped to legitimize multiple new technologies for mass educational use and open the way for the notion of multimedia to gain wider academic, cultural and commercial valence by midcentury (Turner 2013). Importantly, this integrated and cross-media sensibility in education was forged by the early educational adopters and users, rather than (and often in subtle opposition to) commercial producers of new media technologies. As such, it complicates prevailing notions of multimedia as an innovation of technology industries, engineers, theorists, artists and experts (Packer and Jordan 2002).

This orientation both asserted the importance of teachers and learners in determining the proper uses of media in education and, somewhat ironically, created a pedagogical rationale for a flood of consumer media technologies to enter schools in the latter half of the century under the banner of multimedia learning (Acland 2017). In the first decades of the century, schoolteachers, administrators, and researchers began to recast emerging media devices not as standalone, authoritative aids to be passively relied upon for teaching and learning, but rather as complementary, individually inadequate tools that should be marshaled together, combined and steered by discerning users according to their communicative objectives. In this formulation, no single form of commercially-prepared media could be pedagogically superior or even sufficient in its own right. Rather, each would need to be balanced with an array of other sensory engagements and experiences for their educative benefits to be fully realized.

## 1 Media Litanies

Historically, users have played a critical role in defining the uses and meanings of technologies, and have often done so in ways that diverged from the use values imagined by their inventors or promoters (Gitelman 2003). This was certainly true of educational technology in the US, as representatives of the early motion picture, phonograph, stereoscope, and lantern slide industries made bold claims about how their products’ visual or auditory features made them uniquely fit to transform the work of teaching (Ives and Clark 1912; Willson 1919; Victrola Talking Machine Company 1920a; Fitzpatrick and McElroy 1919, 1920). “Let

the pictures teach the lesson,” urged a typical print advertisement for educational motion pictures and projectors in 1920. Claiming that “teaching from books, maps, or charts is dull at best” and consumed “too much brain energy” from pupils, the advertisement contended that “children are more enthused, give closer attention, learn more rapidly and retain more thoroughly without exertion through the medium of motion pictures” (The American Projecting Company 1921). A few years earlier, the inventor Thomas Edison, an early producer of educational motion pictures, made headlines with even bolder claims that the “schoolhouse will be the screen,” and that movies would soon “revolutionize” education, lessen the workload of teachers, supplant textbooks, erase prejudice, and even prevent future wars (Anonymous 1919). For their part, producers of record players were keen to highlight the instructional versatility of recorded sound, a sensory engagement that motion picture technology was not yet capable of providing. Publishing frequently in educational journals, the Victrola Talking Machine Company (1920b) described the phonograph as “the supreme instrument” and the “teacher’s staunchest ally, ready for use in every hour of the day and every branch of school work,” from foreign languages to music appreciation and physical education.

But while inventors and promoters proposed singular technologies as the solution for myriad educational challenges, few educators accepted this idea or put it into practice on the ground. For starters, the uptake of mechanical devices in schools was much slower and more lackluster than industries hoped, due to a combination of school budgetary constraints, logistical challenges in acquiring and adopting new equipment, a lack of electricity in the majority of schools and educators’ general skepticism toward teaching with new technology (Hodas 1996; Cuban 1986; Good 2016). Moreover, some educators were alarmed by the encroachment of commercial interests into the educational field, and in the mid-1910s began to assert their own pedagogical vision for incorporating new devices into instruction. At the 1916 meeting of the National Education Association (NEA), the nation’s largest organization of public schoolteachers and administrators, a Committee on Visual Instruction convened to discuss how new visual aids could be applied to “serious educational ends.” This group of nine educators and administrators was a predecessor the NEA’s Department of Visual Instruction (DVI), which would form in 1923 and grow into the nation’s largest organization of A-V educators, changing its name to the Department of Audio-Visual Instruction (DAVI) in 1947 (National Education Association 1915, 93; Saettler 2004, 167–168).

Key to the committee’s inaugural discussion in 1916 was its rejection of the notion, made popular by the nascent educational technology industry and the press, that any single commercial innovation would soon be radically reconfiguring education. Edward Stitt, the district superintendent of the New York

schools, delivered prepared remarks in which he praised “the modern methods of visualization” such as the stereoscope and motion picture, but argued that the time had come for educators to broaden the definition of visual instruction beyond the most talked-about technologies of the day and bring it into line with progressive educational principles.

Stitt took aim at two popular devices in particular—the motion picture and the phonograph—as examples of how the era’s new media posed the danger of fostering “passive” and mono-sensory learning, the kind of old-fashioned, one-way information transfer and rote instruction that the progressive educational movement was mobilizing to supersede. He criticized the “traditional tendency” of teachers “to make instruction a pouring-in process, in which the teacher becomes a sort of personal phonograph,” where “the child is first [sic] to listen, and so his instruction becomes entirely too ear-minded.” He levied similar criticisms against the visual medium of motion pictures, calling for a “release from the passive reception of the wonders of film reproductions, by enlisting the active energies of the pupils so as to awaken their self-activity.” Evident in Stitt’s speech was a disdain for the “mechanical” and mono-sensory nature of education that was believed to have predominated in earlier years and an apprehension that new media machines, if used as their promoters suggested, would simply reproduce that failed approach. Their work as a committee, he concluded, should be to establish a more dynamic, “active” model of visual instruction that engaged children via multiple senses, so that “in the future the province of the teacher shall include the realm of the eye as well as that of the ear.”

So how might teachers forge such an active and multisensory approach to teaching with technology? Stitt’s suggestion was not to reject new technologies altogether, but rather to offer an alternative to the industry’s vision of how they might be incorporated into schools. He offered what I’ll call a media litany, an enumeration of a long list of available media technologies that teachers and students could variously draw upon, mix, and incorporate into their lessons according to their pedagogical needs. Media litanies not only foregrounded the plurality of media at the user’s disposal, but also situated high-profile commercial innovations, such as motion pictures and slide projectors, within an educational milieu of humbler, older and home-grown devices. “The following are suggested as useful ways to enlarge the plan and scope of the work,” Stitt remarked, going on to define visual aids as:

- (1) lantern slides for instruction purposes; (2) educational motion pictures; (3) stereographs [ . . . ]; (4) display of maps, charts, and models in classroom; (5) greater use of the blackboard by both pupils and teachers; (6) illustrations in reading-books and textbooks generally; (7) souvenir post-cards and pictures from magazines and newspapers; (8) school exhibits [ . . . ]; (9) educational museum [ . . . ] and distribution of visual aids by municipal or state bureaus; (10) clay-modeling, molding in sand trays, etc.; (11) homemade apparatus in elementary science work; (12) visits to museums, art galleries, libraries, etc. (Stitt 1916)

These sorts of media litanies appeared frequently in the new professional literature for visual education that proliferated in the interwar years (Pennsylvania Department of Public Instruction 1930, 9–10; Dorris 1928, 60). In a series of 1924 essays titled, “Aeroplane View of Visual Aids,” Joseph Weber, an early university researcher of visual education methods, echoed Stitt’s call by urging teachers to resist dependency on any single device and make creative use, instead, of a broadened mix of mechanical and non-mechanical media and materials in the classroom. Weber defined visual aids here as “artificial objects, models, and exhibits; globes, maps, and charts; graphs, diagrams, and cartoons; paintings, picture prints, and book illustrations; photographs, stereographs, lantern slides, and motion pictures; and last, but not least, the time-honored blackboard” (Weber 1924, 338). A few years later, Weber would write again to make the case for auditory and other sensory aids, criticizing the visual education movement for “placing the sense of vision on a pedestal and worshipping it as the golden calf.” He urged practitioners to remember that “all the senses, more or less and in diverse combinations, co-operate in the steady accumulation of learning” (Weber 1928). Emphasizing that making interactions with new media “educational” required an active role for users and a fuller engagement of their sensoria, these statements knocked motion pictures and other high-profile visual technologies down from the pedestal to which the industry had elevated them, and afforded them same educational status as simpler, more homemade, and other sensory aids.

Media litanies also appeared in the writings of schoolteachers, who chronicled in educational journals their own experiments with teaching with diverse combinations of sensory devices. Reflecting on how far they had come since the olden days of rote, book-based instruction, a Massachusetts geography teacher named Pauline Powers exclaimed in 1938, “No Victrola, no radio, no motion picture, few newspaper or magazine articles of genuine interest in those days! But how many aids there are [at] the disposal of the geography teacher of today! Let us mention just a few of these many agents.” Powers went on to list a variety of visual and audio and mechanical and non-mechanical media that she had incorporated with success into her geography lessons, including not only movies, record players, radio, newspapers, and newsreels, but also student-made scrapbooks, letters to newspaper editors, stamp collections and pen pal correspondences between students (Powers 1938, 275).

Further indicating this shift toward privileging users and a plurality of media in the classroom, a number of influential educational researchers authored



teacher-training textbooks in the late 1920s-40s that called for a more pedagogically-informed praxis of visual education in which teachers, students, and the curriculum would drive the use of devices, not the other way around. Importantly, these formulations made room for the new medium of film in instruction but emphasized that any screenings in school should be anchored in a range of auxiliary media uses, discussions and activities to promote “active” learning and critical thought. Anna Verona Dorris, a California educator who served as president of the DVI between 1927–29, wrote in *Visual Instruction in the Public Schools* that educators must “control and regulate visual education,” particularly the use of movies, to promote a “more pedagogical use of all visual aids.” Offering a media litany of her own, she wrote: “Visual aids—photographs, models, exhibits, charts, graphs, maps, stereographs, slides, and motion pictures—are merely educational tools to be used at the psychological time.” She warned against “the misuse and abuse of certain types of visual aids, particularly the film [. . .] [that] must be attributed largely to the lack of knowledge of modern pedagogy and an overenthusiasm regarding the possibilities of new and novel devices” (1928, 38–39; see also Hoban, Hoban Jr. and Zisman 1937; Dale 1946).

Published in educational journals and declared in speeches at educational conferences, media litanies were discursive constructs that allowed media-minded educators to assert their professional agency over emerging technologies in a time of broad technological change. Such utterances may have been acts of not only pedagogical theorization but also professional self-preservation: a way of highlighting the indispensable role of the human teacher in a time when popular narratives commonly predicted that new technology would render them “obsolete.” Describing mediated instruction as a field of endless possibilities achievable only through the conscious choices and creative actions of teachers and learners, media litanies allowed educators to push back against characterizations, common in the press, that they were old-fashioned, change-resistant technophobes while obliquely staking claims that no single device could handle the work of instruction on its own.

The contrast between commercial and educational visions of technology in the classroom was evident in the images of visual education-in-action that these groups submitted to educational publications. Commercial advertisements for educational technologies, such as film and slide projectors, unsurprisingly focused on the devices for sale, highlighting their authoritative, visualizing power and sleek, mechanical design. Where pictured in these advertisements, the student users of such devices were often depicted sitting neatly in rows, viewing images on an illuminated screen in rapt attention like spectators in a theater (Bell & Howell 1929). In contrast, educators’ and school administrators’ images of visual education-in-practice commonly portrayed classrooms and school libraries as chock-a-block

with heterogeneous mixes of visual and tactile technologies—including wall pictures, charts, maps, projectors, stereoscopes, and collected artifacts—being actively handled and used by students in a single moment (Dorris 1928, 151, 224; Burrall 1919, 500; Ramsey 1922, 285). These photos have a staged quality to them and may simply represent an attempt by educators to showcase, in the economy of a single frame, the variety of items in a school’s collection or on loan from educational museums. But whether organic or staged, such images celebrating the arrival of technology into the schoolroom were nonetheless visual analogues of the media litanies that so often appeared in educators’ writings. They called into focus the plurality of “devices” available for teaching and ways that users might mobilize them. Rather than figuring singular new media devices as authoritative solutions to an array of teaching problems, these images foregrounded the multiple uses and combinations of an array of high- and low-tech media, and human users as the commanding orchestrators of their instructive potential.

## **2 Illustrated Radio, Multimedia Experiments, and the Promise of “Eye and Ear Instruction”**

At the same time that educators were beginning to articulate a multimodal vision for education, some took part in ambitious efforts to combine and synchronize audio and visual media in their classrooms. In most schools in the 1920s and 30s, electric audio and visual media were rare, used infrequently and transmitted through separate devices, making it difficult for teachers to apply new technologies to the vaunted ideal of multisensory learning. The first major technologies to synchronize visuals with sound—sound films, or “talkies,” and television—did not develop until the late 1920s and early 1930s, and both of these remained out of reach for most schools until after World War II.

Yet some educators made resourceful attempts in the interwar years to mix sounds, visuals, texts, and other sensory experiences in the pursuit of multisensory instruction, using newly acquired media or devices they already had on hand. A teacher at a school in Washington, D.C., for example, wrote in 1925 of an eight-grade class’s project of dramatizing a work of literature by projecting still images on a screen with their new stereopticon (a two-lens slide projector) while playing phonograph recordings of classical music in the background and performing verbal recitations for an audience of their peers (Moore 1925). On the other side of the country that year, the Oakland Public Schools of California experimented with improving art instruction through the new medium of radio, having children draw Christmas cards in their classrooms while listening to a

“radio teacher” deliver instructions remotely from local station KGO. Reporting in *Radio Digest*, an observer of the experiment marveled at how the sounds over the airwaves conjured up new images in the classroom, created by the young listeners as they drew: “By radio lessons the children received suggestions through their ears and sent out the response through eager busy fingers. [ . . . ] In the child’s heart and mind alone took place that transmutation which makes out of spoken word the created image” (Anonymous 1925).

A notable attempt to synchronize mechanically-transmitted sounds and visuals for educational purposes came in the form of “illustrated radio” broadcasts carried out by city school systems, universities, museums and newspapers in the 1920s-40s. In 1924, the Chicago-based radio station WMAQ, owned by the *Chicago Daily News* newspaper, produced a number of educational programs as a “public service” to listeners, and developed a novel approach to delivering remote illustrated lectures to area schools. Partnering with the Art Institute of Chicago, the radio station broadcast 30-minute lectures on art history while teachers in multiple public schools, stationed in their classrooms and auditoriums across the city, screened identical sets of lantern slide images for their students to view. Students of different schools were thus able to share in a synchronous, illustrated, and remote lecture by listening to a single radio broadcast and viewing a common set of projected images at a coordinated time. The same method would be used again to transmit illustrated talks on geography to children in the Chicago and surrounding suburban schools in 1927 (Ramsey 1938; Myers 1927).

Illustrated radio techniques were further developed by university radio stations and extension service educators in the 1930s to provide agricultural education to students in rural communities (U.S. Department of Agriculture 1932). In 1932, the Ohio State University extension service developed a new illustrated radio lecture format resembling a call-in radio show, utilizing a mix of radio, filmstrips and the telephone. At a coordinated time, groups of students in rural classrooms in five different counties viewed identical filmstrips, screened by local agricultural agents, while tuning into the university radio station, where an educator delivered a lecture and an assistant operated a filmstrip projector with the corresponding images. When the lecturer wished to move from one image to the next, he sounded a gong, signaling both to his projection assistant in the studio and to the agricultural agents in the five different locations to move to the next picture in their filmstrips. At the end of the illustrated radio lecture, each class held a discussion and phoned their questions into the radio station, where the lecturer answered the questions, for the benefit of all the groups, over the radio (Hoffman 1932).

Education by illustrated radio represented a promising development in audiovisual pedagogy, or what one educational observer called “eye and ear instruction.” One former high school teacher was so enticed by the prospect of teaching with illustrated radio that he developed special filmstrips to accompany the popular educational radio program, *The World Is Yours* (NBC) in 1938, calling the format “Radiovision” (Myers 1927; Hoffman 1938). By synchronizing the aural medium of radio broadcasting with the visual medium of illuminated lantern slide images and filmstrips, educators, newspapers, and museums produced a technologically-mediated version of the progressive ideal of multi-sensory instruction envisioned by Stitt and the Committee on Visual Instruction two decades earlier. The Chicago lectures arguably lacked the “active” approach to multi-mediated learning that Stitt and his contemporaries had imagined, as it relegated teachers the role of projectionists, students to the role of spectators and the distant radio lecturer to the authoritative role of “master teacher.” But the Ohio lectures included an element of interactivity and user participation through the incorporation of group discussions and the telephone, which allowed students to call in with their questions and interact, to a degree, with their remote instructor and peers. Despite these differences, illustrated radio experiments comprised ambitious attempts by educators to combine and synchronize multiple new media technologies to promote a more engaging and audiovisual learning experience than any single commercial medium could yet provide on its own.

While illustrated radio would soon be eclipsed by educational television after World War II, at least one urban school system continued to use it as late as 1946. In Cleveland, Ohio, the public school district-owned radio station, WBOE, broadcast art talks by an art teacher while teachers and their students screened accompanying sets of colored Kodachrome slides in 64 schools across the city. The postwar A-V journal *See and Hear* chronicled this feat of local audiovisual broadcasting, describing it as “just short of television.” “Television has been called the ultimate in extending the word and the graphic image into the classroom,” the editors explained. “Rather than wait [for television], here is a point from which we can start” (Horton 1946, 48). While it is not entirely clear whether the authors saw television as a technology to be desired or avoided in the classroom, what is apparent is that the multimedia sensibility that led to the experimental use of illustrated radio in schools, and that had been developing in the educational field since the 1910s, emerged at the edges of commercial and mass media development, and through educators’ and other institutions’ enterprising attempts to mix emerging and extant media in pursuit of multisensory learning. By midcentury, the idea of synchronizing, mixing, and teaching with multiple media at once would be taken up by the technology industries themselves, and “multimedia” would move into the mainstream.

### 3 From the Schoolroom to the Living Room

In the late 1950s and 1960s, the interest in coordinating multiple media for instruction that had been steadily building in the educational field for half a century was subsumed by a “wave of industrial-electronic futurism” in American industry, government, and culture, ushered in by Cold War techno-panics, a booming post-war economy and school-age population, and the popularization of television (Fletcher 2017). The Soviet launch of Sputnik in 1957 prompted the US Congress to pass the National Defense Education Act in 1958, which sought to help Americans “catch up” with the Soviet Union in science and technology by allocating significant funds to schools and educational research. The law, which constituted the largest federal attempt to shape American education to date (Strain 2005), prioritized research and development in educational technology and enshrined a distinctively multi-medial vision of it, defining the “new educational media” as a media litany of “motion pictures, video tapes and other audio-visual aids, film strips, slides and other visual aids, recordings (including magnetic tapes) and other auditory aids, and radio or television program scripts” (“National Defense Education Act of 1958” 1958). The technologization of American education now had the full backing of the federal government and the moral urgency of staving off nuclear war and ensuring the triumph of the free world over communism.

One researcher who benefited from the influx of federal support for educational media was the Canadian communication scholar Marshall McLuhan. Shortly after the law’s passage, the U.S. Office of Education and the National Association of Educational Broadcasters commissioned McLuhan to write a report on the state of new media in education. Working out ideas that would later appear in his classic *Understanding Media* (1964) and other works, McLuhan’s “Report on Project in Understanding New Media” (1960) heralded the arrival of a “multi-media electric age” and warned that schools needed to adapt to a variety of new media or risk becoming irrelevant. The spread of television, movies, radio, and computers was obliterating the divide between formal and informal education, he argued, and transforming the world into an interconnected “global village” and a “classroom without walls.” Students should therefore be taught to adopt a “mosaic approach” to utilizing media and information throughout their everyday lives, learning to “deal with all media at once in their daily-interaction” (McLuhan and National Association of Educational Broadcasters 1960; McLuhan and Leonard 1967). Though McLuhan would popularize this multimedia view of education in his later books and media appearances, his “Report” reveals how he developed them in dialogue with an educational sector that had already been grappling the implications of multiple media in education and society for decades.

The notion that new technology was obliterating the divide between formal and informal education was attractive to corporate electronics producers and technology companies, who mobilized in the post-Sputnik era to develop an array of new educational products for not only schools, but also homes and workplaces (Cain 2017). As Curtis Fletcher writes, in the early-to-mid 1960s, virtually every major electronics manufacturer in the U.S., including Xerox, R.C.A., General Electric, I.B.M., Honeywell, Westinghouse and Philco-Ford, began to invest in the research and development of educational technologies, with a focus on “multimedia systems” that incorporated multiple media devices and had multiple instructional uses. Futuristic advertisements for “homes of tomorrow” and “schools of tomorrow,” showcasing technologies envisioned but not yet available for sale, depicted children and parents effortlessly engaging with multi-screen consoles and audiovisual “education centers” in their everyday activities, including homework, child-rearing, reading the news, retrieving recipes, watching television and gardening (Fletcher 2017).

Now, multi-modal and interactive educational technologies were no longer marginal, relegated to teachers’ grassroots experiments in schoolrooms and auditoriums, but a “prominent futurological trope” in American corporate culture, encouraging consumers to imagine how a web of new, interconnected technologies and information flows could enhance multiple domains of their lives. As many Americans saw it, in contrast to the “closed” societies of the Soviet Union, where citizens encountered their media through single, state-approved propaganda apparatuses, the expansive, multi-media, and multi-channel landscape of the U.S. stood for information freedom, self-directed learning, individualism, enlightenment and the creation of “free, self-governing individuals.” Liberal media use had come to be equated with liberalism itself. As Fletcher (2017) and Turner (2013) note, these techno-utopian visions laid the groundwork for dominant thinking about the World Wide Web and the vigorous governmental and corporate promotion of digital technologies, in and outside of schools, in the late 1980s and 1990s. Multimedia thinking, or the idea that many media, mixed, and controlled by individual users and for purposes of teaching and learning, had long ago been articulated by educators who wished to push back against the notion of undue commercial influence and single-medium hegemony in education. But it now provided a pedagogical, social, and political rationale for a range of consumer devices to flood into schools and homes.

## Conclusion

Vestiges of educators' early twentieth-century multimedia visions can still be seen in the products peddled by the most powerful producers in the digital economy. At the time of writing, advertisements for computers and mobile digital devices, such as Apple's iPad and MacBook Air, frequently draw on the idea of technology conveniently blending together multiple, formerly separate media functions (e.g., television and movies, music, games, word processing, reading, correspondence, photos, telephone calls), and assisting users in their ongoing education, information retrieval, communication and overall empowerment. It is common now for ads to bring neither the hardware nor the software into focus but, instead, to render the devices so thin and lightweight (almost like "air"), their uses (or "applications") so limitless and the borders between them so insignificant that they can be effortlessly transcended with a single "swipe" of a finger or keystroke.<sup>1</sup> Now, the user is truly in full command of a fluidly integrated, multisensory mediated experience, with no pesky cords, consoles, reels, discs, slides, or keyboards to manage. So while the term "multimedia" may not be as common as it once was, corresponding to a half-century of growth and consolidation of audio, visual, and digital media industries and products, the concept is now seamlessly embedded into the idealized uses of our popular media machines.

The sociotechnical visions that "multimedia" represents exceed the use of the word itself. Taking root in a historical moment of multiple-media emergence in the 1910s and 20s, and within an informational institution—the school—that has long grappled with the threat and promise of technological change, we continue to feel, see, and hear its effects a century later, absorbed and amplified by an industry that benefits from the assumption that engaging with a multiplicity of media in daily life is essential to being an educated citizen.

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<sup>1</sup> For examples bookending the 2010s, see Apple's advertisement for the first-generation iPad at the 2010 Academy Awards "iPad 1 Commercial" (available at: [https://www.youtube.com/watch?v=U\\_LceLUF10U0](https://www.youtube.com/watch?v=U_LceLUF10U0)) and its 2020 advertisement for the iPad Air, "Introducing iPad Air" (available at: [https://www.youtube.com/watch?v=r\\_VS110WLZE](https://www.youtube.com/watch?v=r_VS110WLZE)).

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# Benjamin Thierry

## Interactivity

### An In-between State

**Abstract:** Interactivity is a term used in many fields of study including ergonomics, computer science, and psychology. It now refers to a wide variety of features that are particularly present in digital devices. How did interactivity emerge in the context of the 1960s as an inseparable quality of computers that paved the way for personal computing? And how has interactivity become so vital in capturing our attention and clarifying the digital world, a central component in our daily relationship with our increasingly technologized environment?

**Keywords:** ergonomics, psychology, affordance, dialogue, HCI

The omnipresence of digital technology in our lives makes interactivity an essential characteristic of the contemporary human condition. Our everyday life is made up of interactive experiences that are mediated by a digital device and its interfaces (Vial 2013).

However, much like the notions of “virtual” and “digital,” “interactive” is a term that has no stable and unambiguous definition over time. There are several reasons for these shifts in meaning.

Firstly, the word “interactive” can be applied to many different devices and communication situations (whether or not they involve digital technologies). In the broadest sense, interactivity refers to a relationship between two or more agents, human or not, mediated or not by technical means of communication.

The meaning of the term “interactivity,” popularized – as we will see – in the field of computer science, has evolved along with technical developments: while it may have been a simple notion in the early days of computing, it has become more complex as interfaces have benefitted from technological advances.

Lastly, the agents involved in an interactive situation change our view of what interactivity is. The scientific literature does not emphasize the same characteristics when it examines human-machine, human-human or human-medium interactions, meaning that ultimately “it is unclear that anyone really knows what interactivity is” (Liu and Shrum 2002).

It therefore seems futile to attempt to produce a single comprehensive definition of interactivity. The main objective here will be to show how the concept of interactivity emerged at the confluence of several theoretical reflections and stabilized in the 1960s with developments in computing (real time, time-sharing, and

individualization of computer use). We will also see how the term serves as an anchor point for several theoretical and disciplinary practices that aim to shed light on the nature of the relationship between humans and computers.

All things considered, we will try to analyze how the proliferation of interactive situations we now experience in our digital lives is leading to a new stage in the diversification of a term which has come to refer to a wide variety of situations and objects.

## 1 Starting Points

The first difficulty lies in the large number of definitions of the term “interactivity.” The same difficulties apply when attempting to pinpoint when the term emerged. For Andrew Utterson, the first questions about interactivity emerged in the 1960s and 1970s in the fields of the arts and computer science (Utterson 2013). The French sociologist Patrice Flichy traces a genealogy starting with North American interactive television in the 1970s, continuing with the growing convergence between telecommunications and computers and ultimately leading to the major questions raised in the 1990s by the interactivity between microcomputers and users (Flichy 1987). Finally, Pierre Lévy recalls how the interactive map of the city of Aspen developed at MIT in 1979 played a key role in the birth of a dynamic relationship between digital artefacts and users (Lévy 1999).

### 1.1 Emergence of the Term in the Field of Computer Science

In the 1960s in the United States, the use of computers changed radically (Ceruzzi 2003). The behemoths of the 1940s were replaced by smaller machines that became more individual and flexible in their use. Until then, the use of computers in laboratories and businesses was dependent on batch processing. Machines were supplied with data by means of perforated cards, and computers were set up to perform lengthy tasks, with each task having to be completed before another could be started (Taylor 1967).

Interaction with computers was collective (an extensive technical team worked around one computer, with no one person having full individual responsibility for the task), sequential (the work had to be performed task by task) and diachronic (the way in which information would be processed was planned out before being performed by the computer) (Yost 2017).

The emergence of computers capable of operating in real time (Utterson 2013) – that is, capable of giving a seemingly immediate response to the user – radically changed the way in which computers could be used, giving rise to the concept of interactivity (Bardini 2000).

Computers could now be manipulated individually by a user and operate on a time-sharing basis (allowing several users to access the computer’s resources at the same time): this was the advent of the individual’s relationship with the computer.

That’s when the notion of “dialogue/communication” between the computer and its user appeared. Users now had the impression that they were conversing with the machine: they entered instructions on the machine’s keyboard which were followed by effects (visible on a printer, then on a screen), giving the impression that they were conducting a conversation with the computer.

The term “interactive computing” appeared in 1967 (Montfort 2016) in an article by Robert Taylor, who wondered about the best way to make use of the limitless potential of the computer: “Today the question is no longer whether we should bring interactive computing to the sciences, engineering, law, publishing, libraries, the government, economics, banking and finance, manufacturing, management, and education – but how?” (Taylor 1967)

It was at this point that the computer left behind its role as a mere calculator once and for all; it became an information machine that would allow its users to manipulate information through logical symbols (Vial 2013).

## 1.2 A Complex Genealogy

Nevertheless, it would be an anachronism to claim that interactivity itself spawned reflection about the role that the interactive computer should play in society. It was not until the late 1960s that considerable attention began to be paid to the consequences of the widespread deployment of computers, and whether or not these were desirable. The relationship between the machine and its user was central to these considerations and influenced the way in which interactivity was perceived once the notion emerged in the 1960s. It is possible to identify traces of a “desire for interactivity” that suggest the existence of a complex, non-linear genealogy (Deleuze 1983).

Viewed from a long-term perspective, the interactive functions of computers accelerated the realization of the old dream of “liberation” found in previous media discourses.

Indeed, as early as the nineteenth century, telegraphy gave rise to the desire for interactive communication between transmitters and receivers. People

would “meet” at a prearranged time in two telegraph stations a long way from each other to exchange successive messages and engage in a dialogue that anticipated the immediacy of communication that the telephone would allow a few years later (Flichy 1991). Games of chess were also played on both sides of the Atlantic (Müller-Pohl 2013) and, with the advent of electricity, the period between 1880 and 1925 gave rise to the “first-generation push-button society” (Plotnick 2018) in which Europeans and Americans became accustomed to manipulating their newly interactive technical environment. Even today we continue to “call” the elevator, referring to the action of pressing a button that generates a technical feedback: the arrival of the elevator.

Literature also saw the emergence of interactive reading experiences: long before computers, the romantic novel *Consider the Consequences!* by Doris Webster and Mary Alden Hopkins was published in the United States in 1930, boasting “a dozen or more” different endings depending on the “taste of the individual reader.” British gamebooks (or Choose Your Own Adventure books) continued and developed the experience and became world famous before being surpassed in the Web era with fan fiction.

Within the burgeoning field of computer science, as early as 1945, in an often-quoted pioneering article (Bush 1945), Vannevar Bush describes an automated device capable of processing information and putting it “within reach” of users to increase their intelligence. In 1960, it was Licklider who, in a seminal article entitled *Man-computer symbiosis* (Licklider 1960), summed up the advances that would be made possible by the spread of connected computing in society.

Bush and Licklider both refer to the benefits of proximity between the computer and the user. Bush envisioned a menu-based description of the “interactive” parts of a device that were not yet digital but electromechanical (screens, microfilms, notched wheels, etc.). The aim was to facilitate use of the information stored on microfilms by presenting it quickly and legibly. Licklider described the computer as having the potential to improve communication between users connected through networked computers.

In both cases, it was no longer a question of providing information but of co-constructing it with users and their machines. Interactivity implied a radical change of orientation that turned the consumer of information into an actor in its production and circulation.

### 1.3 Dialogue as the First Interpretative Framework for Interactivity

It was thus in the 1960s that interactive computing (based on the use of real-time processing, personal access to machines and time-sharing) became widespread and popularized equipment that profoundly changed the way computers were used, such as Digital Equipment's PDP-11 (Ceruzzi 2003).

It was also at this point that the first interpretive framework of what digital interactivity was – or should be – began to emerge: what was the nature of the relationship between humans and machines now that people were able to type lines of code on a keyboard that triggered a process on the computer whose result would be printed or displayed on the screen?

This use of code to interact with computers naturally led to talk about “communication” (“human-machine communication”) or “conversations” (the term “conversational system,” coined well before the use of artificial intelligence, referred to the ability of a system to be interrogated by means of a code entered on a keyboard) and to an understanding of using a computer as akin to engaging in a “dialogue.”

The “dialogue” metaphor became commonplace, describing the idea of an autonomous service provided by a machine for a user who was waiting for an “answer”. It would continue to be used for a long time: microcomputer users in the 1980s who discovered the joys of programming in Basic spontaneously used the term and the analogy (Thierry 2012).

The work of cyberneticians from the 1950s onwards (Kline 2015) enhanced this definition based on the analogy with human conversation by using the concept of feedback to emphasize that in a situation of interactivity the computer's capacity to adapt to requests took on a particular importance. The aim was not to mimic a dialogue by drawing from a stock of predetermined answers but to adapt dynamically according to an “algorithmic logic” (Vial 2013).

So, interactivity was understood as the ability of a digital device to respond to the multiple demands of its user in an understandable form (through the screen or printer) in a dynamic and instantaneous manner. It was this definition that allowed a first distinction to be made between interactive devices (a computer screen or a printer) and other devices (such as a television or cinema screen) that, while they solicit the user's attention, are not strictly speaking interactive (Vial 2013) because their content is not affected by the solicitations of their audience.

In the 1960s, this definition opened up new possibilities for the use of computers: John Whitney, who was in residence at IBM from 1966 to 1967, argued that real time and interactivity should be used as an opportunity for artists to express themselves more directly through the computer. He used the term “fluidity” to



describe a relationship between a user and a computer in which creativity was enhanced by means of the computer's interactive functions (Wiberg 2018).

## 2 New Forms of Interactivity

Everyday users of microcomputers and smartphones know that we generally no longer interact with our digital environment through command lines.

Accustomed to icons or menus popularized by Apple and the Palo Alto Research Center, interaction with the digital world is now “symbolic” as it was textual in the early days.

In this context, the dialogue metaphor for interactivity no longer provides an adequate theoretical framework.

### 2.1 Symbolic Interactivity

Interactivity based on the manipulation of non-text symbols dates back to the very early days of computer science. The Semi-Automatic Ground Environment (SAGE) system, designed in the late 1940s to provide the US Air Force with an airspace surveillance support system, introduced a form of symbolic interactivity. Users would select targets on the radar display with a light pen, and the computer would automatically calculate the location of the target and the intercept trajectory (Machover 1994). Radar operators therefore did not have to use language to interact with the Whirlwind computer that powered the SAGE system (Atkinson 2008) and perform the first “direct manipulation” of a digital object on a screen in the history of computing.

Research on graphical interfaces pursued this path of symbolic interactivity and paved the way for developments in the field of human-machine interaction. In 1963, Ivan Sutherland programmed Sketchpad, which allowed direct interaction on the screen using a light pen (Sutherland 1966), following on from the work carried out on SAGE. On December 9, 1968, Douglas Engelbart, a researcher at the Stanford Research Institute, gave the first “demo” of his OnlineSystem (NLS): a complete set of symbolic human-computer interaction tools (mouse for on-screen designation, chord keyboard for macro commands, hypertext links, etc.).

It was on the basis of these pioneering achievements that the Palo Alto Research Center in the 1970s and the American manufacturers of interactive software thereafter (Apple, Microsoft with Windows, etc.) developed their interactivity regimes based on the desktop metaphor and the designation of symbolic objects on

the screen to open up microcomputing to as many people as possible in the 1980s and 1990s.

This was a major turning point in the history of interactivity, as Pierre Lévy pointed out in an article from the very end of the 1990s: firstly, because the symbolic interface rapidly became widespread, and secondly because it created a new grammar of interactivity: “In a few decades, all terminals will have sophisticated graphical interfaces. Already a new ideography is being born before our eyes. Something like dynamic writing based on icons and diagrams” (Lévy 1999). This grammar of interactivity had its own rules, inertia, and legacies. The resistance of the wastepaper basket that continues to exist on our screens (which we continue to call “desktops”) shows the capacity for resistance of the office metaphor that we inherited from the 1970s and which continues to serve as a semantic frame of reference for our relationship with the deletion of digital files (which have nothing to do with a sheet of paper).

Another complication in this history of interactivity (which is deliberately being presented in a non-linear fashion) is the fact that textual modes of interaction remain embedded in symbolic modes of interaction: text remains under our icons for named files, chatbots are becoming widespread thanks to AI and some devices such as the French Minitel even chose to base their whole interaction regime on text rather than icons in the 1980s and 1990s (Thierry 2015; Schaffer and Thierry 2012).

Interaction is thus also an assortment of collective knowledge and practices that are learned, imitated and ultimately evolve at a much slower pace than the technology or hardware that supports them: who knows today why an icon used to save a file still looks like a floppy disk?

## 2.2 Does Interactivity have Politics?

Winner Langdon’s question *Do artifacts have politics?* (Langdon 1980) also applies to interactivity, whose consequences on society are by no means merely technical.

The first issue to mention, closely linked to the question of the role that should be given to computers in society from the 1960s onwards, was the question of the role that interactivity should play in empowering users. While the command line was aimed at computer scientists – members of the “technical elite” – the new interactivity made possible by graphic interfaces opened up the possibility of easier access for all those who had not mastered programming languages.

It was during the late 1960s and early 1970s that the theme of user-friendliness as applied to simplified interactivity emerged, thus illustrating the potential

liberating role of the computer (Bardini 2000) if it was allowed to leave the laboratory and be usable by everyone.

However, the issue only really came to the fore at the beginning of the 1980s with the advent of micro-computing, which opened up the market for “neophytes” at work and at home.

But this widespread accessibility was a new notion, and interactivity is like Janus: although it does suggest a desire for simplification and openness, it also embraces other values based on a certain elitism and a broader plan to increase humans’ intellectual capacities through the use of machines.

Douglas Engelbart did not have in mind the simplification of the human-computer relationship when he developed the mouse and the chord keyboard; on the contrary, he thought he was helping to “increase” (Engelbart 2012) the user’s intelligence with complex tools full of new potentialities. His chord keyboard, studied by Thierry Bardini (1998), crystallized these expectations: by allowing complex key combinations that could be used at the same time as the mouse, it considerably enhanced the possibilities of interaction with digital content on the screen. At the same time, it made it much more complicated to manipulate and learn how to use the system. Far from the promise of natural interactivity made by Apple and the Palo Alto Research Center, interactivity was seen by some as an enhancement project for certain handpicked users.

The difficulty of the process of interacting with computers (even when graphical interfaces are used) gives rise to several definitions of interactivity as an act of surpassing oneself. The interface must be mastered, in the same way as the operation of any tool (Beaudouin-Lafon 2000). Others see it as a process of reciprocal adaptation by humans and machines to reach an optimal state of collaboration with a view to the task to be carried out (Dourish 2004).

The challenges posed by the widespread use of computers in the professional world during the 1970s and 1980s also led to a new kind of technological humanism driven by developments in ergonomics, an old discipline that was being given new objectives. From analyzing how manual workers’ bodies could withstand repetitive machine operation, ergonomists now began studying the problems facing tertiary-educated workers using computers. By developing new investigative methodologies, they promoted a “humanistic” approach to the field of ergonomics, proposing that machines should adapt to humans and not the other way around. This trend, which is particularly well represented in Europe (Thierry 2013), sees interactivity as a relationship that must be beneficial to workers and maintains that workers’ needs must govern technical development.

So, there is clearly a political dimension to the definition given to interactivity. The elitist vision of “augmentation,” the most perfect expression of which can be found in Engelbart, comes up against the vision of a “soft” interactivity

in which technology must bear the essential part of efforts to develop users' understanding. It is this tendency towards invisibility that we find in Donald Norman's work. For him the best interface is one that is no longer visible, that becomes transparent to the user (Norman 1998).

This approach to interactivity is close to the vision of European ergonomics; it is part of a long tradition of research into work and workers and advocates the continuous development, in collaboration with workers themselves, of an interactivity that is perfectly adapted to them (Falzon 2004).

### 3 An Unattainable Definition in the Age of the Interactive Society

In 1993, the cover of *Newsweek* celebrated the “interactive revolution” that was affecting the way we live, shop, and play. What this consecration of interactivity by the press shows is above all its generalization in a daily environment increasingly colonized by digital technologies.

Mikael Wiberg takes up this topic by seeing in this abundance of interfaces a shift from the information society described in particular by Castells (Castells 2004), focused on information storage and processing of data and transactions, to the interaction society (Wiberg 2005), where contact, networking, and interactivity are the decisive factors in our approach to work and leisure.

It is a shift that also explains why the term is increasingly moving beyond the narrow confines of computer science, where it originated, and being used in an incredible variety of situations that further obscure the establishment of a precise definition: “Interactivity . . . has long been associated with the use of computers that accept user input while a program is running, as opposed to “batch” computers, which process only preloaded data without interruption. Interactive thus came to signify a modern, radically improved technology, usually in relation to an older one. The industrial rhetoric produced concepts such as interactive newspapers, interactive video, interactive television, and even interactive houses” (Aarseth 1997).

#### 3.1 From Affordances to Faceless Interaction

The generalized use of interactive devices creates a need for a generalized definition of the term interactivity in academic research. It is in this context that we see the emergence of a definition of interactivity based on the work of James

Gibson (1977, 1979), a psychologist and ethologist specializing in human and animal perception.

For James Gibson and the many human-machine communication specialists inspired by his work, interactivity refers to the successful use of the affordances created by the designer of a device to accomplish a given task. These affordances do not refer to the autonomous invention of a way of using a device by a user, or to an intrinsic characteristic of the device, but to the series of possibilities for use “staged” by the designer and identified as such by the user. This vision, which banishes the idea that there is a “right way of doing things,” is gradually establishing itself as a framework of thought that makes users actors in their environment (albeit a digital one), within which the clues created by the designer(s) allow them to “inhabit” what might be described as an ecological niche (Winoograd and Flores 1986). Thus, for Mikael Wiberg, interactivity is the sum of the material elements put at the service of an interactive design project (Wiberg 2018).

Interactivity as “experience” is another definitional framework used in the context of the profusion of interactive devices that we have been witnessing since the 1980s. By focusing on the user’s experience to define what interactivity is (McCarthy and Wright 2007), the idea that there is a single way to interact with one’s environment is abandoned and the concept of interactivity is enhanced by taking into account the user’s perspective, giving rise to an approach that has become known as experience design (Laimay 2017).

These definitions make it possible to go beyond the initial definitional framework of interactivity, one that has proven to be too narrow in light of the subsequent proliferation of possibilities for interaction with an increasingly rich digital environment. Today, we study situations of “faceless interaction” in the material sense of the term, such as those that can be experienced with a voice assistant (Janlert and Stolterman 2017).

These framework variations show the extent to which developments affecting devices and their use (from text to symbol, from hardware to voice interfaces, etc.) have fueled debates about the nature of interactivity.

As many authors have observed, these developments are driven by technology. As is often the case in the digital field, the power of manufacturers and the strength of the market give the impression that theory lags behind innovation.

### **3.2 Interactivity as a Broad Framework for Interpreting a Digital World**

It was also during the period from 1970 to 2000 that the term “interactivity” began to be used to refer to various situations of communication or bringing

people together, going far beyond the initial definition of interactivity between humans and computers.

The vagueness that surrounds the term has played a key role in this extension of meaning: “The word interactive operates textually rather than analytically, as it connotes various vague ideas of computer screens, user freedom, and personalized media, while denoting nothing” (Aarseth 1997).

### **3.2.1 Interaction, Freedom of Choice, and Consumerism**

The growth in television offerings in the United States in the 1970s can be seen as a first stage in the generalization of the use of the term “interactivity” (or the qualifier “interactive”) outside the field of information technology.

The possibility of choosing content (Video on Demand, Replays or home shopping (Harrelson 1975) gave rise to a multiplication of discourses promoting the interactivity that television, traditionally considered as a passivity-inducing medium, now made it possible to practise (Galbreath 1996).

As early as 1977, experiments were carried out in the field of cable television in Reading, Rockford and Spartanburg and then with the Qube project in the United States. Qube was an experimental cable television system that played an important role in the history of American interactive television. Launched in Columbus, Ohio, on December 1, 1977 (Greene 1979), the Qube experiment, which was heavily publicized as a revolutionary and “interactive” breakthrough, allowed viewers to discover several concepts that later became essential: pay-per-view programs, specialized cable television networks and so-called “interactive” services such as weather forecasts and teleshopping, the latter becoming ubiquitous in the mid-1980s with the Home Shopping Network (HSN).

However, choosing between several feature films on a pay-TV channel or selecting an item in a teleshopping program is not a matter of interactivity, despite the promotional rhetoric of “interactive television” in the 1970s and 1980s, but an act of content consumption. Unlike browsing a mail-order website, where it is the browsing itself that constitutes the interactive situation, buying on a teleshopping channel, even if the choice of objects is unlimited, is nothing other than an act of consumption that is no different from the way in which we previously chose items from catalogues delivered by post.

### 3.2.2 Communication or Interaction

Media analysis (following the work of James Carey, one of the fathers of cultural studies in the United States, or Stuart Hall's theory of "active reception" (Hall 1980)) also uses the concept of "interactivity" as a way to refer to a wide variety of situations. Authors such as Henry Jenkins, however, warn against this lack of differentiation, maintaining that a distinction must be made between "communication" and "interactivity" because the former is social and the latter is technological: "For Jenkins the distinction is between technological and social protocols – technical versus social code." (Thorburn and Jenkins 2004 cited in Andrejevic 2016).

It is this blurring of boundaries that, in the 1990s, allowed the term "interactivity" to come to designate all communications (often mediated by digital networks) between individuals or organizations (especially businesses) and consumers or customers. In the early 1990s, Blattberg and Deighton defined it as the ability for an organization or an individual to encounter another market player without geographical distance or time being a factor thanks to new communication tools (Blattberg and Deighton 1991).

Advertising and its market, as reconfigured by the arrival of the Web, suggest a similar analysis. Advertisers are more interested in how technology can be used to add value to the communication process (Johnson, Bruner, and Kumar 2006) than in interactivity itself. Measuring the reception of an advertising message within a community of potential online buyers, possibly interviewing them, is not strictly speaking a question of interactivity; instead, it allows old survey methods to be passed off as modern.

Digital networks certainly give the impression that a vast, borderless global market opened up in the 1990s and that interactivity (here meaning "communication" or "advertising") has become the rule in a globalized society where the freedom to choose a product is an interactive act.

### 3.2.3 Interaction and Involvement

As we have just seen, the rapid emergence of the Web and its participatory dimension are leading to a further blurring of the boundaries between technical and social interactivity. In her analysis of "participatory" journalism (Usher 2014), Nikki Usher shows how technology, through the tools used in editorial offices and by readers, is transforming readers into agents of interaction with online content rather than mere passive consumers: "Interactivity is a concept long used in scholarship about user-to-computer interaction, and it helps explain

on a broader level the new capacity of users to control the way content is selected or presented to them, whether text, audio, video, multimedia, or something else” (Usher 2014)

What we see here is a confusion between “interactivity” and “participation.” Andrejevic warns against this dilution of the specificity of the two terms: “Technically, participation simply means “to take part” in” (Andrejevic 2016). The fundamental difference lies in the fact that participation, unlike interactivity, does not imply a series of reciprocal actions to which actors must mutually adapt. People who leave comments on the sites of major online newspapers often get annoyed by this: their comments are rarely taken into account or do not elicit answers from editorial staff. What is more, the idea of articles written in equal parts by journalists and readers has yet to be explored.

### 3.3 The Essence of Interaction: Video Games

Video games, the first examples of which date back to the 1950s in American laboratories (we can cite Alexander Douglas’ OXO game on Edvac in 1952 or Willy Higinbotham’s Tennis for Two at Brookhaven National Laboratories in 1958), can be seen as a remarkably pure embodiment of what interactivity is.

Based entirely on a combination of sensory-motor and intellectual challenges (acting at the right moment in a thoughtful way) (Triclot 2011), the video game is inhabited by what Löwgren and Stolterman define as a “dynamic gestalt”: “One of the first attempts to conceptualize interaction, that of Löwgren and Stolterman (2004), provides the important cornerstone that we can use to think about interactive artifacts not only in terms of a user interface and input/output modalities but also of an interactive system’s ‘dynamic gestalt’.” Löwgren and Stolterman suggest that through interaction an artifact reveals its dynamic gestalt. For instance, a classic arcade-style computer game reveals different levels, monsters, obstacles, and challenges along the way as the user continues to interact with the game (Wiberg 2018). The only goal of video games is to offer interactive situations (even narrative-based video games, in which the player is more often passive, offer an interactive challenge at their heart). Unlike word processing software, for example, the interactivity of a video game is not instrumentalized by an external objective (writing a text, producing a document and its layout in the case of word processing), but finds its *raison d’être* in itself: to play is to interact (Vial 2013).

It is for these reasons that video games are used today as a frame of reference for improving other interfaces, such as those of professional software or online services. This approach is called “gamification”: “at the core of gamification are



interactive game mechanisms adapted to nongame systems” (Marache-Francisco and Brangier 2015).

There are two major trends in software development that are influenced by gaming today. The first is the revival of symbolic codes that refer to video games (like representing an order of magnitude in gold coins, which is an obvious nod to all fans of games about dungeons and treasures). This shows just how much the video game has become a heavyweight in our digital cultures: its symbols are spreading and becoming an unavoidable reference.

The second trend is the implementation in software of a logic similar to that found in video games. Gratuities for tasks carried out by a professional (score, badges, etc.) are part of this logic, as well as the playful scripting of tasks (in serious games for example).

While interactivity initially focused on how to improve working practices using a computer, video games have made interactivity a central element of our leisure time.

## Conclusion

“An interaction, grossly speaking, is a transaction between two entities, typically an exchange of information, but it can also be an exchange of goods or services” (Sharp et al. 2019).

To avoid the vagueness of an overly general definition of interaction and interactivity that would have the merit of applying to all situations but would not allow us to think about the particularities of the concept, we opted for a historical approach to show how the meanings given to the term have changed over time.

The sweet spot of this history is the 1960s. The development of computer science, allowing personal use of computers (with the advent of real time, time-sharing, and human-machine interfaces) paved the way for the emergence of interactivity as a concept and an issue. At that stage, interactivity referred to the user’s involvement in the algorithmic functioning of the computer. Seen by computer scientists from the angle of a “dialogue” or “conversation,” interactivity then became an issue for psychologists and ergonomists as computers began to pass from the hands of staff trained in their use (computer scientists, the “technical elite”) to those of office workers or the general public at home.

It was during the period from the 1970s to the 2000s that the main efforts were made to theorize interactivity. “Dialogue,” human-machine “symbiosis” and “experience” became conceptual frameworks for thinking about interactivity and

the ever-increasing number of interactive devices colonizing our workplaces and homes.

In this chronology that sees the term interactivity becoming richer and more diversified, another trend is perceptible, namely the move from technical interactivity to social interactivity. This shift in meaning is not a novelty in itself: as we have pointed out, interactivity is one of the obvious characteristics of interpersonal communication.

Used in the context of television offerings, advertising, online journalism, and the new status given to readers more generally on the Web, the meaning of the term is becoming blurred and its boundaries are becoming fuzzy. Our era is one of interactivity. Web 2.0, participatory journalism, even online sales, everything has become interactive.

The video game, however, is there to remind us that the original sense of the term interactivity – and it is important not to stray too far from this notion – is the relationship established between the user and the algorithmic logic of a digital device that allows an original creation through successive stages of co-construction.

The importance of this definition, which may seem narrow compared to the many other uses that can be made of the term “interactivity,” is its fecundity when it comes to the consequences of this relationship between user and computer.

It is this experience of interactivity that lies at the heart of the ongoing fascination for screens and their ability to be powerful “attention sensors” (Vial 2013) on which reflections about attention and the attention economy are based (Citton 2014).

It is also the ability to create using interactive tools that underpins the practice of digital arts, from pixel art to mash up (Miller 2007) and the creation of movie sets.

Politically, interactivity is not neutral, as we have pointed out. It reveals a sharing of power between designers, machines and users. At a time when AI is on the rise, it is more important than ever to reflect on this triad: what freedom is given to users of interactive systems? Is a system still “interactive” when artificial intelligence guides the choices made?

Finally, at the broader level of digital anthropology, in the space of a few years interactivity as an experience has probably become one of the most noteworthy features of our relationship with the world. We are surrounded by devices that interact with us. Robotics gives them an anthropomorphic aspect that allows us to identify them, dream about them, and sometimes fear them. But

voice assistants and automatons in supermarkets, airports, and public transport are all “robots” too. Their capacity for interaction changes our relationship with the world.

For all these reasons, interactivity, however difficult it may be to define, is of vital importance for social sciences. It deserves our full attention – if we still have any left over.

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# Artificial Intelligence

## Reframing Thinking Machines Within the History of Media and Communication

**Abstract:** Beginning with a critical exploration of the canonical histories of AI, this chapter stresses how the history of communication and media research may contribute to existing historiographies of AI. Four key aspects of the long-standing relationship between communication, media, and AI are discussed: the cross-history of communication theory (especially cybernetics) and AI, the early development of AI and human-computer interaction, the relevance of media and science fiction narratives in AI research and imaginaries, and the role of games in shaping interaction with AI software as communication between humans and machines. Relying on an historical and critical discussion of these four aspects, we claim that reconsidering the history of AI does not only contribute to the historiography of the field but adds more ground for rethinking and discussing the theoretical foundations of communication and media studies at large.

**Keywords:** artificial intelligence, communication research, media history, historiography of AI, media studies

With the emergence of technologies such as voice assistants, chatbots, and communicative robots, Artificial Intelligence (AI) is today increasingly discussed as a medium of communication. Scholars have recently argued that the development and impact of AI should be reassessed by bringing the question of communication to the center stage as AI raises new questions about the nature of communication itself, considering that communication theory has long since mostly focused on human-human communication (Guzman and Lewis 2019; Gunkel 2020; Hancock, Naaman, and Levy 2020). At the same time, in public forums, widely discussed phenomena, including the ubiquity of voice assistants such as Apple's Siri and Amazon's Alexa or the use of bots on social media to manipulate political campaigns, have attracted attention to the many challenges raised by contemporary AI. The quest for "ethical AI" – one of the most important transdisciplinary intellectual debates in recent years – is thus deeply connected with the prominence of AI in cultural and communication phenomena.

However, few efforts have been made to reframe the relationship between AI and communication as part of the wider history of communication and media. This chapter aims to fill this gap by more firmly contextualizing the history of AI

through the lenses of media and communication history. Feeding into likeminded efforts that consider communication phenomena as central to the development of AI (e.g., Ekbja 2008), we aim to show that historicizing communication and AI is essential to understanding contemporary AI technologies that engage in dialogue and communication with users. As we will show, the close relationship between communication and AI is neither a novelty nor a recent evolution in this field: it accompanied AI from its very inception. As Gunkel (2020, 7) notes, “communication – and not just verbal communication through the manipulation of language but also various forms of nonverbal behaviors – is fundamental to defining and detecting intelligence.”

In order to meet this goal, the chapter first looks at how the historiography of AI has hitherto been written and disseminated, and how a more specific focus on the role of communication and media may contribute to existing approaches. Then, the chapter examines four key aspects of the long-standing liaison between communication and AI: the cross history of communication theory (especially cybernetics) and AI, the early development of AI and human-computer interaction in parallel lines, the role of media narratives in science fiction and popular culture, and the role of games in shaping interaction with AI software as communication between humans and machines. In conclusion, we point to the fact that reconsidering the history of AI does not only contribute to the historiography of AI but adds more ground for rethinking and discussing the theoretical foundations of communication and media studies.

## 1 Beyond Canonical Histories

With the pace of technological change constantly accelerating, the history of AI, whose emergence is usually situated in the 1950s, already seems quite old. There is a universe (or two) between W. Grey Walter’s 1948 *Machina speculatrix* – a purely analogue robot tortoise showing “some degree of self-awareness” (Nilsson 2010, 24) – and today’s digital chatbots. In this context, it is difficult to recast artificial intelligence into the broader history of “intelligent machines” and non-human forms of intelligence, which can be traced back to the origins of the human species. To put it differently, while AI was not invented before the 1950s, it had many precursors, some famous and others forgotten. As Nilsson (2010) rightly claimed, the long history of AI begins with dreams such as self-propelled chairs (as in Homer’s *Iliad*) and ivory statues coming to life (as in Ovid’s *Metamorphoses*). Non-Western literatures and oral traditions also abound with examples of imagined forms of non-human and artificial intelligence and these many objects

and narratives irrigated the western imagination for centuries (Truitt 2020). The historiography of artificial intelligence mentions many of these precursors, including Ramond Lull's thirteenth century *Ars Magna*, Leonardo da Vinci's fifteenth century robot knight, Thomas Hobbes' Leviathan, Blaise Pascal's seventeenth century calculator (the "pascaline"), and Jacques de Vaucanson's eighteenth century sophisticated mechanical duck (Nilsson 2010; Dyson 1997; Russell and Norvig 1995; Riskin 2003).

Such a pantheonization testifies to the prevalence of a teleological and chronological approach to the history of the AI, which is essentially the history of technical progress achieved or envisioned by great minds. Mirroring broader dynamics in the history of computing (Campbell-Kelly 2007), the first scholarly book-length studies about the history of AI were mostly written from the viewpoint of computer scientists directly involved in the development of the field. Pamela McCorduck's pioneering work is mostly based on interviews conducted with "founders" of the field such as Marvin Minsky and Allen Newell, who also made detailed comments on the manuscript. Among others, Daniel Crevier and Nils Nilsson made successful careers in AI before writing influential histories of the field focusing on key American and British scientists. In as early as 1983, Newell (2000, 25) himself highlighted the danger of such a kind of historical work, writing that "the accuracy of the participant observer is at least tinged with bias, if not steeped in it". He then envisioned the development of historical works focusing on "intellectual issues" that are still largely to be written.

When exploring the historiography of AI, it is imperative to keep in mind that a distinctive feature of AI is the centrality of discursive practices. As Ekbia remarks, "what makes AI distinct from other disciplines is that its practitioners 'translate' terms and concepts from one domain into another in a systematic way" (2008, 5). In this respect, the historiography of AI is at least partly a translation process aimed at people outside the field. While AI becomes increasingly integrated in our daily lives and raises many important political and philosophical questions, these narratives have complex strategic implications. Not only do they legitimize specific actors and technologies, set boundaries, inform and fascinate the public, but they are also tracing a path from the past to a future largely defined by these narratives.

According to the canonical narrative, the emergence of AI as a full-fledged field of research coincided with the organization of three meetings in 1955 (Session on Learning Machines, Western Joint Computer Conference, Los Angeles), 1956 (Summer Research Project on Artificial Intelligence, Dartmouth College) and 1958 (Mechanization of Thought Processes, National Physical Laboratory,



UK).<sup>1</sup> AI is mostly associated with the work of American and British “founding fathers” such as John McCarthy, Marvin Minsky, Allen Newell, Herbert A. Simon and Alan Turing. In some respect, this “canonical narrative” is similar to the received “standard” history of media and communication research according to which Wilbur Schramm, Harold Lasswell, Kurt Lewin, Paul Lazarsfeld, and Carl Hovland were the “founding fathers” of this field (Rogers 1994; Schramm 1997). Recently, new approaches to disciplinary history exposed the strategic functions of this form of storytelling which is common to many young disciplines establishing their legitimacy and tracing their boundaries (Pooley 2018). In line with the work of Ekbia and others – who emphasized the communication phenomena that are central to the field of AI – and the development of critical approaches to the history of media and communication, this chapter recasts the development of AI into the history of media and communication. Rather than proposing a History of AI, we more modestly propose media and communication studies as one of the possible standpoints for exploring the history – or better said, histories – of AI.

## 2 From Feedback to Communication Theory: Cybernetics, AI and Communication

The field of communication and media research owes a great debt to cybernetics. While media and communication research certainly predates cybernetics, it is only with cybernetics, defined by Norbert Wiener (1948) as the “science of control or communication in the animal and the machine,” that communication became a central concern across disciplines and that “communication theory” and its key concepts (feedback, noise, entropy, signal, etc.) were defined (Shannon 1949).

One of the key features of AI is “feedback control,” that is the capacity of a machine to use its output as an input in order to “behave” autonomously. These mechanisms are not exactly new. Two thousand years ago, Byzantine lamps were equipped with a float regulator to maintain a constant level of oil, as the floater

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<sup>1</sup> The canonical narrative of AI history has faced numerous critiques. While Dreyfus (1965, 1972) ridiculed the teleological accounts put forward by AI scientists and historians, Collins (1992) debunked the claims and promises of AI and argued that machines can only be “intelligent” in areas where humans behave like machines. Edwards (1997) critically recast the development of the field in the context of the Cold War’s political context and strategic imperatives. There are also local histories of AI in particular labs (Hounshell 1997), specific countries (Chamak 2004) or subfields (de Mantaras and Arcos 2002).

would open or close the flow of oil in the lamp. While feedback mechanisms have been well-known for centuries, it is only with cybernetics that feedback became a well formalized theory of self-regulation and a field of scientific inquiry. The contribution of cyberneticians was not only at the theoretical level as they also invented many “intelligent” machines using feedback control such as Ross W. Ashby’s mobile homeostat, Norbert Wiener’s “Moth,” Claude Shannon’s “The-seus” mouse, and W. Grey Walter’s aforementioned tortoise.<sup>2</sup> These works bridging feedback theory and its applications were of great importance in the early days of AI as they were a starting point for imagining other forms of intelligent machines. The work of Claude Shannon (1950, 1953) – which describes logic machines, game-playing machines, learning machines, Turing machines, and Von Neumann machines – was of particular importance in this regard.

Cyberneticians were also among the first to observe similarities between the brain and engineered devices (Ashby 1952). As Arbib (1972) shows, the central metaphor of AI (the brain as a machine / the machine as a brain) can easily be traced back to cybernetics. With this metaphor, cybernetics proposed a new answer to the old philosophical question on the nature of machines. Do machines have purpose? And intelligence? For centuries, the standard Cartesian answer was to distinguish between mind and matter. In 1943, two of the founding articles of cybernetics formulated a different answer, arguing that purpose can be instilled in machines by feedback (Rosenblueth, Wiener, and Bigelow 1943; McCulloch and Pitts 1943). This answer was widely adopted by AI scientists who had “not provided any qualitatively different argument” (Newell 2000, 30). In the early days of AI, the brain was considered the model for building intelligent machines as the neural activity of the brain was to be imitated or replicated by the electrical pulses of a computer. Nowadays, this homology is still central in various AI branches, including “brain-computer interfaces,” a field of research dedicated to connecting the human brain with intelligent machines. Elon Musk’s Neuralink project is among the most prominent experimentations in “brain-computer interfaces”, which is widely considered as the new frontier of AI (Touzet 2017).

Cybernetics was also central to the debate, now mostly forgotten, which animated the early days of AI: were computers to be analog or digital? In the 1940s, analog computers were representing quantities by means of physical variables (mostly electrical) while digital computers represented quantities by discrete state.

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<sup>2</sup> Ashby’s homeostat (1948) was a set of four interconnected machines exchanging information (feedback) in order to achieve homeostasis (see Pickering 2010). Wiener’s “moth” (1949) was an automated mobile tricycle integrating feedback to guide its movement. Shannon’s The-seus (1950) was a mechanical mouse enabled to learn its path through a labyrinth.

The distinction between analog and digital was widely discussed at each of the ten Macy conferences on cybernetics. If a complete synthesis of these discussions falls beyond the scope of this chapter, cyberneticians were mostly convinced that analog and digital were equally important and that their uses depended on the specific nature of the problem under consideration (Pias 2005). However, history and technology eventually resolved this problem. By the 1970s, the progress in digital signal processing was so important that it became evident that computers were digital, and analog computing only survived as a marginalized subfield of electrical engineering. From then on, computer science (the science of digital computers) and electrical engineering were clearly distinct fields, and enthusiasm for cybernetics, as an interdisciplinary field studying analog and digital systems, fizzled out. As Allan Newell remarks, the development of AI, an important subfield of computer science, was characterized by “the loss of an analytical point of view, in which the contrast between analog and digital computation is taken as a starting point for asking what sort of information-processing the nervous system does [. . .]. This style of analysis belongs to the world of cybernetics and not to that of AI” (Newell 2000, 34).

The divorce between cybernetics and AI was not abrupt and required many years of “boundary work” by AI researchers (Kline 2015). During the 1956 Dartmouth conference on artificial intelligence, which is highly regarded as a founding moment in AI history, this distinction between AI and cybernetics was not at all clear. Most of the 20 researchers participating in the conference had deep ties with cybernetics. While Claude Shannon’s work is obviously a central pillar of cybernetics, and the names of Julian Bigelow, William Ross Ashby, Herbert Simon, and Warren S. McCulloch are closely associated with cybernetics, other professional, personal or intellectual ties are little-known. As a graduate student at MIT, Oliver Selfridge proofread Wiener’s *Cybernetics*. Marvin Minsky also studied at MIT, where he discovered the work of McCulloch with great interest, and he later worked with Shannon at Bell Labs simultaneously with McCarthy (Kline 2015).

According to John McCarthy, the main organizer of the Dartmouth conference, the label “artificial intelligence” was then consciously selected as a means “to escape the association with cybernetics” and “to avoid having either Wiener as a guru or having to argue with him” (McCarthy cited in Nilsson 2010, 78). Another reason for using the then-new term was to distinguish the matter of the conference from a narrower focus on automata, which was that of the book McCarthy co-edited the same year with Shannon, *Automata Studies*, a book that “still seemed part of an integrated subject that might be called cybernetics” (Arbib 1987, 6).

Another possible reason to escape the association with cybernetics stemmed from the strong association between cyberneticians and the Cold War’s military-industrial complex (Edwards 1997). Likewise, AI was and still is attracting billions

for defense and military related projects (Allen and Chan 2017), although public discourse, for obvious reasons, mostly emphasizes the conviviality of virtual assistants, the promises of autonomous vehicles and the exploits of chess software. The coming to life of communication research, in the early 1950s, followed a similar pattern by abandoning earlier labels such as “propaganda” and “psychological warfare” (Simpson 1994).

This cross-history of cybernetics, communication research and AI is quite interesting from the standpoint of media and communication theory and history. The field of AI was built on the refusal of a specific discussion (about the merit of analog versus digital feedback) with Wiener and other pioneers of cybernetics. If this discussion did not occur during the Dartmouth conference, cybernetics and cyberneticians were nevertheless “present.” As McCarthy himself remarked, “If certain scientists were not present at the conference, their spirit was represented by their work, and sometimes by their colleagues and students. I think here of Norbert Wiener and his work on cybernetics, Warren McCulloch and Walter Pitts [ . . . ] John von Neumann, and to a lesser extent, Alan Turing” (McCarthy cited in McCorduck 1979, 113). This reference to the “spirits” of cyberneticians is maybe the best way to summarize the complicated relationship between cybernetics and AI, a field so haunted by cybernetics that it often prefers to ignore its old demons.

### **3 Human-computer Interaction and AI: The Turing Test as a “Communication Game”**

Considering the centrality of communication in the theoretical frameworks that underpinned the emergence of AI, from cybernetics to information theory, it is surprising how little space is given to the problem of communication in the most authoritative histories of the field (e.g. Crevier 1993; McCorduck 1979). This was probably a consequence of the disciplinary distinction that emerged in the 1970s and 1980s but was also applied retrospectively to the early development of AI: the separation between AI and human-computer interaction (HCI). In most discussions among experts in the field as well as in the general public, AI was mainly conceived as having to do with the definition of intelligence. The fact that intelligence is strongly related to communication – as cybernetics but also much of the psychological literature (Boden 2006; Bateson 2000) suggest – was not usually given sufficient attention. The problem of communication between humans and machines was mainly restricted to a separate discipline

within computer science, HCI, which aimed at improving the processes of interaction and communication between users and computers (Grudin 2006).

Nevertheless, the extent to which this separation is arbitrary is evident not only in the contemporary diffusion of communicative AI systems, from voice assistants to companion robots and chatbots, but also in the early history of AI. Let us look for instance at the Turing Test, proposed by British polymath Alan Turing (1950). In his thought experiment, Turing imagined that a computer would be programmed to engage in conversation with a human user through written communication; the machine would have passed the Turing Test if able to trick the user into believing it was not a computer program but a “real” human. While the Turing Test has been mainly discussed as a problem regarding the definition of intelligence (Shieber 2004), one may more accurately describe it as a problem of communication (Gunkel 2018). In fact, the test does not measure the machine’s cognitive ability per se, but rather the perception that human users have of it. In this sense, the Turing Test for the first time made clear that AI is a matter of communication.

In designing the test, Turing felt the need to include actual details about how humans and machines would engage in communication. In 1950, when Turing published his paper, computers were mostly calculating tools and interactions between human users and computers were minimal (Ceruzzi 2003); he therefore imagined a system of human-machine communication that did not exist at the time. To ensure the validity of the Turing Test, the interrogator needed to communicate with both human and computer players without receiving any hints about their identity other than the contents of their messages. Communications between humans and computers in the test were thus meant to be anonymous and disembodied (Enns 2019). In the absence of video displays and even input and output devices such as the electronic keyboard, Turing imagined that the answers to the judge’s inputs “should be written, or better so, typewritten,” the ideal arrangement being “to have a teleprinter communicating between the two rooms” (Turing 1950, 434). Turing’s solution shows an acute sense of the role of technical media in communication, considering how telegraphic transmission and the typewriter mechanized the written word, making it independent from its author (Gitelman 1999; Kittler 1999). The Turing Test’s model of technological mediation allowed computers and human actors to participate in the experiment as pure content, or to use a term familiar to communication theory, as pure information. In this sense, the Turing Test was not so much, or not only, an “Imitation Game,” as Turing initially labelled it, but also and perhaps especially a “Communication Game” (Natale 2021).

In spite of all the arbitrary distinctions between AI and the areas of computer sciences that engage directly with the problem of communication, such as Human-

Computer Interaction and Computer-Mediated Communication, Turing’s intuition that AI was also a matter of communication resonates in the subsequent evolution of the field. In laboratories and research centers across the US, Europe, Russia, and Japan, the goal to create “intelligent” machines went together with the objective of implementing interactive systems ensuring wider and more functional engagement with computers. This was openly acknowledged by computer scientists of the time, who considered human-machine systems within the remit of AI. MIT’s AI pioneer Marvin Minsky, for instance, apologized in a 1961 paper for the fact that:

we have discussed here only work concerned with more or less self-contained problem solving programs. But as this is written, we are at last beginning to see vigorous activity in the direction of constructing usable time-sharing or multiprogramming computing systems. With these systems, it will at last become economical to match human beings in real time with really large machines. (. . .) In the years to come, we expect that these man-machine systems will share, and perhaps for a time be dominant, in our advance toward the development of ‘artificial intelligence’.

(Minsky 1961, 28)

Notwithstanding Minsky’s prediction, it is only recently that the centrality of communication in AI has become fully evident to computer scientists as well as to communication and media scholars (Guzman and Lewis 2019; Gunkel 2020). Yet, the history of AI shows that the division between AI and human-computer interaction is the fruit of a retrospective partition rather than an organizing principle useful to understanding the evolution of the field. As practical AI systems were developed and implemented, researchers and developers were forced to face the reality that the social and cultural dynamics foregrounding human communication also inform the outcomes of AI (Suchman 2007). The commitment to the dream of creating thinking machines could never be fully separated from the question of what happens when “intelligent” systems enter into communication with human users (Natale 2021).

Not only practical developments in the field but also in the popular imagination conceived AI as indivisible from the problem of developing socially meaningful communications between machines and humans. Science fiction is often dismissed as detrimental to a proper understanding of AI, especially because many fictional explorations of AI give excessive emphasis to the problem of consciousness, which is irrelevant to the most practical achievements of AI. Yet, as Luke Goode (2018) recently argued, popular culture and the circulation of “evocative stories” have been instrumental to facilitating public engagement with many important questions related to a complex, technical subject such as AI. In fact, as the next section conveys, popular media’s engagement with AI has often provided a powerful invitation to return over and over to the spirit of the Turing Test – intended first and foremost as a “Communication Game.”

## 4 Narratives, Science Fiction, and the Media Imaginaries of AI

As noted above, thinkers and scientists have been often fascinated with the imaginary of “thinking machines.” As scholars from media and technology studies, but also from film and literary studies, have aptly shown, science and fiction have maintained a mutual and complex relationship in this regard, which precedes even the formulation of the Turing Test (see Cave et al. 2020). Despite the clear difference between the scientific method and the realms of fiction and imaginary, the history of AI cannot be separated from the history of media and communication research also because AI has always been narrated, imagined, and presented by and through media narratives, and especially in science fiction (SF) narratives. Importantly, the same emphasis on the role of communication that characterizes AI history is also a crucial feature of the fictional imaginaries through which AI was represented and constructed in the realm of popular culture.

Think, for instance, of the persistence in the imaginary of old characters and machines like the *Mechanical Turk* of Wolfgang von Kempelen, the fake chess automaton created in the eighteenth century whose name has been used by Amazon to market its famous crowdsourcing platform. Or the persistence of a SF classic in the social imaginary: *HAL 9000*, the cruel AI imagined by Arthur C. Clarke and made famous by Stanley Kubrick in his masterpiece *2001 A Space Odyssey* (1968) – whose creation benefited from the insights of AI pioneer Marvin Minsky, who acted as advisor for the film (Broussard 2018). Almost 30 years after the release of the movie, the red eye of *HAL 9000* was used to advertise the famous human-machine challenge between the chess world champion Garry Kasparov and IBM’s *Deep Blue*.

Like the flashing eyes of Fritz Lang’s robot in *Metropolis* (1927) or the insensitive eyes of the androids in *Blade Runner* (Scott 1982), *HAL 9000*’s red eye symbolically captures one of the most relevant debates on AI: the potentials but also the risks evoked by the rise of a future intelligent, or even super-intelligent, artificial being (Bostrom 2012). Such concerns, extensively addressed in SF literature, recently led to the creation of research centers such as Cambridge University’s Center for the Study of Existential Risk founded by Nick Bostrom and Stuart Russell, among others, in order to prevent “unexpected catastrophic consequences” due to the potential birth of a super AI.

Within SF, critical and anticipatory reflections on the emergence of intelligent machines date back at least to the mid-nineteenth century, when the novelist Simon Butler wrote a famous piece entitled *Darwin among the Machines*. Merging one of the most famous theories in the history of science, the Darwinist



theory, with speculative thinking, Butler warned the readers about a future in which machines would dominate humankind:

The upshot is simply a question of time, but that the time will come when the machines will hold the real supremacy over the world and its inhabitants is what no person of a truly philosophic mind can for a moment question. (Butler 1863, 185)

Notwithstanding the fear of dystopian futures, if we look at the best known and most persisting representations of AI in SF, the imaginary embedded in such narratives diverges sharply from the actual developments of intelligent systems – paying more attention for instance to the problem of consciousness or to general or strong AI, which has been until now almost irrelevant to the practical development of AI. However, the imaginary of AI entailed in SF has been quite perceptive in focusing on, besides the risks entailed in a strong future AI, the construction of new forms of sociability between humans and machines, and especially on the role of communication in building such relations. Turing’s intuition that AI was a matter of communication, in fact, also resonates in SF literature and especially in SF cinema. A long series of variations on the Turing Test theme permeates SF movies contributing to the landscape of the possible ways in which intelligence, but also forms of consciousness and vitality, might be recognized in an intelligent artefact. For instance, it is when robot Number 5 laughs at a stupid joke that the scientist in the movie *Short Circuit* (Badham 1986) realizes his invention is alive. In *Her*, one of the most successful recent movies on AI directed by Spike Jonze (2013), the construction of a human-AI relationship is completely based on oral communication and storytelling. Samantha, the intelligent assistant who eventually becomes the partner of the protagonist, is pure communication and her identity evolves throughout the constant dialogue with the human and by means of a self-narration of her mutual experience with her material partner.

As stressed before, the fields of HCI, natural language processing and human-machine interaction have been at the heart of the research on intelligent artefacts. Today, although the dream of the man-computer symbiosis formulated by Joseph Licklider (1960) is far from being realized, recent studies show how fields like HCI, especially in the last three decades, tend to refer to SF to think, predict, and imagine the future of AI. For instance, in their compelling analysis of a dataset based on proceedings and scientific publications, Jordan et al. (2018) show how the growing use of SF references in scientific papers indicates that SF stories, movies or shows are actually inspiring novel Human-Computer Interaction research.

In addition to their contribution to scientific thinking, popular narratives on AI have deeply shaped the way in which AI is promoted and presented to the public. Once a new AI prototype is ready or publicly testable, its shape, language,



modes of interactions and even its discourses are usually inspired by sci-fi literature, cinema, and popular stories. Consider, for instance, the vocal assistants that recently crossed the threshold of individuals. Alexa, Siri and Google Home tend to replicate in their format the “characters” of movies and series like *Her* or *Black Mirror*, starting from the genderization of the (mostly) female voices programmed in their software. All the examples from SF literature and movies listed in this paragraph show how fictional narratives have deeply influenced the development of real AI, the way in which AI products are designed and promoted, and finally how scholarship has been addressing and thinking the topic in contemporary research. Hence, the history of AI cannot be separated from the history of the imaginaries of AI and from the way in which the mass media have historically built and spread a common ground made of literary *topos*, figures and ethical dilemmas that shaped the scientific and technological debate around AI as related to the problem of communication.

## 5 Not Just for Play: Games as Testbeds for Communication between Humans and Machines

Besides SF, public events and spectacles have also played key roles in the history of AI. In particular, gaming has been one of the most powerful means to communicate and familiarize AI with the general public. It is not by chance that the Turing Test is also called the Imitation Game. As the long tradition in the social theory of games has aptly shown, play is one of the most distinctive features of humankind. Furthermore, play and gaming can be seen as particular forms of communication between different agents, or, following Gregory Bateson’s definition, they provide humans and living beings with a specific form of meta-communication (2000).

From the *Mechanical Turk* to more recent chess and GO players like *Deep Blue* and *AlphaGo*, from the conversation chatbot *Eliza* to *Watson* – the program capable of beating human contestants on the TV quiz *Jeopardy!* – to the humanoid robot *Sophia* that recently joked with Jimmy Fallon on his famous talk show, intelligent prototypes, programs, and machines have often been created with the goal to imitate, or in some cases surpass, human features in a gameplay situation. This is probably one of the most underestimated aspects of the relationship between AI, the media and communication research: the role of playfulness and forms of meta-communication not so much in the interaction between human and machines *per se*, as in the promotional and narrative strategies adopted by the AI industry and scientists to integrate and make AI products familiar in

everyday life. Games and playful activities have been essential to the development of digital media at large, and AI constitutes no exception. But games, even more than scientific experiments, have historically played the function of the social and psychological means to test the acceptance, integration, and familiarization of machines in human life. It is not by chance that leading companies like IBM and Google DeepMind used board games to present their most advanced AIs. Over time, public demonstrations and media narratives on intelligent artificial players have contributed to reach a twofold goal: on the one hand, AI companies have shown the potential and the marvelous capabilities of their artefacts for exploiting the potential of the digital sublime; on the other, these actors profited from a neutral and non-harmful environment to show how humans and machines can weave a mutual, positive, and co-productive relationship (Bory 2019). The history of human-machine communication through gaming is thus an essential part of the history of communication research. It is a history made up both of communication and metacommunication in which humans act “as if” machines are their peers, and in which machines act “as if” they are really experiencing the emotions and playfulness of the game they are playing; the beauty entailed in a genius move on the chessboard, or the funny sense of a joke. The history of AI is thus also a history of how intelligent artefacts communicate and induce emotional reactions and feelings through interaction.

Turing himself intuited this not only when he proposed the “Imitation Game” (as the Turing Test was originally called) but even earlier, when he suggested chess as a potential testbed for AI. In a lecture to the London Mathematical Society in 1947, he contended that “the machine must be allowed to have contact with human beings in order that it may adapt itself to their standards. The game of chess may perhaps be rather suitable for this purpose, as the moves of the machine’s opponent will automatically provide this contact” (Turing 2004, 394). Turing’s words indicate more than an interest in demonstrating the potential of AI. The development of “machine intelligence” required pathways for the computer to enter into contact with human beings and hence adapt to them, and games were the first means envisioned by Turing to create this contact. Years later, in 1953, beside the famous question “Can a machine think?” it is precisely in a paper on “digital computers applied to games” that Turing further asked: “could one make a machine which would have feelings like you and I do?” (Turing 1953, 1). Today, like at the outset of the AI era, games were envisioned as imaginative spaces to explore the implications of the encounters between AI and communication.

## Conclusion: Recalibrating AI as Part of Media and Communication History

The term intelligence comes from the Latin *intelligere* which, in turn, may come from the two terms *inter* (between) and *ligere* (to read, but also to understand). According to this definition, intelligence is the ability to tie things up, to create connections between different objects or elements. Indeed, all media can be seen as a human attempt to extend and exteriorize human intelligence so as to meaningfully interconnect different elements, including minds, bodies, natural and technical objects. Notably, through media and communication, humans have constantly interwoven and shared their thoughts and feelings with those of their peers and within their social and material environment. All media, from handwriting to the typesetter, from flying chairs to chess automata, from the first motion picture to voice assistants, can thus be seen as intelligent “artifices”, thus as specific forms of AI before AI.

In this chapter, the close relationship between AI and communication has been explored by considering four key trajectories in AI history. First, we looked into the cross-history of communication theory (especially cybernetics) and AI to unveil some of the crucial crossovers – at the conceptual, personal and institutional levels – and the distinctions between cybernetics and AI. The development of cybernetics in the late 1940s and early 1950s paralleled that of another “new” field of study labelled “communication,” a then-new buzzword whose success was linked to the post-war fascination with cybernetics. Second, we focused on the early histories of AI and human-computer interaction in parallel lines, looking at how artificial agents and humans have interacted over time, especially but not exclusively by means of language. This entailed demonstrating that work to develop “intelligent” systems has been done since the origins of the AI field in close relationship with work aimed at developing human-machine communication and interactive systems. Third, we highlighted how media, such as cinema and sci-fi literature, have contributed to the socio-cultural construction of the imaginary of AI. The history of AI is also characterized by a series of well-known literary fictions and mass media events. Over time, such narratives have also influenced the development and the scientific research on AI, shaping how companies and research institutions conceive, promote and present their products and innovation in this sector. Finally, we stressed how games and playful interactions have been essential to create and publicly test new forms of communication between humans and AI. This particular kind of interaction is essential to reading the history of AI also as the history of the different forms of metacommunication between humans and artificial agents by means of play and games.

Looking at different strands within the history of AI, this chapter has shown the potential of a historical approach to AI that places media and communication at the center stage. Such an approach not only promises to improve our understanding of AI's past, present, and future. It also improves the capacity of communication and media history, and of communication and media studies as a whole, to make sense of ongoing phenomena in digital and non-digital spaces.

As Guzman and Lewis (2019) recently argued, people's engagements with AI do not neatly fit within paradigms of communication theory that have mainly focused on human-human communication. The very idea of thinking machines also challenges existing conceptualizations of media as "what is in between," i.e. the channel of communication. From the feedback mechanisms of cybernetics that instilled purpose into the machine's action to the conversations imagined by Turing in 1950 and then conducted by chatbots and other technologies of communicative AI, from the fictional imagination of communicating with robots and computers to the role of games in facilitating new forms of communicative engagement with software and AI, the history of AI stimulates us to extend the concept of medium as a channel and at the same time as a participant in the communication. Integrating historical research on AI into the remit of communication and media history, in this sense, does not just help to reconsider the history of AI from a different and relevant point of view, nor does it only respond to the need of giving an account of communication technologies that are becoming more significant and widespread, such as AI voice assistants or chatbots. Perhaps even more crucially, it also provides a powerful reminder of the need to continually rethink and discuss the key concepts that underpin the study of communication.

From a historical perspective, moreover, the focus on communication works as an invitation to rewrite not only the history of AI but also its prehistory. While historians of AI have often pointed to the history of automata and to attempts to simulate life and intelligence before the computer age (Riskin 2003; Sussman 1999), reframing AI as a medium of communication means that the broader history of communication is equally relevant and important to understanding AI. In his landmark history of the concept of communication from the early Roman empire to the present, John Durham Peters (1999) shows that this can be examined as the history of people's aspiration for communication contact with others and their fears over the loss of such contact. The contemporary obsession with machines that think – or perhaps better said, that are thought to think – can be seen as part of this same history. Historicizing media and communication concepts, in this sense, challenges the idea that AI is unprecedented. The problem of how humans perceive and enter in communicative interaction with AI technologies needs to be contextualized within the wider histories of mediated communication that do

not reside exclusively in the digital age. If we really want to understand what happens when we talk with the virtual assistant on our phone or we comment on something posted by a bot on Twitter, we may need to consider these exchanges as embedded within the long history of media and communication.

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## **Agency and Politics**



Francesca Musiani and Valérie Schafer

# Global Governance

## A Short History of Debates Born with the Telegraph and Popularized by the Internet

**Abstract:** Scholars have successfully attempted to historicize global governance, comparing the Internet to telephone and broadcasting, from a primarily legal standpoint. Among these scholars, historians have also studied particular issues that are relevant to Internet governance, e.g. openness and net neutrality. History is relevant for the concept of global governance for at least two reasons: to historicize the concept in itself through the Internet/digital age (the evolution and enrichment of the notion in the past 30 years, with key turning points such as the creation of ICANN and WSIS) and to flesh out continuities through time with other “global media” or “global issues,” such as international standardization, multi-stakeholderism, and communication rights. This chapter addresses these issues at three levels: periodization of the key concept of “global governance” since the 90s; evolution of the state of the art/research on global (Internet) governance; analysis of global governance in the broader field of media and communication.

**Keywords:** governance, globalization, regulation, media policy, multi-stakeholderism

The World Summit on the Information Society (WSIS), which took place between 2003 and 2005, stabilized a definition of Internet governance for the first time. Widely circulated and re-elaborated in later times, this notion is far from static. It has evolved over the course of 15 years, be it in practical uses or from a more theoretical standpoint. It has become more complex as the Internet also became more complex. It should keep on evolving, prompted by its stakeholders and by different digital arenas in which States, civil society, and the private sector are led to meet around issues such as Internet policy, media regulation, net neutrality, and data privacy.

This chapter focuses on approaches to the past and suggests that the roots of the governance concept as applied to communication technologies are not limited to the start of the WSIS Internet debates. They can be retraced earlier on by mobilizing media history, even if the word “governance” is not explicitly used there. We think especially of the internationalization and globalization issues,

and of the multi-stakeholder discussions that have, for a long time, paralleled the development of information and communication technologies (ICTs) – from the telegraph and submarine cables to radio waves.

Scholars have previously – and successfully – attempted to historicize global governance, like Tim Wu in the *Master Switch: The Rise and Fall of Information Empires* (Wu 2010) or, earlier on, Gary Hamilton in his article “Trademarks on the Internet” (Hamilton 1995), comparing the Internet to telephone and broadcasting, from a primarily legal standpoint. Some historians have also studied particular issues that are relevant to Internet governance, e.g., Andrew Russell (2014) who has examined how openness has become a foundational value for the networks of the twenty-first century, in particular during standardization processes, or Paul Edwards who has analyzed the encounter between digital age and climate change (Edwards 2010). Pioneer work by the journalist Tom Standage in *The Victorian Internet: The Remarkable Story of the Telegraph and the Nineteenth Century’s On-Line Pioneers* (Standage 1998) should also be mentioned.

These historical perspectives allow us to avoid an Internet-centric vision of the debates that permeate the world of communication technologies and enable us to fully position these exchanges within a heritage that is legal, economic, institutional at once, as well as practice-based and embedded in society. History also allows to nuance the predominant vision of “digital globalization” as a radical break or a revolution. Thus, this chapter invites the reader to a two-step course, aiming to historicize the “global governance” concept in itself through the Internet/digital age, and to flesh out continuities and turning points with other “global media” (e.g., telegraph, telephone, radio) or “global issues” within media before the Internet.

## **1 Global Governance: An Evolving Concept, Revealed and Transformed by the Internet and Co-shaped by Research**

The first part of this chapter seeks to historicize and better understand the concept of global governance as it has been applied to Internet governance, so as to demonstrate its diversification and various trajectories, theoretical and practical at once.

It should first be underlined that the notion of governance finds its origins outside media studies, as Manuel Puppis reminds us: “Governance, like regulation theory, is not an invention of communication science. The origins of governance

can be traced to different disciplines” (Puppis 2010, 135). In the field of economics, Puppis points out, governance was used in new institutional economics to describe institutional rules that help to reduce transaction costs. As he also underlines, roots of governance can be found in political science, especially in the field of international relations. Finally, he emphasizes that governance was heavily used in politics as well, as since the 1980s, the World Bank disseminated the notion of “good governance” in the developing countries (Puppis 2010, 136). To these preliminary comments, we add that the notion of globalization also preceded the Internet, and that scholars traced its origin at the end of the nineteenth century, and sometimes even before.<sup>1</sup> However, Internet governance made global governance a buzzword in the early 2000s, thanks to its definition at the WSIS and the ability of stakeholders as well as researchers to enrich this notion.

The birth of “Internet governance” took place in a context broader than the Internet itself. Innovation and technology governance became an increasingly important and articulate issue during the last decades of the twentieth century. Problems such as environmental management, the availability of energy sources, nanotechnologies, arms control, and food security emerged as full-fledged objects of interest for transnational politics. They are now governed by different conflict resolution instruments within the framework of international law, such as treaties, protocols and conventions. Examples of these arrangements are the Kyoto Protocol (signed 1997) and then the Paris Agreement (signed 2016) on climate change, the Comprehensive Nuclear-Test-Ban Treaty (signed 1996), and the International Treaty on Plant Genetic Resources for Food and Agriculture (signed 2001). Nation states have played a central role in the negotiation, writing, and implementation of these legal systems. However, the challenges of scientific and technical governance most often move beyond national borders to cross multiple spheres of sovereign action and different jurisdictions, making it necessary to elaborate new “hybrid forums” able to reunite experts and civil society to discuss and co-construct decisions regarding controversial issues that are both social and technical, in a new form of “technical democracy” (Callon, Lascoumes, and Barthe 2001). Analysts from a variety of social science disciplines have looked at how scientific and technical governance regimes take effect in light of the internationalization of the issues, the complexity of the arrangements, the changing boundaries of governmentality, the globalization of actors. This heterogeneous body of work on “global governance” addresses

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<sup>1</sup> For a short overview of globalization, see Ghorra-Gobin (2017, n.p.): “Anglophone economists rather situate the ‘first’ modern globalization between 1880 and 1914, due to numerous political leaders adhering to Adam Smith’s free-exchange thesis” (our translation).

how these regimes redraw the borders of nation states, and, more generally, how they reconfigure the meaning and the implementation of democracy (Jasanoff 2004; Hagendjik and Irwin 2006) thanks to the intervention of new players, whose scope is defined around their involvement in the governance of complex technical issues. It is mostly in this broader context – which expands beyond the frame of media and communication and ties it to larger notions, such as technical regimes and technical democracy – that debates around Internet governance have taken shape in more recent years.

## **1.1 Attempting an Internet Governance Periodization since the 1990s**

As Milton Mueller and Farzaneh Badiei argue, Internet governance has emerged simultaneously “as a label, a field of research and academic study, and a real-world arena where stakeholders and interest groups clash and cooperate” (Mueller and Badiei 2020). While it has been argued that embryos of at least one of these three aspects were already present in the discussions over early internet-working principles, or in the convergence of computing and ICTs, it is arguably only in the early-to-mid nineties that it became apparent that the Internet posed unique governance problems, both because of its specific underlying protocols and its own standardizing organizations and institutions, which grew beyond and outside those of global telecommunications governance.

Interestingly, in parallel to the chronology of major Internet governance steps and debates, the state of the art in the academic field demonstrates how seminal research work has contributed to co-shape the concept of global governance of the Internet. From Milton Mueller, Lawrence Lessig and Tim Wu’s pioneering approaches to Laura DeNardis’ *The Internet in Everything* (DeNardis 2020), the notion of Internet governance has evolved in practice also due to the explicit and analytical questions scholars have been asking through the years about its perimeter, nature, and actors. There are of course differences in the ways in which periodizations and evolutions of Internet governance as a concept have been established (see e.g. Bradshaw et al. 2015; Mueller and Badiei 2020); however, a few key periods and moments appear to be consensual.

### **1.1.1 Early Debates on “Internet Exceptionalism” (1996 to Late 1990s)**

The first of these revolves around the debates on the understanding of the Internet as being a space of its own, notably from the standpoint of law and jurisdictions.

While the first document that comes to mind as a symbol of this phase is perhaps the 1996 “Declaration of Independence of Cyberspace” by John Perry Barlow, from a political and academic standpoint, this phase was marked by discussions about whether the Internet should develop its specific regulation system, more decentralized and multi-centered, and not primarily based on state-centered control (Johnson and Post 1997), as well as by debates on “cyberspace sovereignty” (Wu 1997). These debates informed the analysis – which was conducted, overwhelmingly, by legal scholars at the time – of the nascent commercial Internet, with issues such as trademark law, intellectual property law, and online dispute resolution becoming central.

### **1.1.2 ICANN, a Controversial Newcomer (1998 to mid-2000s)**

In the late 1990s, in what was likely a new, second phase in the periodization of Internet governance, discussions on Internet exceptionalism became “incarnated” in a more concrete debate on actually constructing a new Internet governance institution, or an ensemble of them. Indeed, if there was a general consensus that existing governments and/or intergovernmental organizations were inadequate to take on the Internet as their policy subject, the question became how to build a novel framework or structure for Internet governance, and who should control or coordinate it. These issues became particularly salient with the creation of the Internet Corporation for Assigned Names and Numbers in 1998 (ICANN; Mueller 2002). From a political standpoint, ICANN, while novel for its ability to globally coordinate actors around problems posed by critical Internet resources, was controversial due to the United States’ role in its birth and prerogatives. As a private, yet global, non-profit corporation, ICANN was empowered by the US to issue private contracts as a way to solve public policy issues, and to have sole authority over the domain name root and Internet address spaces, while at the same time attempting novel “democratic experiments” such as global elections for its Board. Scholars have in turn highlighted ICANN as the epitome of new networked governance for the digital age (Levinson 2002), examined how nation states and their governments have played a role in the formation and development of ICANN, especially its ambiguous Governmental Advisory Committee (GAC; Weinberg 2011) and critiqued the legality – and most strongly, the legitimacy – of the governance model proposed by ICANN (Froomkin 2000). This phase was also marked by landmark judicial decisions, such as the Yahoo! vs France case, where a French court ordered Internet giant Yahoo! to block French web users from a number of its auction sites selling Nazi memorabilia (Goldsmith and Wu 2003).



### 1.1.3 The WSIS, a Global Discussion Space on Internet Governance (2003 to Early 2010s)

The WSIS, a United Nations summit, held in two phases in 2003 (Geneva) and 2005 (Tunis), is most probably the process epitomizing the third phase in the periodization of Internet governance – a process around which Internet governance in practice, and the structuration of Internet governance as a field of study, converged. Heavy debates on the definition of Internet governance took place during the entire WSIS process, with a variety of positions, ranging from the extremes of critical Internet resources management by ICANN on one hand to the regulation of the whole ICT spectrum on the other. A central contribution in the definitional efforts was provided by the WSIS-mandated Working Group on Internet Governance (WGIG) in 2004, which spoke of “shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet,”<sup>2</sup> and noted that IG was a so-called “multi-stakeholder” issue, with relevant actors being not only nation states, but also businesses and civil society in its different facets (technical community, civil liberties associations and citizens in their individual capacity). Multi-stakeholderism as a novel governance arrangement soon became a prime subject of research on Internet governance for scholars in a variety of fields (a good review is to be found in Raymond and DeNardis 2015), with particular attention paid to the ability of civil society to meaningfully participate in IG processes (Hintz 2005). Among disappointments (voiced in particular by those actors who wished WSIS to overcome the United States’ unilateral and predominant role in ICANN, something it failed to achieve), WSIS originated a global discussion space on Internet governance which carries on to this day, not without criticism of its own: the Internet Governance Forum (IGF; see Malcolm 2008 for an analysis of its early days). Interestingly, the main scholarly association on Internet governance issues, the Global Internet Governance Academic Network (GigaNet), was born out of the Internet Governance Forum and still holds its annual conference on the day preceding the official start of the IGF.

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<sup>2</sup> Report of the Working Group on Internet Governance, Château de Bossey, June 2005. Available at <http://www.wgig.org/docs/WGIGREPORT.pdf>.

### 1.1.4 A “Post-Snowden Internet Policy.” Rethinking Perimeters and Emerging Issues (Mid-2010s to Present Day)

Discussions about the definition of Internet governance keep on being a core issue in itself. Indeed, the last and ongoing phase of a hypothetical periodization of Internet governance is marked by a discussion about its perimeter, and the inclusion of a number of issues as they emerged and took center stage in the global political arena. For several scholars including Laura DeNardis (2014), Internet governance per se should be distinguished and treated separately from user practices, uses and content creation and distribution on the Internet, while other scholars, in particular coming from a STS (Science and Technology Studies) tradition, argue that Internet governance could meaningfully include the agency of technology designers, policymakers, and users as those interact, in a distributed fashion, with technologies, rules, and regulations, leading to unintended consequences with systemic and pragmatic effects vis-à-vis the (re)distribution of power on the Internet (Epstein 2015; Musiani 2015). Placing emphasis on the distributed and diffused nature of power on the network of networks, scholars have also argued that this configuration may lead to a lack of clarity on where actual authority to govern resides, in short, “where is the governance in Internet governance” (van Eeten and Mueller 2013; see also Hofmann, Katzenbach and Gollatz 2016).

Regardless of where scholars may stand in these debates, they reflect a crucial evolution in Internet governance as a field of practice: while a number of political arenas and institutions such as WSIS or Internet Governance Forum were closely scrutinized by academics, several issues that de facto pertain to Internet governance increasingly developed “in the largely non-institutionalized space formed by transnational Internet services and commerce” (Mueller and Badieli 2020). Such issues include network neutrality; Internet content regulation (filtering, blocking, deep packet inspection techniques); censorship and circumvention techniques; private sector-led intermediation and regulation of both content and infrastructure; cybersecurity, information security and the related markets; online-intermediary liability in situations such as defamation, copyright violations and disputes over e-commerce practices.

The pre-eminent Internet governance-related issue of the last decade is perhaps – catalyzed by the Edward Snowden revelations, but having its roots in long-standing debates about personal data, identity on the Internet and cryptology – that of online surveillance and privacy. By exposing internal documents of the U.S. National Security Agency that revealed the extent of its pervasive global surveillance on the network of networks, the former NSA contractor opened the era of a “post-Snowden Internet policy” (Pohle and Van Audenhove 2017),

where the world took full measure of the extent of the United States' de facto global authority "by infrastructure" on the Internet and became aware of the depth of the US government's "dangerous liaisons" with private intermediaries (Musiani 2013). This opened up a wide crisis of legitimacy for the US to keep on acting as the foremost actor in IG. Arguably – even if the process was, slowly but surely, already underway before Snowden – it contributed to the so-called "IANA transition", the process during which the US relinquished their control of the DNS root, and which originated substantial reforms in the accountability mechanisms of ICANN. In parallel, the 2010s have also witnessed the rise and/or the stabilization of new "superpowers" in Internet governance, most notably Russia and China (see Litvinenko 2021; Negro 2017), with a predominant strategy of "digital sovereignty" – the idea that states should reassert their authority over the Internet and protect their nation's self-determination in the digital sphere, not by means of supranational alliances or international instruments, but by increasing their independence and autonomy at the technical, economic, and political levels. Eventually, legal instruments such as the European Union's General Data Protection Regulation (GDPR, entered into force in May 2018) posed new conditions to both data protection and platform governance, incarnating a major regulatory challenge for business models based on the harvesting of data and offering "free" services as a counterpart.

## **1.2 Broadening the Perimeter (Even More): From One to Many Governances**

The last part of the periodization presented above, with the introduction of GDPR, as well as data protection and platform governance, leads us to discuss how governance issues have pervaded several fields and institutions related to ICTs and digital technologies, such as the Web, research infrastructures, Wikipedia and Web archives as "born-digital heritage."

As we explore in Musiani and Schafer (2018), the World Wide Web, which emerged in the late 1980s and especially in the early 1990s, dealt with governance issues from the start. After its genesis at the European Organization for Nuclear Research (CERN), the Web moved to the US, when Tim Berners-Lee joined the Massachusetts Institute of Technology (MIT) and created the World Wide Web Consortium (W3C) in 1994. As he considered the Internet Engineering Task Force (IETF)'s proceedings too slow for the fast evolution of the Web he envisioned, he established a dedicated consortium. Andrew Russell notes that "The W3C model occupies a middle ground between the IETF and ICANN: it counters the slow speed of grassroots code development by developing code

within the W3C; by including industry Members, its Recommendations are more likely to be implemented quickly and effectively; it also considers seriously and responds to input from Members and the broader public before it issues the code as a Recommendation” (Russell 2003, 28). The W3C shares some of the long-standing issues of Internet governance, including standardization, openness, and multi-stakeholderism.

Less obviously linked to the problem of governance, but nonetheless strongly related to issues such as standards, commons, author rights, and multi-stakeholderism, Web archiving initiatives are a good case study to analyze the way many stakeholders participate in, and negotiate, the governance of born-digital heritage. Indeed, actors involved in Web archives governance include

- foundations (e.g., Internet Archive),
- transnational organisations (e.g., the International Internet Preservation Consortium), professionals (librarians, archivists),
- representatives of civil society (in particular, activists, and researchers) and
- private businesses (e.g., Facebook and Twitter have their own archives).

All these stakeholders bring to the table their own diverging approaches to born-digital heritage, from proprietary forms of ownership to an open vision of web archives as commons (Musiani et al. 2019). The Internet governance typology authored by Bygrave and Bing (2009), describing several types of organizations and power balances at work in Internet governance, is useful here to account for the technical governance at stake in particular arenas (e.g., crawlers and metadata). It also helps to account for the different civil society claims for more inclusiveness (e.g. the Documenting the Now initiative born in 2016 in relation to the Black Lives matter movement<sup>3</sup>), or to understand the variety of private and commercial interests involved in Web archiving (e.g. the presence of Facebook, Amazon, and Twitter among the main “web archiving” players), as well as to grasp national attempts to keep web archives within the national heritage (e.g. legal deposits for Web archives in France, United Kingdom, etc.).

Digital research infrastructures and knowledge infrastructures also try to test and develop new forms of governance. Wikipedia is the prime example of a setting in which the governance of a knowledge platform tries to include issues such as the commons, self-organization, and shared authority (Cardon 2012).

Last but not least, the final (for now) frontier of Internet governance is the issue that Michel van Eeten recently described as “the disappearance of the distinction between devices with and without connectivity and computing

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<sup>3</sup> See <https://news.docnow.io/introducing-documenting-the-now-416874c07e0>.

capabilities” (van Eeten 2017, n.p.) and that Laura DeNardis (2020) has summarized, in the title of her last book, as *The Internet in Everything*: the Internet as a network of networks is becoming the meta-infrastructure of most other infrastructures, with crucial implications for economics, security, and governance. While it has long been believed that the influence of digital actors would remain confined to software, dematerialized content and information, it starts to be clear that they are using their mastery in these areas to take positions in non-digital markets, be it transport, infrastructure management, health, or banking. With the connection of infrastructures and objects, the organization of physical flows requires the control of information flows. Massive data is at the heart of this movement, which calls into question the positions of the historical players in these markets. Eventually, this will generate new interplays between Internet governance and the governance of other socio-technical systems, which is currently discussed and acted upon in completely separate settings. It could possibly lead to unprecedented convergences between institutions and fora examining, for example, Internet governance and environment or health governance.

## 2 Media and Communication Global Governance Before Digitalization

The flexibility of the notion of governance, but also its suitability to think and analyze arrangements of power, global controversies, transnational regulation, and arenas of negotiation, makes it an efficient umbrella to describe evolving realities within the digital area, but also to rethink a number of phenomena in the media and communication field, even before the word governance was used in media studies. Indeed, global Internet governance preceded the academic notion of media governance.

In 2002, Sean O’ Siochru and Bruce Girard (2002, viii) noted: “A few years ago, we sought in vain a publication that would succinctly present the main issues confronting media and communication governance at the global level. We were not the only ones searching, and so this book was written.” However, the notion of media governance has subsequently been developed and addressed by several scholars, who refined its definition. Freedman (2008, 14) considers media governance as broader than media regulation and “refers to the sum total of mechanisms, both formal and informal, national and supranational, centralized and dispersed, that aim to organize media systems.” In line with this approach, Hamelink and Nordenstreng (2007, 232) define media governance as a “framework of practices, rules, and institutions that set limits and give incentives

for the performance of the media.” Furthermore, Lange and Schimank (2004, 18) consider governance as patterns of coping with interdependencies between actors, while McQuail (2007, 17–18) describes media governance as both the numerous forms of management and accountability within the media and the institutionalized relations between media and society. All these definitions,<sup>4</sup> from narrower to broader ones, invite the rethinking of global Internet governance from a longer-term perspective within media history. Indeed, global discussions and framework of practices, as well as international rules, have started long before the Internet in the field of communications.

## 2.1 Institutionalizing Global Discussions on Communication and Media Technology

In his pioneering analysis of media globalization before the Internet, *The Victorian Internet*, Standage (1998) highlights – interestingly, although risking anachronisms – the similarities between the telegraph and the Internet and the qualitative shift the telegraph created by allowing “real-time” and “online” communication. Indeed, global governance was debated in the nineteenth century with electric telecommunications, such as telegraphy and telephony and, in the twentieth century, for technologies like wireless, broadcasting and satellite communications. With the telegraph, as well as with radio waves or satellites, institutionalisation of global debates within several arenas were also already at stake, for example at ITU (International Telecommunication Union), the first and oldest intergovernmental organisation, born in 1865, which was set up to manage telegraphy internationally (Balbi and Fickers 2020).

Definitely, as Pascal Griset shows in his study of the development of intercontinental telecommunications in the twentieth century (1992, 19), since the first telegraph cable was laid across the English Channel in the 1850s, “with the recognition of their strategic importance, these networks became the object of vigorous strife among the world’s major powers.” Without taking up the complex history which sees leadership on cables, and then on the waves, gradually move from Great Britain to the USA, it suffices here to underline the weight of the international discussions at work in the twentieth century, concerning transnational communications, and nation states’ renewed power following the two World Wars, after negotiations primarily conducted by private companies. The attempts to create international agreements, and to think of a more global and less

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<sup>4</sup> These definitions are discussed at length in Puppis’ article (2010) mentioned earlier.

sector-focused policy (see, in particular, ITU's choice to pool the telegraph and radio branches in 1932, or the INTELSAT international agreement on satellite transmissions, signed in August 1964 in Washington by 19 countries), are already clearly found in waves-related and submarine cables-related policies (Headrick 2013), whose geography is largely mimicked today by the geography of infrastructures and Internet cables.

These international agreements and discussions, implemented in the second half of the nineteenth century and whose institutionalization continued during the twentieth century, are linked to the crossing of borders by means of communication that do not comport with national jurisdictions. This was not the only motivation; Fari, Balbi, and Richeri (2015) emphasize, in their comparison between ITU and the Universal Postal Union, the low cost of the infrastructures or the challenge of coverage (Fari, Balbi, and Richeri 2015, 19–20).

These agreements are of course also linked to international strategies of companies that leverage the possibility of reaching publics in a foreign country by radio waves, and modify the audio-visual landscape, in particular the European one. In *Inventing American Broadcasting, 1899–1922*, Susan J. Douglas (1987) shows it well with her description of Marconi's establishment of subsidiaries in the USA, after the creation of his company in the United Kingdom (1897). Reginald Fessenden adopted the same strategy with his National Electric Signalling Company (NESCO), created in 1902, which joined forces with General Electric in 1906 and obtained contracts abroad (Australia, Japan, Russia, Brazil) as well. The first international meetings were already taking place, like two international conferences on wireless telegraphy held in Germany in 1903 and 1906 (with, it should be noted, predominantly military delegates). After the Titanic tragedy and the role played by wireless telegraphy in rescuing survivors, the Radio Act was voted on August 13, 1912 to regulate it.

Several other events testify to pre-Internet transnational media governance issues, such as the creation of the International Broadcasting Union (IBU 1925), International Broadcasting Organization (IBO 1946; see Michalis 2007), European Broadcasting Union (EBU 1950) and some transnational initiatives (e.g., Radio Luxembourg's role from 1929 or Radio Monte-Carlo's and Télé Monte-Carlo's creation in 1942 and 1955 respectively). As Fickers and Lommers (2010, 225) show, "broadcast communication was the most powerful and influential means for both national and transnational communication in the twentieth century." Their study helps to question "the medial construction of European and international communication spaces," but it also provides very insightful elements on the international governance at stake in broadcasting, which also requires to be nuanced. Henrich-Franke (2010) demonstrates the challenge of "Creating transnational through an international organization" in his examination of the transnationality of television

activities carried out under the umbrella of the European Broadcasting Union (EBU) between the 1950s and the 1970s.

Satellites like Telstar further reinforced this international trend in the 1970s and 1980s, which also saw the rise of internationalization in production. The privatization movement of the late 1980s in the audio-visual sector opens the way to a reinforced power of “new global media providers, with Rupert Murdoch’s News Corp as the champion, [who] aggressively built operations that crossed national borders, rendering previously important aspects of localized regulations at least irrelevant and in many cases obsolete (Chenoweth 2001)” notes Brink Lund (2016, 108). “In this situation, the EU, EFTA, the Council of Europe and other international agencies attempted to fill the regulatory gap (Harcourt 2005). The EU was especially persistent in pursuing transnational codes of governance to secure the interest in a competitive internal market” (ibid.). These few lines are an obvious reminder of the current debates on the Internet giants’ empires of communication, and of the European Union’s goal (most notably via the GDPR) to find a key role in the definition of regulatory policies related to communications, in particular digital-supported ones. A strong historicization of media governance is again necessary in order to better understand the current issues at stake, as older and new bodies have to cooperate in fields that entwine for example broadcasting and digital activities. This is for example the case with the debates on Digital Video Broadcasting (DVB), which implies debates between ETSI (European Telecommunications Standards Institute), EBU (European Broadcasting Union), and Internet stakeholders (Kratovich 2008).

Thus, one should keep in mind that ever since the ages of the telegraph, telephone, radio or television, companies and States, but also international bodies, developed in particular in the telecommunications field, are tackling the question of crossing borders, but also of sharing resources: if today critical Internet resources concern for example domain names, they previously concerned the distribution of bandwidth, waves, and infrastructures. This prompted agreements, but also controversies and criticisms, especially in light of the possibility of domination by a few countries – Great Britain first, on intercontinental routes, with the weight of the Marconi company, then the United States. Also, throughout the long history of the media, one can retrace initiatives aimed at a more balanced distribution of power.



## 2.2 Claiming for a New Balance of Power in the Communication Age

The claims for new balances of power in the media and communication systems have paved the way to the development of alternative media, and genealogies of several digital players show some interesting continuities between analog, early digital and Internet times. Dutch media theorist and net activist Geert Lovink recalls for example the important role of community radio, his support of anti-war efforts in Zagreb, in Croatia and its contact with Belgrade and the radio station B92 (Schafer 2018). Another example, among many others, is linked to the Minitel case (Schafer and Thierry 2012). It showcases issues that are today important in Internet governance but pre-existed it to be highlighted. In his paper “Building Internet policy on history: lessons of the forgotten 1981 network neutrality debate” (2018), Mailland demonstrates how the issues of liability and responsibility of intermediaries and carriers was actually born with the development of telematics in the 1980s and was the precursor of a multi-stakeholder debate. The first cases of “tele-presence” analyzed by Jérôme Bourdon in this book show the first hints of debates on the secret of private correspondence, or anonymity; the issues of data privacy for courier and telephone remind us that several questions at the heart of network regulation (the *demoiselles du téléphone* listening to discussions, or anonymity within mail) were internationally raised before. Jones and Ackermann (2020) follow suit, with their recent analysis of data privacy issues within several pre-Internet networks including packet-switched networks, Bulletin Board Systems, videotex, online services, and early web browsers, as well as anonymity issues. The involvement of civil society in global governance was already in construction via their national actions and reflections, while its more active participants easily crossed national borders through international debates held e.g., on newsgroups.

Internet regulation concerning trademark law/author rights also had its predecessors, before debates on domain names and trademarks on the Internet became widespread. Hamilton (1995) refers for example to the case of *Dranoff-Perlstein Associates v. Sklar*: Dranoff-Perlstein Associates, which had been using and advertising the telephone number “INJURY-1” since 1984, filed an action alleging unfair competition and trademark infringement against Sklar, when it began using and advertising the telephone number “INJURY-9” in 1990. Although this case is a national one, it prompts reflection on copyright issues through the history of media and the international debates, that arose e.g., within the World Intellectual Property Organization (WIPO), established in 1967. WIPO members agreed to the so-called WIPO Internet treaties in 1996, on copyright and on performers

and producers of phonograms, which indicates that the entanglement between media and digital issues is strong.

These stories of power balance-building at the national, regional and international levels contribute to show how, as concisely put by Laura DeNardis (2014, 17), “(g)lobal Internet stability is [ . . . ] dependent on local Internet conditions.” They pave the way to Internet governance debates, as they show the need for multi-stakeholder discussions, the entanglement of infrastructures, content and economic regulation, and the (geo)political issues at work. They show how discussions of dominant positions and monopolies, neutrality, public/private property and local, sectorial or national debates all contributed to the roots of the future “Internet governance,” in its globality as well as its “glocality” (Goldsmith and Wu 2003).

All these debates may also be retraced in the histories of both telegrams and submarine cables: complex debates on dominant positions and monopolies arose in the wireless field (e.g., Marconi vs Telefunken) already, while submarine cables led to important debates between the public and private sector. Net neutrality may also be considered in a longer-term historical perspective by referring to the “neutrality” over telegrams and the debates surrounding priorities in the international network, as noted by Balbi et al. (2014).

Deeply entwined with geopolitics from the start, issues surrounding media and telecommunications governance are clearly retraceable within debates which took place within the “New World Information and Communication Order” in the 1970s and the 1980s, for example within the WARC conferences (World Administrative Radio Conferences). They are an international discussion arena which will outline the first subjects of debate that will subsequently be found within WSIS, opening the way to the first Internet governance discussions criticized as too openly US-centric and Western-centric. Following Marc Raboy (2004), we can even go as far back as the Universal Declaration on Human Rights, approved in 1948. The post-colonial climate of the Cold War and non-aligned nations played an important role not only in WSIS and in the IGF, but also in venues such as the World Forum on Communication Rights, the Community Media Forum and Media Liberties in the Information Society, while “an entirely parallel set of activities was organized under the heading of WSIS? WE SEIZE!, an alternative event organized outside the summit complex, thus marking not only a geographic but also an ideological distance from the summit proper. Put simply, the organizers of WE SEIZE! rejected the social, political, and economic premises on which the debates and discussions surrounding the WSIS were based. They proposed instead to re-imagine the role of communication in the organization of society” (Raboy 2004, 352).

## Conclusion

In “Shifting Governance Structures in Global Commodity Chains, with Special Reference to the Internet,” Gereffi (2001) underlines three broad and to some degree overlapping phases of globalisation after the second World War: investment-based globalisation (1950–1970), trade-based globalisation (1970–1995) and finally digital globalisation (1995 onward). The path we have threaded in this chapter invites the reader to discuss this periodisation, as we have shown how this globalisation can, in the “long haul” of media and communication history, be thought of since the early days of the telegraph, and elements of it can be found even before World War II.

Of course, reflecting on the historical continuity of issues such as data privacy, openness, transparency and more broadly media regulation should not lead us to neglect ruptures and breaks, that are played out both in the so-far-relatively short time span of Internet governance, as shown in the first part, and in the longer time span of media history. Indeed, while we can learn from past media regulation attempts, the Internet also poses specific challenges, particularly in terms of participation and of horizontal and peer-to-peer exchanges. Our historicization attempted to avoid “the alienation of inherent (as well as) constant continuity (as) two forms of determinism” (Balbi and Magaudo 2018), while exploring the roots of some debates, organisations and issues that remain relevant through media and digital history.

To keep this history in mind is also a way to better understand some chosen paths, and roads not taken (Schafer 2020; Winseck 2020). An important example of this is the International Telecommunications Union (ITU) and its problematic relationship with Internet governance. This United Nations-mandated organisation had to confront a new model of technical decision-making and governance arising within the Internet community, which was openly divergent from the standardisation procedures previously at work, and deeply challenging of it. Although the ITU sought to restore its techno-diplomatic role through multi-stakeholderism, of which the WSIS was a crucial step, its roots and past history created a strong legacy, which remains difficult to overcome and keeps the organisation at the margins of Internet governance.

Today, there seems to be a scholarly tendency to emphasise the risk of the Internet and its digital spaces turning into a new medium of top-down dissemination, controlled by powerful conglomerates and platforms, confiscating alternative and distributed speech. However, the Internet and digital ecosystem also represent, for the so-called traditional media, a chance to reinvent their governance and modes of participation, contributing not only to the evolution of global governance challenges – with TV over IP, for example – but also to the

renewal of the debates on the world of communications today as a “global village”. This notion was coined for television, before the Internet – and its current use in relation to the Internet will be this chapter’s last testimony of the strong links between “old” and “new” media.

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**Data(fication)**

“Understanding the World Through Data” as an Everlasting  
Revolution

**Abstract:** In this chapter we set out to historicize and trace the pre-digital roots of the concept of datafication of communication and society. Collecting and processing data as well as governing data storage and access to it are not to be seen as a particularity of the digital era. Data and datafication produced, already long before the digital revolution, exclusive arrangements of infrastructures and knowledge orders and they can hence be seen as building blocks of culture and society. We illustrate this argument in four steps using different historic examples. We first provide a glimpse into the beginnings of datafication in ancient times. We then present data as early social science instruments in the modern welfare states since the mid-nineteenth century used for social control and to grasp facets and consequences of social modernization. Thirdly, data were also crucial in the service of oppression during the National Socialist era, in which cutting-edge data technologies contributed to the planning and implementation of the Holocaust. Finally, the shift of data from the numerical to the digital information age in the second half of the twentieth century and its consequences for a “datafication of everything” is discussed.

**Keywords:** big data, data processing, social engineering, technological solutionism, dark data, social history

The digital age is an age of data. Digital communication research rhetoric suggests an unprecedented relevance and depth of data for virtually all domains of social and everyday life and for shaping the very construction and perception of reality. Data is seen as a fabric, output, fuel, lubricant, and currency of the digital age. Digital communication is based on algorithms, metrics and complex processes of datafication. Whereas in principle everything can be turned into data (Mejias and Couldry 2019), the notion of datafication refers to processes of rendering information into machine-readable quantifiable data for the purpose of aggregation, analysis, and anticipation of human behavior and social interaction (Mayer-Schönberger and Cukier 2013; Mau 2019; Southerton 2020). In this trajectory, Couldry and Hepp (2017, 34–56) have argued that datafication marks an entirely new wave of mediatization, causing profound transformations of our everyday life as well as the organization and evaluation of social



issues. Following Southerton's (2020, 1) contribution to the "Encyclopedia of Big Data", datafication is also used to describe "a logic that sees things in the world as sources of data to be 'mined' for correlations or sold . . ." Data is hence occasionally referred to as the new oil or the most valuable resource, which to control promises wealth, power, and influence in shaping the social world. Hence, datafication "combines two processes: the transformation of human life into data through processes of quantification, and the generation of different kinds of value from data" (Mejias and Couldry 2019).

But, putting aside the rhetoric of technological newness and the fascination for the peculiarity of the current historical moment, we can follow Rödder and ask how new all of this truly is (Rödder 2015). And if so, to what extent and regarding what respects are the processes of digital datafication novel. When the notion of datafication was originally introduced by Mayer-Schönberger and Cukier (2013), it was coined with regard to the economy of digital platforms and since used in relation to processes of making virtually all aspects of human behavior processable for large scale Big Data analysis. Data and the interpretation of data in this respect is seen as a means of looking at and understanding the world (Borgman 2016; boyd and Crawford 2012; Mejias and Couldry 2019; van Dijck 2014). Recent publications have argued that data(fication) should not be viewed as a unique characteristic of the digital era, but rather as a historical category and as an ongoing historical process with manifold precursors (Beer 2016; Borck 2017; Aronova, von Oetzen, and Sepkowski 2017; van Es and Eef Masson 2018). In a similar vein, Beer (2016) has called for understanding "Big Data" "both as a material phenomenon and as a concept", which is changing historically and only reached a new level in the digital era. "Big Data," Aronova and colleagues (2017, 7) furthermore argue, "is often associated with the era of digital electronic databases, but this association potentially overlooks important continuities with data practices stretching back to much earlier material cultures. While technologies have changed – from paper-based to mechanical to electronic devices – database practices have been more continuous than the technologies and tools" (Aronova, von Oetzen, and Sepkowski 2017, 7).

In this chapter, we set out to historicize the concept of datafication of communication and society and trace the pre-digital roots of what is nowadays considered a defining process of the digital era. Rather than imagining data and datafication as a particularity of the digital era, we provide a perspective on data as a category and datafication as a historical process. Our perspective is inspired by Raphael's (1996) take on the scientification of the social. In a perspective on a social history of data and datafication, it becomes evident that gathering data was never a naïve project but always happened on purpose, with particular goals and intents regarding its impact on shaping social reality.

Collecting and processing data as well as governing data storage and access to using it was produced already way before the digital revolution's exclusive arrangements of infrastructures and knowledge orders. Furthermore, datafication has long since amounted to distinct communicative and social practices. A look back at earlier epochs can thus help us to compare today's processes of datafication with previous historical contexts and put their alleged uniqueness in perspective.

We illustrate this argument in four steps using different historic periods as examples: before we leap into the mid-nineteenth-century and the role of datafication of the social through the emerging social sciences, we first provide 1) a glimpse on the beginnings of datafication in ancient times. We then present 2) data as early social science instruments in the modern welfare states used since the mid-nineteenth century for social control and to grasp facets and consequences of social modernization; 3) data in the service of oppression during the National Socialist era, in which cutting-edge data technologies (e.g., Hollerith-systems) contributed to the planning and implementation of the Holocaust; 4) the shift of data from the numerical to the digital information age in the second half of the twentieth century in which the new computer technologies rapidly increased the processes of datafication and made data gathering increasingly a private and corporate enterprise. When Mayer-Schönberger and Cukier (2013) coined the notion of datafication, they predicted Big Data would bring a revolution that will transform how we live, work, and think. Historicizing datafication, we show that the aspiration of “understanding the world through numbers” is indicative of old hopes, renewed promises and an everlasting revolution rather than a singular turning point.

## **1 Data(fication) as a Building Block of Culture and Society – From Early Cultures to the Age of Enlightenment**

It can be argued that the history of datafication is closely intertwined with the history of writing and hence an early wave of mediatization (Herrenschmidt 2007; Krotz 2012; Ong 1982). According to anthropologists and historians, the main driving forces behind the development of symbolic forms of data gathering and recordkeeping were the necessity of the earliest complex social formations to keep records of their legislative measures and taxes. Thus, the ability of the state to coordinate substantial public works and the need of private entrepreneurs to

keep records of their business operations were also matters of record keeping from the beginning (van de Mieroop 1999, 13; Law et al. 2015, 212). Such tangible records were external to an individual, which means that they could be inspected, verified, and cross-examined (Law et al. 2015, 208). Data collection hence from the very beginning of written records became a paramount objective for governing bodies as well as for private individuals and families engaged in complex webs of economic activities and logistics. Data collections contained the documentation of loans, sales, and rentals as well as public records of military and religious personnel and were kept in private and public administrative archives, which can be found practically everywhere in Mesopotamia where cuneiform writing was diffused.

Additionally, the sophisticated urban civilization of the Greeks soon articulated the need for public and private record keeping (Sickinger 1999). From the speeches of Attic orators, valuable insights can be gleaned not only about the quantity and the places in which they were stored but also the cultural, economic, and political importance ascribed to these records by their contemporaries. “An excellent thing, fellow citizens, an excellent thing is the preservation of the public acts,” claimed Athenian politician Aeschynes (3.75) in 330 B.C.E. “For the record remains undisturbed, and does not shift sides with political turncoats, but whenever the people desire, it gives them opportunity to discern who have been rascals of old but have now changed face and claim to be honorable men” (Aeschines 1958, 367–369). Thus, anticipating later developments, already in ancient Greece the collection of data holds out the prospect of objective and undisputed access to social reality. Data should make it possible to open up reality independently of bias, whim, and interpretation.

Less direct knowledge exists about the record-keeping and data gathering activities in Classical Rome. Contrary to Greek social life which took place in the public square, Roman society, even during the republican era, was organized on the principle of patronage where wealthy and influential patrons received their clients in their own homes. Therefore, each patron’s household had a separate space storing private as well as important public records belonging to the office administered by the head of the household (Culham 1989, 104). We hence can identify widely privatized and decentralized practices for the collection and storage of data. Historical evidence indicates that even such essential public data as the census, the masterpiece of Roman bureaucracy and backbone of its taxation system, were not gathered, processed, and stored in one central location.

In the late medieval period, the earliest parish registries appeared but it was only during the Reformation when they became mandated by the Catholic Church, and subsequently also by various Protestant Churches in order to keep track of their own populations (Emigh, Riley, and Ahmed 2015, 174–175). After

the Council of Trent (1545–1563), the Catholic Church required all parish priests to keep registers containing lists of persons who received the basic sacraments, such as baptism or marriage, or who had a Christian burial. By doing this, it *de facto* created a permanent, standardized census tracking the fundamental demographic data by registering those who were born, got married and died (Culham 1989, 105).

The relatively high degrees of literacy and numeracy required in the commercial world were simultaneously translated into the civic life of the late medieval urban communities and reflected in the fact that medieval cities and city-states started organizing their own information-gathering and record-keeping systems (Barber 1992, 258).

Historians argue that it was the reign of Louis XIV in France which for the first time demonstrated that an early modern nation-state could prosper despite its relatively vast and differentiated geography. This was possible mainly due to the improving systems of transportation and communication but also to the collection and management of large amounts of statistical data. Jean-Baptiste Colbert (1619–1683), the king’s chief minister, is often presented as a posterchild of this trend. Over his two decades of service to the king, Colbert amassed vast amounts of information through the various sectors of public administration that he oversaw – from finance and the navy to foreign diplomacy – using data as a foundation for the rationalization of state operations (Soll 2009). In this effort, he harnessed many of the techniques developed previously by scholars, merchants, and churchmen and systematically applied them to government.

Following Mejias and Couldry (2019), and as illustrated by the examples above, datafication began in the domain of business and administration and not social life. The collection of data was closely linked to those in politically or economically privileged positions (positions of power) for doing so and the command over data helped to reinforce and expand their power. The data collected typically addressed those bound to the powerful through contracts or other obligations and the purpose of the data was to govern, administer, coordinate and control and further accumulate privilege. But data could also be used to rationalize processes based on datafied knowledge. While the records that were kept are partially of surprisingly rich detail, for instance contracts in late medieval Genova could not only hold the dates but also the hours and minutes of when the contracts were made if this information was deemed necessary, it is also a common pattern that the data gathered was more or less directly linked to its initial purpose and focused on essential elements. It was only later that the collection of data expanded from the functional collection of data to the “datafication of everything” (Mayer-Schönfelder and Cukier 2013, 93–94), with the functions of the data only to be discovered later in the vast collections.

Datafication practices from their very historical precursors and origins were located at the intersections of (recordable) knowledge and power. The study of datafication, in historical as well as contemporary contexts, is thus also a critical perspective on processes of gathering and capturing human experience in data and processing it for economic or political purposes.

## 2 Open the Box: The Scientification of Data and the Datafication of Social Life

As shown, the practices of experiencing, collecting and organizing data can already be observed from early cultures to the Age of Enlightenment. With the advent of modernity, a new period begins in which societies develop and explore instruments to systematically observe and describe themselves with data, not least in order to manage, organize, and regulate social processes based on this data.

The very ideas that datafication opens vistas for beholding the world and that society can be discovered, explored and understood through data resonate in the aspirations regarding the potential of the then emerging social sciences. “[W]e can in principle *control everything by means of calculation*,” as Max Weber (2004, 13) stated. The “disenchantment of the world” through the modern social sciences, which Max Weber (1864–1920) told to his Munich students a hundred years ago, was above all to be achieved by the accumulation of data, calculations, and the technical means which allowed for the collection and processing of data. “The nineteenth century,” Jürgen Osterhammel argues, “can be seen as the century of counting and measuring. The idea of an all-embracing taxonomy now grew into a belief that the power of number – of statistical processing or even ‘social mathematics’, as the Marquis de Concordet, a bright star of the late Enlightenment, put it – could open up truth itself to human reason. It was in the nineteenth century that societies measured themselves for the first time and archived the results” (Osterhammel 2014, 29).

Over the course of the nineteenth century, social data collection became a common practice in Europe and the US (Burke 2012), providing spaces for “ongoing institutional self-observation” (Osterhammel 2014, 25) and helping statistics to become “what it is today: the most important tool for the constant self-monitoring of society” (Osterhammel 2014, 26). As early as in the 1830s and 1840s, statistical societies were founded in many industrial cities in England in order to collect social data for deep insights into the entire social life of the lower classes. One of the most important studies produced in this context was Charles Booth’s (1840–1916)

long-term study “Life and Labour of the People of London” (1886–1903), in which he explored the citizens of London over a period of 16 years (Schubert 1994). The scope of these data collections went way beyond legal obligations, contracts or financial dependencies but tried to provide insight into broad facets of everyday life.

This modern empirical view on societies was primarily motivated by the dismay about the great social upheavals occurring during the industrial revolution. At the same time as the industrial revolution, a structural social change began which was characterized by enormous population growth, migration from the countryside to the cities and urbanization – a transformation with massive social consequences. Governments, legal and administrative bodies required reliable data and figures to gain an idea of the magnitude and dimensions of these social shifts. The aim was to use the collection of social data to learn something about the social reality transformed by industrialization and the many new social questions that emerged as a consequence. In this sense, ideas and concepts about the usefulness of data and their collection were framed at first in a philanthropic and idealistic manner. Social data should serve for sociological elucidation and socio-political ambitions, ideas and interests. Furthermore, and as already briefly stressed above, the rise of the modern nation state as a model of political organization is deeply entangled with and enabled by the advent of modern statistics and social sciences. In conjunction with the rise of nations, a new chapter in the social history of datafication begins because data and the consequent needs for calculation are paramount preconditions to making a state administration work. The coordination and efficacy of governing measures depend on the complex integration and interpretation of diverse data, measures, and calculations. Henceforth, the methods, techniques and technologies for logistics, data collection, and processing also needed to progress and new, innovative ways were found. The history of the computer can be told in relation to processes of datafication and the nation state’s need to count and calculate (Balbi and Magauidda 2018, 31–33).

In Germany, the Verein für Socialpolitik (founded in 1873) and its members were pioneers in the development of instruments and practices for social investigation by data (Gorges 1986). In the mechanical era of datafication, the Verein für Socialpolitik created important paper tools to gather social knowledge about society. One of the most frequently used tools was the “Enquete” (Embden, Cohn, and Stieda 1877; Horst 1980). In the spirit of the English social reformers, the Verein für Socialpolitik defined the “Enquete” as scientific preparatory work for the enactment of laws: each “Enquete” was expressly intended to have a political impact. To become effective as a “mean of control, agitation and power of the *modern state*,” the “Enquete” was a “complex body” of social data collection (Kern 1980, 89). Ideally, an

“Enquete” integrated different practices and techniques of empirical social research such as field studies, questionnaires, special reports by experts, statistics, and surveys. What becomes evident from this example is that the collection of data in the “Enquete” clearly exceeds the documentation of what is a current state of affairs. Instead, they mark a shift from aiming to record society and social relations as they are at the moment of data collection towards the ambition of effectively shaping how society moves forward based on datafied knowledge.

In this manner, the “Enquete” and the method-mix associated with it turned into the standard instrument “of social factfinding in Germany before the first World War”: “All the leading historical economists, Schmoller, Bücher, Brentano, Adolph Wagner, as well as those of the next generation who are known to us as the founders of sociology, Tönnies and Max Weber, became involved in planning and directing surveys, writing out questionnaires and analyzing the returns” (Oberschall 1965, 3). The classical philologist and economist Karl Bücher (1847–1930), to take just one example from this list, was not only the father of the “law of mass production” and founder of “newspaper science” as the precursor of communication research in Germany but also a busy empirical social researcher. Prepared by a series of historical-statistical studies, in 1888 and 1889, he conducted a census and a housing-“Enquete” in Basel and with the “Investigations on the Situation of the Craft in Germany” (1892–1897) organized a large-scale study for the Verein für Socialpolitik (Bücher 1890a, 1890b, 1895–1897, 1919). Bücher’s studies and the many studies of his colleagues once again reveal the specific view that early empirical social researchers wanted to gain of society with the help of social data. Although the individual researchers and their studies differ in their points of view and objectives, they are united in their political purpose to identify social patterns and regularities in the data in order to use this knowledge to solve serious social problems and imbalances. Thus, it was never just about developing and training a data-based “factual view” (Bonß 1982) on the world, but always also about policy advice, public information, and social reforms. In doing so, early empirical social researchers contributed to the advent of datafication by providing a complex system of reliable instruments, practices and techniques with which modern societies began to discover, observe, and manage themselves with the help of data.

## 2.1 The Birth of Data Processing

Despite all the ambitions, dedication and efforts of empirical social researchers, collecting social data was only a first step. The huge amounts of data on paper they produced were nothing but worthless data garbage without the right data



processing techniques. In contrast to the tradition of the cameralistic statistics in the Age of Enlightenment, which were primarily interested only in the description of “state peculiarities” (“Staatsmerkwürdigkeiten”) (Kern 1980, 19–27), the insights for modern empirical social researchers were hidden in the complex combinations and relations making up the collected data.

Therefore, the statistical methods and procedures had to be refined and efficient calculation aids were required. For his Basel studies, Bücher used a manual method of data processing with a paper tool called “counting slips” (“Zählblättchen”), which was commonly used in European official statistics prior to the punch card (Rauchberg 1890; von Oertzen 2017). “The counting slip,” writes von Oertzen in her important study on the innovative data practices of Prussia’s statistical office in the second half of the nineteenth century to handle census data, “was an intermediate, movable data carrier designed to facilitate and enhance the counting and sorting of data compiled in lengthy enumeration lists, praised for its ability to greatly enhance statistical complexity. [. . .] The main difference was that the information on counting slips had to be transferred from enumeration lists with a pen, not, as with punch cards, via punched holes. And whereas punch cards could be sorted and counted by machines, counting slips had to be sorted into stacks and counted by hand” (Aronova, von Oertzen, and Sepkowski 2017, 137). The next step was from manual to automated, machine-based data processing. In 1889, Herman Hollerith (1860–1929) was awarded the gold medal at the Paris World Exhibition for a prototype of his Electric Tabulating System. A year later this system was used for the first time in a large-scale experiment for processing data from the American census. Punch cards as data carriers and resources for electro-mechanical data processing, however, only became widely accepted in the following decades (Austrian 1982; Heide 2009). Thereafter, the punch card remained dominant for machine-based data processing until the availability and application of means of magnetic storage possibilities, thus through to at least the 1970s.

Even while the technical processes of data processing by counting slips and punch cards were very different – manual in the former case and machine-based in the latter – both data practices were characterized by common basic techniques for handling large amounts of data. Clearly, the Hollerith machines were faster but “manual and mechanical data processing rested on the same principle: a movable paper tool carrying all relevant data of one person, which enabled statisticians to sort and compile census data in new ways” (Aronova, von Oertzen, and Sepkowski 2017, 149). Data as such do not exist. Data are always complex constructions and so even then a lot of human work was hidden in data to make it usable at all. In this sense, they both revolutionized the organization of data handling by establishing basic data procedures and routines



(e.g., formatting, merging, sorting, synchronizing), which were not yet performed by machines alone, but by many people, who acted as “human computers” (Grier 2007). In these days, computers were not only partly human, as Grier suggests, but oftentimes female: the skillful tasks necessary for serving in the capacity of human computers were often performed by women (Abbate 2012; Edwards and Harris 2017; Hicks 2017). This detail in the history of datafication was later somewhat obscured in computer history, which has strongly reproduced myths of computer development as driven by the great deeds of exceptional men. Whether with or without the support of the Hollerith machine, human-based data processing thus needed “carefully planned choreographics of sorting, sustained labor management, skillful counting techniques, relentless tracing of errors, and strict control” (Aronova, von Oertzen and Sepkowski 2017, 132). This is also indicative of a development characteristic of datafication in the digital era, namely the integration of data collection and data processing in entangled processes.

The modern empirical social research that emerged in the second half of the nineteenth century is only one example of the data enthusiasm prevailing at that time. Especially for the organization of politics and the rationalization of bureaucracy, data became increasingly important. “Seeing like a state,” as James Scott has pointedly summarized it, in around 1900 meant seeing the world more and more with the aid of numbers. (Scott 1999). “For governments and state authorities,” claims Mau, “the numerical medium is essential in a chaotic reality in order to define problems adequately and devise suitable intervention programmes” (Mau 2019, 32). The numerical approach through data enabled by empirical social research techniques and tools furthermore began to spread. Gradually, almost all areas of social life based their work on data and adopted the “language of numbers” to describe, decipher, and organize social affairs (Mau 2019).

## 2.2 Data and Social Engineering

Simultaneously, expectations and ideas about the potential and usefulness of data began to shift significantly. The increasing possibilities for measuring social behavior and for surveying societies by data are noticeably intertwined with discourses and concepts of social planning as well as the rationalization and regulation of social life. From this perspective, the many social questions raised by modernity were no longer questions of political action, but rather questions of a more technical nature. The increasing measurement of the social with ever new instruments, machines and methods was a basic prerequisite for this. Social engineering is a generic term for a variety of ideas to adapt social life and societies according to the pace and rhythm of industrial modernity by

means of “social interventions” (Peukert 1987, 132–149; Raphael 2011, 149–157). Thomas Etzemüller points out that the idea of social engineering at that time was nourished by a popular longing for social order, the scientificisation of the social and a general belief in the blessings of technology (Etzemüller 2017). Etzemüller has thus defined social engineering as a “combination of (social) technological solutions, a specific idea of social order and a decided design imperative,” which could appear in “various contexts” – from the left to the right of the political spectrum (Etzemüller 2017). Such techno-utopian visions are reflected by what in contemporary datafication discourses is addressed as technological solutionism (Morozov 2013); the oftentimes naïve, and partially ignorant of collateral effects, ideological belief that big data “will allow us to make large-scale and sophisticated interventions in politics, culture, and everyday life. Technology will allow us to solve problems in highly original ways and create new incentives to get more people to do the right thing” (Morozov 2013). However, visions of improving society through social interventions based on data were always connected with utopias of a “new human being”: “Coercion through the transformation of things or through authoritarian political intervention and the learning adaptation of those concerned were the two complementary poles of such programs” (Raphael 2011, 151, translation by the authors).

With the increasing measurement of the social and growing technical possibilities, social planning and rationalization became a key political concept far beyond the economic field in the first third of the twentieth century. The 1920s are known for the rationalization of housing, urban planning and social policy from data-driven, functional aspects, but rationalization also intervened more and more in people’s individual lifestyles and privacy and covered issues such as controlling “proper” family planning and sexuality in order to optimize the reproduction of the population (Raphael 2011).

### 3 Times of Dark Data

However, whereas the datafication of human life and social behavior allegedly aimed for the betterment of society and an optimization of social life, there was also a dark side to the datafication of the social world and humanity. Notions of a “new human being” and of the socio-technical control and optimization of the social through data reflect a world view that perceives “the self-dynamics of social change as a jeopardy for the nation” (Raphael 2011, 155, translation by the authors). A means to counter this danger was seen in the biological and social selection of individuals and populations. Since the middle of the nineteenth

century, numerous anthropological doctrines have been established in the grey area between natural and social sciences, which promoted the measurement of man and the social in order to identify the supposedly “deviant and marginalized” (Bernard 2017, 119). Stephen Jay Gould has critically reviewed this “mis-measurement” of man as driven by the idea of biological determinism (Gould 1981). Well-known examples are Alphonse Bertillon’s (1853–1914) anthropometry, Paul Broca’s (1824–1880) craniometry or Cesare Lombroso’s (1835–1909) concept of the “born criminal.” These are all concepts that insist on a correlation between the measured external bodily characteristics and mental and moral anomalies and which found widespread support, especially in police practice (Bernard 2017). Classification, categorization and standardization of individual features, social characteristics and normed categories in general play an important role in shaping the modern world, as was stressed by Bowker and Star (2000). Classifications order human interactions and depending on what is classified for what purposes, the classification of standards and deviation can impact on society for the better or the worse.

Even before the First World War, the German historical economist Rudolf Goldscheid (1870–1931) drew up the plan for a comprehensive “economy of human beings” (“Menschenökonomie”), “which would ensure that ‘human material’ was not wasted, but on the contrary to optimize the population of a country by improving its genetic make-up and rationalizing its reproductive conditions” (Exner 2004; Raphael 2011, 154). In the interwar period, questions of “improving” the biological and social quality of the population increasingly came to the attention of a diverse field of experts, including demographers, eugenicists, medical scientists and social politicians. Their demands, ideas, and models for a planned “healthy regeneration” of human populations based on complex data also reached social policy, which intervened in various countries with political interventions aimed at “negative” (for example marriage prohibition, forced sterilization) and “positive eugenics” (child benefit, laws to protect the health of mother and child etc.) (Raphael 2011).

The times of dark data that loomed on the horizon found their breakthrough in the era of National Socialism, in which the various instruments of biologicistic measurement and eugenic selection became the foundations of Nazi racial politics. As Götz Aly and Karl Heinz Roth have extensively researched, experts, practices and techniques of systematic identification, isolation, and selection of people based on the datafication of health, ideology, race, social status, and religion became in fact the administrative backbone of the race-hygienic extermination policy (Aly and Roth 2004). For this purpose, state-of-the-art Hollerith punch card technology was used, which was developed and provided by the German IBM subsidiary DEHOMAG (Black 2002).

## 4 Data as the Functional Logic of Societies in Digital Transformation

“What may the state, what may the statisticians know about the individual?” Questions such as these may sound anachronistic today, with more data available to states and private enterprises than ever before and with comparatively little critical opposition against the widespread collection and availability of data. But in 1983, Götz Aly and Karl Heinz Roth published their book on the “Nazi Census” in the light of these questions and employed the Nazi State as a deterrent and explicit statement to protest against the German census planned for 1983 (Aly and Roth 2004). The 1980s were a time in which it became obvious that more and more areas of life are organized by data and also the private sphere is increasingly permeated by data. In the German discourse, the fear of the “gläserner Mensch” – a man made of glass, transparent and open for inspection of all the secretive bits and details of their personal lives – was a widespread catchword. From the perspective of historical surveillance studies, Sven Reichhardt (2016) shows how data-based infrastructures, practices and techniques of surveillance, and self-surveillance as essential processes were embedded ever deeper into everyday life, privacy and societies. The fear regarding surveillance through data transparency also echoed in pop culture. The 1981 song “Computerwelt” by pioneering German band Kraftwerk is but one example of the fear of misuse of computer data and digital surveillance by German and international institutions: “Interpol und Deutsche Bank / FBI und Scotland Yard / Flensburg und das BKA / Haben unsere Daten da” (“Interpol and Deutschr Bank, FBI and Scotland Yard, Flensburg (location of the Federal Motor Transport Authority) and BKA (Federal Criminal Police), they all have our data”). The critical reactions to datafication processes reflect a quantitative and qualitative shift and increase in keeping with the prevalence and relevance of data for social processes.

In the second half of the twentieth century, data has become “a fundamental organizational principle of modern societies” (Bächle 2016, 157, translation by the authors). According to Nassehi (2019), in the course of the computerization and digitization of society, data has finally established itself as a functional logic of modern societies. Through these processes of social transformation, data become both a trade secret as well as the leading currency and the raw material of modern societies. In this sense, data for societies has an enormous potential to generate social order, which, according to Nassehi, primarily lies in their inexhaustible “recombination possibilities”: “The simplicity of the data is the key to its effectiveness” (Nassehi 2019, 145). In digital societies, data increasingly accumulates in abundance and everywhere.

Whereas in the previous historical examples data were seen as a means of recording social relations and experiences, in this current period data itself moves to the center of interest. In this process, the relationship between the recorded data and social life is partially inverted and data changes from being an ex-post codification of, resource for, and the result of economic operations and legislative measures. We have shown that throughout history, social and economic relationships as well as observable patterns of human behavior were made into data, e.g., translated into contracts or codified into laws; additionally, with social science data gathering there was an interest to be defined and then investigated, data was accumulated to serve a particular goal or to provide insights to specific areas. With the rise of digital platforms and big data, human behavior itself, particularly the use of and interaction with digital devices, generates data. The prospect of datafication in the digital era hence was widened to capture all aspects of life from digital traces and to later find patterns in these enormous volumes of data, which can be used for various interests.

Over time, the concept of datafication has since become more widespread and is used in a variety of fields and (sub)disciplines, also beyond online platforms and the traces left behind by navigating through or with digital devices. The “quantification of the social” renewed historical promises of providing access to a “rationalized world of data” (Mau 2019, 36), which allows for anticipating and controlling human behavior as well as for minimizing risks while doing so. While the character of datafied societies is sometimes rather seen in a widespread “data voluntarism” (Mau 2019) of people, which is cleverly driven by promises of social participation as well as a “cult of numbers that masquerades as rationalization” (Mau 2019), datafication does not only affect those who provide data voluntarily. Instead, big data can also create new and reinforce old divides regarding access to data, interpretation of data, representation in data, and the ethics of data and their processes of capturing (boyd and Crawford 2012). Datafication, in addition to its use as a notion describing a phenomenon and process of social transformation, is hence also increasingly used to name critical research perspectives, discussing potential biases, omissions, or discriminations caused by big data or its analytical application (Leurs and Shepherd 2017; Milan and Treré 2020; Dencik and Kaun 2020). Interestingly, historical references and interpretative schemes prominently feature in such discussions. Employing perspectives from (post-)colonial studies, datafication is seen to create new centers of power and exploited or dependent peripheries, oftentimes mirroring colonial dependencies from the past (Thatcher, O’Sullivan, and Mahmoudi 2016). While colonialism might seem like a thing of the past, as Couldry and Mejias (2019) write, the historic appropriation of land, bodies, and natural resources is mirrored today in this new era of pervasive datafication.

This is just another way of looking at how research into datafication today can learn from historicizing the concept and idea.

## Conclusion

Institutions, practices, and processes of datafication, according to the guiding thesis of this chapter, did not simply surface out of nowhere nor come upon us in the wake of digitalization, but have a long prehistory with diverse historical roots. The ambitions and initiatives for understanding the world through data can be traced through time as a persistent and ongoing historical enterprise. A look at earlier epochs can help us to compare and put in perspective processes of datafication today with the data practices of other historical contexts. Historicizing data(fication) does not focus on what is distinct about datafication in the digital age but examines data(fication) with regard to its interrelations with changing social conditions and evolving media environments. Dirk Baecker (2013, 164, 184), hence, proposes seeing “society or culture as metadata,” which is characterized by and has enabled “historically varying” processes of datafication. It can then be observed how societies were repeatedly challenged by new forms and quantities of data records in the face of media (r)evolutions (Burke 2000, 2012). Changing media environments affected the generation, storage, and exchange of data. Beer (2016, 1) thus proposes investigating and contextualizing processes of datafication in “historical, political and sociological terms.”

The first traces of data-processing instruments and techniques can already be discovered from ancient to early modern times. The main driving forces behind the development of symbolic forms of data gathering and recordkeeping were the necessity of the earliest complex social formations to keep records of their legislative measures and taxes. Apart from that, Nassehi (2019) has pointed out in his studies of the “patterns” of modern societies how closely the nineteenth century as an age of analog data-driven discovery of society by the state, statistics and sociology is linked to the current digital data-driven permeation of our present. Gradually, over the course of the twentieth century, more and more fields of society changed their working basis to data. As a result, data have become a kind of “key currency” not only to quantify but also as a possibility to code and recode almost all facets of the social (Mau 2019). This can already be observed in around 1900 in discourses and ideas of social planning and social engineering to optimize social life and societies and experienced its darkest excesses in the use of data for the race-hygienic extermination policy of the Nazi

regime. Today, data permeates and influences our lives as a matter of course, but as a historical topic, datafication has yet to greatly resonate.

Following a perspective on the social history of data and datafication in the *longue durée*, we illustrate that the production, collection, and processing of data not only predate digitalization but also, in the immediate decades before the digital revolution, produced exclusive infrastructures, knowledge orders, and practices. Historicizing the concept of data(fication) provides an analytical matrix for identifying persistent questions and changing answers through the ages. In order to capture historically long-term processes of datafication, this research framework can be further systematized by asking not only for the social contexts but also for the respective ideas, discourses, infrastructures, media, practices, and techniques around data in a particular epoch. Using these lenses, we can trace and discuss the shifts and persistence of data collection institutions (e.g., state or private), the governance of access (e.g., open or restricted) and the processing of data, the means and the ends of data collection, and the discursive transparency about (and potential resistance against) socially collected and relevant data and what happens with it.

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Monika Hanley and Allen Munoriyarwa

## Fake News

### Tracing the Genesis of a New Term and Old Practices

**Abstract:** Fake news has recently emerged as a buzzword in media and political discourses. Many incidences ranging from ethnic violence, inter-racial and religious conflicts to mass riots have been blamed on the spread of fake news. This chapter provides a clear historicization of the phenomenon of fake news, from its early days as far back as can be documented up to present day. Here we advance the argument that fake news is not a new phenomenon, but a part of human lives since societies were formed and information was shared. We further argue that the technological changes of the past century and recent decades, along with the expansion of communication spaces, have simply accelerated the speed at which fake news can be shared, as well as increased the spaces and platforms in which fake news may be found and spread.

**Keywords:** disinformation, history, fake news, strategic communications, propaganda

While it is clear that fake news has existed since humans began communicating and sharing information, fake news as a term is not the most useful when it comes to the myriad categories of false information as there are marked differences between types of inaccurate or misleading stories. For the purposes of this chapter, we can differentiate between disinformation (lies, hoaxes, stories, and images deliberately created and disseminated to influence or cause harm) and misinformation (mistakes, accidental sharing of false or misleading information, not intended to cause harm). The two should be understood as part of the “fake news ecosystem” and the “information disorder” currently afflicting the world. In this chapter, we treat them as such. The origins of each term stem from a particular place in history. Disinformation is commonly associated with the Russian term “dezinformaciya” and was defined in 1952 as “dissemination of false reports intended to mislead public opinion” (Taylor 2016). These, often government-sponsored, campaigns differ from propaganda (originally a positive term for the work of foreign Catholic missions to propagate the faith, taking the newer, more pejorative, definition connotations after World War I) (Diggs-Brown 2012, 48). Propaganda, as referred to in this chapter, denotes the systematic propagation of information or ideas by an interested party, specifically, in a tendentious way, in order to encourage or instill a certain attitude or response

(OED 1989). There is a thin line separating propaganda and disinformation. This is because propaganda utilizes disinformation and vice versa. The thin difference, however, is that propaganda is information that advances only one side of an argument, while disinformation may advance both or all sides of an argument with a view to cause rifts in society and exploit them further for distraction or political gain.

This chapter is organized as follows: the first section provides a genesis of fake news by tracing its growth from 44 BCE, in the ancient Egyptian and Roman societies. This section outlines fake news up to the invention of the Guttenberg press, citing major incidences recorded as manifestations of fake news in historical texts. The second section, Fake News in the Modern Age, discusses the growth of fake news in the modern era, from the 1800s up to the end of World War II. The third section, Fake News in the New Information Age, explores disinformation in the new information age, from 1945 to 1995, while the final section, Fake News in the Digital Media Age, explores developments from 1995 to the present day.

## 1 The Genesis of Fake News (44 BCE–1799 CE)

To clearly trace the evolution of this information space prior to the digital age, we divide this section into two categories: pre-printing press and post-printing press.

The intent and action of creating and distributing false information has been in existence even during the pre-printing era (Uberti 2016; Burkhardt 2017). Examples of fake news have been well-documented and are littered throughout history (Parkinson 2016). Some researchers (Soll 2016) argue that fake news has been around for a very long time and, consequently, has left a lot more destruction behind than any kind of news that can be imagined.

In the pre-printing era, fake news spread through rumors and false stories. In most instances, fake news stories served a political purpose – for political “character assassination.” A famous instance of the use of fake news for political purpose involves Procopius of Caesara, the principal historian of the Byzantium Kingdom (Burkhardt 2017). He released a treatise called *Secret History* that discredited the emperor and his wife with wild and unverifiable claims (Burkhardt 2017), in a bid to curry the favor of the new, incoming emperor. During the Second Triumvirate in Rome (43 BC), fake news fueled internal jealousies and hatred amongst the three architects of the Triumvirate – Octavian, Antony, and Lepidus (Wright 1937). It was no secret that the three were naturally ambitious men (Weigel 1992) but the spread of fake news – untrue stories, unfounded

tales of plots and counter-plots – destabilized the Triumvirate (Weigel 1992). Such bizarre stories also circulated during Emperor Ramesses II's campaigns in Egypt (1303 BCE) against the Nubians, Syrians, and Libyans as he consolidated his power, strengthened Egypt and fended off external threats (James 2000). One such piece of damaging news was that the Emperor's army had been defeated in battle by Sherden sea pirates (James 2000). The fake news story nearly caused mass panic and alarm in the Kingdom. Thus, for more than 2000 years, fake news has been part of humanity's news narratives, with almost the same intentions as today's Internet era – to inflame passions, raise alarm and cause (usually political and religious) prejudice. And, in most of these instances, fake news embodied the same sensationalist and extremist content.

This trend gathered momentum with the invention of the Gutenberg printing press in 1450. Printing allowed for fake news to become part of the emerging press outlets and could be distributed faster to a larger audience (Soll 2016). The advent of the printing press led to the mass production of pamphlets, books, and treatises that could circulate widely (Vicario et al. 2016). Yet, despite the development of mass printing, and mass circulation of reading material, the development of a code of journalistic ethics, such as truth-telling, did not arise simultaneously: an ethical code that would go in some way to hold journalists to professionalism, and, thus, help reduce fake news from the mainstream. There was also a plethora of news sources in the centuries up to the Enlightenment, around 1700, which were valued as official and unquestioned (Holan 2016). These included religious authorities, accounts, official publications, eyewitness accounts by sailors and merchants – all with a claim to authenticity. These sources, because of their “sacred predisposition,” could easily become sources of fake news. As a result, fake news emerged from such “valorized” news sources and circulated easily. When spread by the so-called trusted sources, fake news could lead to deaths and the displacement of communities. For instance, on Easter Sunday in 1475, in Italy, a two-and-a-half-year-old boy called Simonino disappeared (Soll 2016). The Catholic preacher of the city spread fake news blaming the Jewish community for abducting the boy, beheading him and drinking his blood for ritual sacrifices (Soll 2016). The result was the public lynching and beheading of many Jewish people in the town. Others were displaced as the fake news spread (Soll 2016). Christian-Jewish hostilities that have culminated in violent anti-Semitism can equally be traced to the propagation of fake news (Myles and Crossley 2012; Kaplan 1985). The cultivated fake narrative that Jewish people drink children's blood as ritual sacrifice can be traced back to this period (Kaplan 1985).

Such fake narratives about other ethnic groups have proved to endure over time, and they have provided fodder with which other ethnic groups have later been treated. For instance, Goebbels' anti-Semitic propaganda of the twentieth

century, which led to the Holocaust, thrived on such ancient and false myths about the Jewish people (Ivanova 2019). Between 1500 and 1600, as printing expanded and became commercial and dominant, fake news emerged as instrumental to boosting circulation figures (Standage 2017). News books or pamphlets ran fake stories of weird sightings. For instance, in 1654, a Catalonian news book reported the discovery of a monster with goat's legs, a human body, seven arms, and seven heads (Standage 2017). In 1611, an English pamphlet reported a Dutch woman had lived for 14 years without eating or drinking (Standage 2017). These are classic instances when fake news was intentionally manipulated as a commercial strategy. The invention of the printing press in the mid-1400s, like the invention of the Internet, increased the speed at which fake news could spread.

The coming of the Enlightenment, from the seventeenth to nineteenth centuries, was characterized by widespread philosophical and intellectual ideas, the growth of the (printed) mass media as we know it, and more fake news. These two centuries witnessed the overt practice of fake news production in mainstream media publications. This may be attributed to the intense commercialization of the media, which roughly began in these two centuries, or at least gained impetus. Like today, newspapers then began to source funding from advertisers. This exerted pressure on editors to pursue readers at all costs in order to attract advertisers (Mott 1942). Secondly, the period between 1700 and 1900 was characterized by political revolutions in many parts of the world, for example, the American and the French revolutions. Moments of political upheavals like these produce anxieties and are fertile ground for fake news (Joubert 2020). Through frequent publication of fake news surrounding “outrageous” French demands for a loan before negotiations, the press attempted, through fake news, to stir public opinion towards war.

From 1700 onwards, fake news evolved further, becoming a costly phenomenon associated with enormous loss of life. For instance, in 1761, a fake news story circulated in the city of Toulouse about Antoine Calas, who was alleged to have been murdered by his father, Jean Calas (Holan 2016). The fake news gained official recognition and the father was convicted, publicly tried and hanged. Concurrently, in the U.S., racial tensions became grounds for the propagation of fake news (Knopf 2017). The Lisbon Earthquake of 1755 sparked the production of an entire genre of fake news (Soll 2016). Fake news pamphlets spread stories that the earthquake was divine retribution against sinners, and that survivors owed their lives to the divine apparition of the Virgin Mary (Soll 2016). Across the Atlantic, in the U.S., African-American relations of the eighteenth century proved to be a “cottage industry” of fake news. For example, fake news swirled around imaginary and strange crimes committed by slaves around the U.S., including

bestiality, cannibalism, and other weird and unverified accounts (Petty 2003; Turner 1993). The French revolution, which dominated the eighteenth century, became notorious for its production of fake news (Burkhardt 2017). For example, fake reports of counter-revolutionary forces from Belgium mobilized at the behest of the beleaguered queen (Darnton 2017). These fake news stories about Marie Antoinette contributed to her harsh treatment by revolutionaries and subsequent demise on the guillotine (Petty 2003; Turner 1993). In past centuries, before the digital era, it was not easy to verify if news was true or fake. This gave false news stories the same credibility and legitimacy as true stories, since fact checking, or debunking, was much more difficult in a time of information scarcity. The increasing veneration of the principles of truthfulness, objectivity and integrity began to inhibit the spread of fake news, especially in the 1900s. The absence of such standards was in itself a contributing factor to fake news. There were no professional norms which could be used as a measure of deviation or standard reporting. Newspapers evolved to be more professional (Raymond 2013), but the seeds of fake news had already been sown and were growing.

## 2 Fake News in the Modern Age (1800–1945)

### 2.1 The Spanish-American War and the Birth of Yellow Journalism

The early-1800s saw a turning point for news media and journalism in the United States with the advent of what became known as “yellow journalism.” In this era (Emery 1972), societies were subjected to a steady diet of fake news. As Burkhardt (2017) notes, it was competition to break the news first and attract more readers and advertisers that led to fake news in this period. In 1835, the editor of *The New York Sun* ran a series of articles about astonishing sights witnessed by the British astronomer, John Herschel, from his observatory in Cape Town, South Africa (Standage 2017). The paper’s editor, Richard Adam Loche, ran stories of observed great man bats that collected fruit and held animated conversations on the moon, along with blue-skinned goat-like creatures (Standage 2017). A total of six articles of these sensational observations became known as the Great Moon Hoax. The stories were initially believed, and despite the false nature of these articles, the paper’s daily circulation shot up from 8,000 copies to 19,000 copies, ushering in the era of yellow journalism (Standage 2017). The newspaper never issued a retraction (O’Brien 1918).



The years of 1860–1920 ushered in the age of mass-circulated newspapers in the United States (Lutes 2011). The American Civil War (1861–65) saw the creation of large-scale war reporters and the use of the telegraph in wartime for faster transmission of information (Andrews 1964). After Joseph Pulitzer bought the *New York World* in 1883, and William Randolph Hearst acquired the *New York Journal* in 1895, they found themselves competing for increased readership, relying on tactics of sensationalism and scandal. In a battle to increase the circulation of their respective newspapers, Hearst and Pulitzer engaged in fierce competition, which historians refer to as the first press-driven war (Lutes 2011, 97–101). The Spanish-American War gained the support of the American people, who had previously opposed intervention in Cuba, largely through sensationalist and fabricated stories in the newspapers of Hearst and Pulitzer. These stories weaved invented tales of oppressed Cubans, persecution by the Spanish, and in great need of American military intervention. American sympathies grew as the papers published, though support for a war was not explicit (Cinquemani 2014). In 1898, the sinking of the USS *Maine* in the port of Havana, Cuba, killed hundreds of those aboard. Both papers were quick to blame the Spanish without any basis, with headlines reading “The Spirit of War Pervades the Breasts of All Americans” and “Maine was Blown up by a Mine or Torpedo”, and urged the government to respond (Swift 1899). This reporting spurred Americans into action, including Theodore Roosevelt, who assembled a cavalry regiment, soon dubbed the Rough Riders by the press (Musicant 1998).

## 2.2 The Boer Wars

Preceding the Second Boer War (1899–1902), Britain’s Forster Education Act of 1870 increased literacy rates and, as a result, the readership of newspapers rose and new papers were founded, including the *Daily Mail* and *Daily Express*. As a result, information consumption during the Boer War was vast compared to any wars of the past and the *Daily Mail* reached over a million people daily (Thompson 2000). Throughout the war, the Boers were presented as backward, savage, and primitive, compared to the more advanced British. Though there were more newspapers at the time than ever before in British history, nearly all were in favor of the war (Morgan 2002, 1–16). The war was also the first in which photography was able to be featured so prominently, initiating the era of photojournalism, as well as photo manipulation and use for disinformation (Morgan 2002, 1–16). Reporting focused not on the deaths of Boer children and their mothers in British concentration camps, but on the mothers being ignorant about nutrition

and their children's health (Krebs 2004). A photo taken of an emaciated seven-year-old girl, Lizzie van Zyl, an inmate of a camp in Bloemfontein, was released in 1902 by *The Times*. This photo was used as a way to persuade the British public that Boer mothers were mistreating and neglecting their children as a further method of dehumanizing the enemy, which served to garner support for the war (Godby 2013, 171–183).

### 2.3 World War I (1914–1918)

The first of the World Wars brought about the foremost use of widespread mass media and government-backed and propagated fake news (Keil 2017). While today most news outlets claim a degree of freedom and objectivity, in 1914, they expressed political leanings more openly (Paddock 2004). A lack of first-hand information from the front lines due to a banning of journalists by many countries also contributed to incomplete or inaccurate information (Beurier 2014).

Prior to the American entry into World War I, stories of the atrocities appeared in magazines and newspapers (Kingsbury 2010, 66–68). When the *Lusitania* sank in 1915, a new wave of propaganda and disinformation arose. Of the most circulated fake news stories was one of a mutilated Belgian baby, purposefully harmed by German soldiers. This story was unique as it became transoceanic, spreading across America as well as France, appearing in *Le Rive Rouge* with photos allegedly depicting Germans eating the hands of the baby. Despite the implausibility of the survival of these handless babies and children, many claimed to have seen them first-hand (Graves 2007). Other stories included a nurse mutilated by German soldiers, crucified Canadian soldiers, as well as some of the first instances of doctored photographs (Ponsonby 1929). In the last months of 1914, the attention of citizens was turned towards Russia, with the idea that their soldiers passed through Great Britain on their way to the Western Front. Despite being false, this rumor spread around the country with myriad reports of citizens spotting Russian soldiers (Ponsonby 1929). These reports were published by *The Daily News*, *The Daily Mail* and others.

Concurrently, the British forces made calculated efforts to gain support and persuade China to take part in the war (Ponsonby 1929). As a strategy to vilify their German enemy, British propagandists developed atrocity propaganda and concocted the story of the German corpse factory, detailing how Germany was using the corpses of their soldiers as sources for fat during the British naval blockade (Knightley 2000). Though rumors had circulated since 1915, the story first appeared in the English-language press in China, *North China Daily News*, in early 1917. Several months later, the story appeared in articles in Britain's

*Daily Mail* and *The Times*. The effect was achieved and, in August 1917, China entered the war. In 1925, it was admitted by parliamentarian John Charteris and Secretary of State Sir Austen Chamberlain that the story was fabricated (Neander and Marlin 2010). Atrocity propaganda was used by all sides of the war, with stories of soldiers further mutilating women and babies spreading widely across Europe and the U.S. (Lawson 2020).

French newspapers during the time of the war tended to suppress news of enemy advancement and inevitable defeat and were some of the most censored press in Europe (Beurier 2014). In a time when the civilian population was hungry for information from the front, the first months of the war provided very little official information as journalists were barred from reaching the front. Newspapers invented letters and rumors to provide text for articles and to contribute to morale. News of how close the front was were also skewed in the press. Until August 1914, through news reports, the public had believed that the French troops were winning in Belgium and Alsace, when, in reality, the front ran from the Somme to the Vosges rivers, much closer than reported. News stories around the 1914 Battle of Marne exemplified this strategy, with papers stating that Germans were using shells made of cardboard, or that they had lost five million troops (Demm 2017). On the German side, though the army had to enact a quick retreat, leaving behind 50,000 prisoners, the German press proclaimed the capture of prisoners and French canons. Much of the false information disseminated in France at the time came more from a lack of authentic reporting and access as opposed to an orchestrated disinformation campaign. Interestingly, most of the exaggerated or invented accounts faded away as news from the front and first-hand military reports and photographs started to be supplied in 1915 (Beurier 2014).

The situation in Russia was somewhat different at the time, primarily due to the 40% literacy rate and low circulation of newspapers, as well as a lack of an overall cohesive and patriotic society. However, the will to fight against a common threat was apparent, and the public needed very little motivation to back the war effort. Despite the lack of a coordinating propaganda body, like Great Britain's, Russia spread disinformation through its 4<sup>th</sup> Department of the Quartermaster-General of the General Staff along with the press bureau of the Headquarters of the Supreme Commander-in-Chief with the aim of providing propaganda materials to newspapers (Medyakov 2014). The primary narrative was that the enemy was violating laws of war, along with the "otherization" of the Germans and their influence in Russian culture. The Russian press employed narratives of German orientalism, portraying their barbaric tendencies, and, in effect, positioning Russia as a champion of "the West" while Germany represented the East. Russian newspapers printed stories of the rapes and beatings of Russian tourists in Germany, and the city of Kalisz became a propaganda

example of German atrocities, which led to the anger of the Poles as a consequence (Medyakov 2014).

One piece of false information, deemed misinformation, that travelled around the globe on November 7, 1918, was that of the armistice. This news, greeted by celebrations and cheers from Canada to Argentina and beyond, however, was not true. The news was spread in large part due to the United Press Agency president, Roy Howard, himself in France, who received a cable that stated Germany had signed the armistice agreement, fighting had ceased and the German-occupied town of Sedan had been taken by the U.S. military (Smith 2017). The message was transmitted to the British and the U.S. without passing French censors because they had left the building to celebrate. The message was received by Reuters who then circulated it among British papers, only to send a follow-on message 20 minutes later to correct the story, but the news had already spread (Beard 2016, 73–77). Work across the U.S. and Great Britain ceased, shops closed and workers abandoned their offices (Beard 2016, 73–77). The reputation of Reuters suffered greatly as a result and the Associated Press called for the court-martialing of Roy Howard, and for the United Press Agency to fund the clean-up of New York City following the celebrations of November 7. Ultimately, no real repercussions were conferred (Smith 2017).

### 3 World War II (1939–1945)

World War I served to lay the groundwork for disinformation in World War II and Germany did not forget Britain's disinformation campaigns. The stories in the foreign press about Nazi atrocities were easily decried by the Nazis, citing the corpse factory hoax of the previous war, by then known to Germans as disinformation (Neander and Marlin 2010).

Technology saw further developments in the interwar period, with radio reporting becoming more popular and relied upon for information. The outbreak of World War II is simply traceable to a single, well-crafted disinformation item. Faced with citizen fatigue from losses in World War I, motivation to enter another war was not forthcoming (Luckert 2019). In this section, we will outline examples from Germany, Great Britain, the Soviet Union, and the United States.

In August 1939, following months of reporting ethnic violence against Germans in Poland, a new plan was sought to bring about a reason to invade Poland. Orchestrated by Hitler, a radio station in German territory at Gleiwitz was raided by SS operatives in Polish uniforms. Incendiary words were broadcast in Polish, and several concentration camp inmates and prisoners were killed and

left as proof of the violent raid (de Zayas 1992, 383–399). After U.S. correspondents were called the next day to view the damage, this false flag operation was reported widely in the United States and Great Britain. Germany invaded Poland that same day. While the intent behind the German initiation of the event and subsequent reporting was clear, those reporting the news in the West could be seen as disseminators of misinformation, without the explicit intent to mislead the public (Godson and Wirtz 2008). Fake reports abounded during this time, including information that German soldiers were receiving syphilis-tainted blood from captured Polish and Russian soldiers (Shaer 2017).

The strongest disinformation was certainly directed at those of Jewish decent, heavily vilified and demonized so as to provide a basis for atrocities to be willingly committed against them. The *Wehrmachtbericht*, a daily radio broadcast from the High Command of the Wehrmacht, was one of the primary sources for disinformation at the time, including portraying Operation Barbarossa in 1941 as a success against the Soviets, as opposed to the reality (Stahel 2009). The radio channel broadcast news about President Roosevelt being Jewish, Jewish crimes and false German victories (Murawksi 1962). All newspapers and information were controlled by the state, with the most widely disseminated newspapers, such as the *Völkischer Beobachter* (People's Observer), spreading stories of near-constant Nazi success in the war, plans to attack the United States for countering anti-Semitic policies and widely blaming most negative events on the Jewish people.

Much of German news revolved around the protection of Europe from the enslavement of Communism, and less so around pure German protection (Rhodes 1983).

No stranger to orchestrated propaganda campaigns at this point, Soviet disinformation during the period of World War II included stories of German killers, cannibals, widely circulated in the newspaper *Pravda* amidst general stories of fascist Germans. The overall Soviet disinformation machine would develop more after the war as the Cold War took hold. The primary narratives of the time were that Germany wished to exterminate the people of the USSR, atrocities committed by the Germans, the strength of the Soviet army and emphasizing the use of German allies for the most dangerous missions (Overy 2004).

The Ministry of Information of World War I in Great Britain was revived during World War II, making use of not only newspapers, but the now-popular cinema, as well as radio. One notable instance was that of the 1939 sinking of the SS *Athenia*, in which Americans, Canadians, and British were killed on the first day of the war. It was exploited as a way to invoke the same terror of U-boats from World War I. However, the Germans continued to deny involvement in the incident until the 1946 Nuremberg Trials, largely based on the fear that

the United States would be persuaded to join the war should this attribution be made. The Ministry also disseminated information that the Katyn Massacre in Poland in 1940 was staged by the Nazis, information that was believed by the British public until well after the end of the war (Roberts 2012). Meanwhile, Germany used the massacre as a way to exaggerate Soviet crimes and further vilify their enemy.

The U.S. entrance into World War II was largely a result of the daring Japanese attack on Pearl Harbor on December 7, 1941. But the very entrance of the United States into World War II may have also been based on a large piece of fake information in 1941 – that President Roosevelt was in possession of a secret Nazi map, outlining a reorganization of South and Central America, and the idea that Germany had their sights set on dominating the United States. Years later, it was discovered that the map itself may have been made by the British. Whether or not the president knew this is unclear (Blanding 2019).

Much of the disinformation and false stories circulating in the United States during this time involved a significant racial undertone, specifically anti-Japanese. The hysteria in newspapers of the time included fake stories of the mistreatment of prisoners, bayonetting Hawaiian babies, along with spreading the narrative that Germany had encouraged Japan to attack Pearl Harbor in 1941 (Dower 1987, 43–44). Meanwhile, both Germany and Japan were disseminating leaflets dropped on U.S. troops that black men were violating white women while white men were at war, which went as far as a Japanese short-wave radio station broadcasting news of lynchings and discrimination against African-Americans in the United States, often voiced by African-American prisoners of war. These nuances of pitting one nation's race against the minority and vice versa were also seen later in Cold War disinformation (Brack and Pavia 1994, 671–684).

## **4 Fake News in the New Information Age (1945–1995)**

The end of World War II did not mean that massive information campaigns ceased. During the ensuing Cold War (1947–1991), disinformation laundered by the Soviet government through the news outlets of other states resulted in some of the greatest hoaxes and disinformation campaigns that the public still remembers today. By using a blend of covert and overt methods, the Soviet government attempted to influence events and behaviors abroad, including government action. Strategies also involved discrediting and weakening governmental opponents, creating forgeries, as well as the purposeful dissemination of false information to be spread by

Soviet-friendly media (Cull et al. 2017). The most notable case was Operation Infektion, the story that the U.S. invented AIDS. By using a number of proxies and Soviet-friendly news outlets, it began in the *Patriot* newspaper in 1983 and spread outwardly across the world. This widespread campaign is illustrative of the Soviet Active Measures pattern of dissemination. A piece of information or story was given to an outside source, not known to be Soviet-affiliated, where the news would break. The story would then be picked up by Soviet news, citing the international investigative sources in a process of circular reporting or false confirmation to show legitimacy (U.S. State Dept. 1987). The impact through time has remained strong, with a 2005 RAND study revealing that 50% of Americans believed that AIDS was man-made and 25% that it was made in a government laboratory (Boghardt 2009).

To counter this threat, the United Kingdom created the Information Research Department, a covert research facility to respond to Soviet Active Measures, primarily active in the 1950s–1960s. The department created their own forgeries to be disseminated covertly, to include press releases and fake copies of *The Times* of North Korea depicting communist propaganda (Thomson 2010). The majority of the stories were circulated to maintain a constantly negative view of life in the Soviet Bloc. The department supplied materials to the *BBC World Service*, funded Reuters and assisted greatly in bringing down the Indonesian Communist Party through radio and newspapers to emphasize and exaggerate news of murdered Indonesian generals and their families (Thomson 2010). The department was also later involved in false information surrounding the “Troubles” in Northern Ireland. Media outlets such as *News of the World* featured invented tales of Soviet involvement in shipping rocket-launchers to Ireland and sightings of Soviet tankers off the coast of Ireland, as well as disseminated other fake news stories about the Irish Republican Army.

Following World War II, South African media took after the British model, with relative freedom and independent expression (Kolbe 2005). However, following the 1948 rise to power of the Nationalists, the press was significantly restricted and gave rise to considerable disinformation. Within the apartheid government, the Stratcom Department was created to spread messages and create campaigns to discredit their opposition (Knight 2020). A former employee of the department, Paul Erasmus, stated that the primary role was to “disseminate negative propaganda or disinformation against its enemies or perceived enemies” (Knight 2020). These Stratcom agents placed letters to media outlets on their doorsteps at night; the next morning, these pieces would become headline local news. Internationally, Stratcom, via Erasmus under a pseudonym, even published a smear-campaign piece in the U.S. magazine *Vanity Fair* about Winnie Mandela. This campaign to



discredit Mandela was entitled Operation Romulus (South African Press Association 1997).

In the 1970s and 1980s, during apartheid in South Africa, the controlling regime had to rely on fake news in order to “take the offensive against those in opposition” (Nixon 2016, 71). The regime launched an operation codenamed “Acoda” – or “Operation Heartbreak” to try and influence political opinion in the U.S. and Europe. This operation involved the spread of fake news and propaganda on a massive scale to try and influence international public opinion (Nixon 2016). It is instructive to note that De Clerk, the last apartheid president, dismantled the propaganda apparatuses that had sustained the regime for about 50 years (Nixon 2016). Much of the propaganda was based on fake news stories of political reforms and black African terrorism which made it difficult for inclusion and reconciliation. The South African “Afrikaner media” (Kolbe 2005) ruthlessly spread fake news in order to delegitimize the anti-apartheid struggle. One consequence of this fake news strategy by the Afrikaner press was that it successfully split the anti-apartheid forces in the country (Kolbe 2005).

## 5 Fake News in the Digital Media Age (1995–Present)

In the digital media age, fake news has become an even greater concern, largely due to the ability of technology to facilitate the spread of information much more quickly than before. This is especially apparent during momentous events like war and elections (Kurtzleben 2018). Fake news and strategic disinformation during elections, wars, and other conflicts such as terrorist attacks, can be seen in different formats. These range from the proliferation of emotionally charged online fake stories, false vitriol aimed at certain groups, unverifiable sensationalist stories and outright lies about a political party or candidate (Cantarella, Fraccaroli, and Volpe 2019). Hartmann (2017) notes that, during elections, bots on social media platforms such as Twitter and Facebook have been responsible for the spread of fake news. Fake accounts on these platforms have also been responsible for “ideologically extreme, hyper-partisan or conspiratorial” stories about election candidates (Hartmann 2017). Facebook, for example, had to suspend about 30,000 accounts that propagated fake news during the French elections in 2016 (Hartmann 2017).

The account of fake news during the 2016 elections in the U.S. is by now a very familiar story (Kurtzleben 2018; Gunther, Beck, and Nisbet 2018). The Hillary Clinton-Donald Trump campaign generated a lot of fake news that is now



well-documented in the academic literature (Kurtzleben 2018; Gunther, Beck, and Nisbet 2018 and many others). In fact, both sides of the U.S. political divide were victims of fake news both domestically and as part of orchestrated disinformation campaigns, now attributed to the Russian Internet Research Agency. There was, for instance, a fake news story that Trump had a secret server that allowed him to communicate privately with Russian banks. The fake story went viral on online news spaces in the US. Pizzagate was also a notorious story alleging Hilary Clinton was involved in a child slavery ring operating out of a pizza restaurant in Washington D.C. This led to an armed man going to the restaurant to free the (non-existing) children. After the election and subsequent investigations the narratives spread, creating bigger rifts between political parties, widening racial divides and sowing general discord in the United States. Many of the accounts spreading disinformation in 2016 are still active today.

In the global south, particularly in Africa, Mumbere (2019) notes that elections on this continent “have a fake news problem.” The concern with fake news in Africa has grown with each passing election. In 2018, in southern Africa, for example, Zimbabwean elections were riddled with fake news (Mumbere 2019). There was a fake news story explaining that the leading opposition candidate, Nelson Chamisa, had pulled out of the election (Associated Foreign Press 2018). In Malawi, Kondowe (2019) notes that WhatsApp had been the biggest propagator of fake news in the country’s 2018 elections. Kondowe notes that one of the most notorious fake news stories of the Malawian election was that popular Nigerian prophet, TB Joshua, had prophesied that the opposition candidate, Saulos Chilima of the United Transformation Movement, would win the election. In a continent where prophets are revered, this fake news story, according to Mumbere (2019), had the potential to change voter opinions or cause election violence in fragile political environments. TB Joshua had to issue a statement denying the prophecy and dissociating himself from the elections.

In war and terrorist conflicts, fake news has become a preferred weapon (Husseini 2018). One characteristic of fake news during wars has been the circulation of often old and unrelated images to either “confirm” the savagery of either the conflict or one side in the conflict. This has been prominent in war contexts such as the Syrian War (Husseini 2018). In Syria, Husseini (2018) notes that the conflict has become a fertile breeding ground for bizarre fake news stories including unverifiable tales of cannibalism, dramatic rescue stories, unverified stories of extreme torture and many more. This has also been the case of the Boko Haram conflict in Northern Nigeria (Associated Press 2019). This has given rise to wild stories of Boko Haram insurgents drinking the blood of their victims with such stories pushing the ethno-religious conflict (Associated Press 2019).

In the digital age, there are four general characteristics that have generally defined the character of fake news (Kurtzleben 2018). First, fake news is rampant during momentous events like wars and elections. Second, it is spread by fake social media account profiles, bots and propagandists (Gunther, Beck, and Nisbet 2018). Third, fake news stories play into peoples' already existing biases and beliefs. Last, fake news goes viral quickly, which makes the argument that fake news is a platform problem valid. The consumption of news on social media platforms has facilitated the speedy increase in the quantities of fake news being consumed. New developments in technology, from deep fake videos, bots increasing the spread of information to record levels, as well as an increase in artificial intelligence and machine learning to create and distribute news, are potential current and future trends. However, as with any new technology, the advance is often faster than the ability to counter it.

## Conclusion

The importance of historicizing and exploring this concept through the lens of extended history is to provide researchers, citizens, teachers, politicians and indeed anyone who comes into contact with information with the knowledge that the answers to today's current disinformation phenomenon may lie in learning from the past. The increased attention to the field of disinformation and fake news, while beneficial to build societal awareness of the issue, can also be problematic. It has been shown throughout this chapter that the generation of fake news can be politically or financially motivated, or sometimes the motivation is a combination of both. However, to dismiss all fake news as a scheme by media outlets to attract readership through salacious and misleading content disregards the very real and often malicious intent behind spreading fake news, disinformation, and other items that fall under the umbrella of the ecosystem of fake news – namely, information warfare or information operations. In these instances, as noted above in the cases of Soviet Active Measures or activities conducted by the Internet Research Agency, information is weaponized to create mass confusion, sow discord and generally pollute the information environment, and less so for monetary gain.

The common thread of all forms of disinformation in the past is their target – the human mind. By critically examining these tactics and the spreading of disinformation, along with societal effects, we become more aware of when similar tactics are deployed. By enhancing critical thinking skills, media literacy and general historical awareness, it is much easier to discern between real and

fake news (Jones-Jang and Mortenson 2019, 1–18). Fact-checking organizations, non-governmental organizations that work with the public to build awareness, along with governmental efforts to be more transparent and build public trust are all efforts currently deployed to help stop the consumption and spread of fake information.

Standardization of terms to replace these “floating signifiers” (Farkas and Schou 2018, 298–314), which tend to be vague and empty of meaning, yet used ubiquitously, would also further debates and research in the field. The term “fake news,” while a very straightforward phrase, does little to break down the categories, motivations and significance of items of false information, nor does it help stop their spread. The term is frequently co-opted by anti-democratic voices to encourage censorship, which is also greatly problematic. The Ethical Journalism Network, The European Parliament (Bayer 2019) and others have put forward clarifications to standardize the discussion between academics or member states. However, there is no concrete terminology reference. In fact, counterproductively, new terms are often introduced (Vilmer et al. 2018) without attempts to further refine or clarify already existing terms. This is especially problematic in academia when myriad terms are used in journal publications to essentially refer to the same topic even though, due to differing terms, they are often not read or referenced in conjunction.

As we look towards the future, both from a technical and societal viewpoint, there is no indication that the creation, spread, and consumption of disinformation, malinformation, or misinformation will cease. In order to create resilient societies, states must increase trust in public institutions, work together with social media and news platforms to ensure transparency and quality reporting without infringing on freedoms of expression as well as bolstering the awareness of society to provide a foundation for quality news consumption.

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Maria Löblich and Niklas Venema

## Echo Chambers

### A Further Dystopia of Media Generated Fragmentation

**Abstract:** With his reflections on echo chambers, American legal scholar Cass R. Sunstein provided one of the most prominent buzzwords for pessimistic views on online communication. Although it refers to the latest changes of the media environment, the idea of echo chambers replicates past worries regarding fragmentation of public discourse. Statements about internet users and their selective exposure form the cornerstone of the echo chambers argumentation. Against this background, the chapter analyzes the concept of echo chambers in a historical perspective on media use. It provides a history of ideas and discourses on audiences as well as a social history of media use and its relations to the public sphere. Research shows that the concept of echo chambers and earlier depictions of fragmentation are based on rather simplistic assumptions regarding media use.

**Keywords:** public sphere, media use, fragmentation, polarization, history of ideas, social history

Digital media “have generated another wave of great expectations and concerns about the place of the media in a public sphere” (Butsch 2011, 162). Cyber-optimists have, sometimes in revolutionary rhetoric, emphasized “the democracy-enhancing potential of the online public sphere” (Trenz 2016, 10). While until around 2010 such great expectations prevailed, since then critical voices have become louder. The “cyber-pessimists” have worried about the “fate of the public” (Splichal 2012). One of their concerns has been that “a further fragmentation of user communities [. . .] might promote monologues in segregated blogospheres but no dialogue in an integrated public sphere” (Trenz 2016, 10). The concern of emerging echo chambers as fragmented communication spaces reinforcing views among certain groups has been heavily influenced by Cass Sunstein. His book *Republic.com* and its two successors have become one of (Sunstein 2001; 2007; 2017) if not the most visible contribution to this pessimistic view (Gripsrud et al. 2010, xv; McLeod and Lee 2012, 203).

Despite the drastically changed media environment, a lot of the echo chambers concern echoed past worries. Like earlier authors, Sunstein and the ensuing empirical research identified the fragmentation of audiences and media users’ behavior to be the cause for the dissociation of the public sphere. Unlike



earlier authors, Sunstein excluded the other main cause for this danger, the monopolization of media companies and communicators (Averbeck 2000; Gripsrud et al. 2010, xxii–xxiii). The US-American scholar explicitly focused on the “consumers of information,” not on the side of “producers” such as large internet companies (Sunstein 2001, 17). Like earlier authors being concerned with the relation of people to the public sphere, he had to draw on a concept of media audiences (Butsch 2000, 2). Statements about internet users and their selective exposure form the cornerstone of the echo chambers argumentation. Therefore, we approach our historical investigation into echo chambers from the perspective of media users in their relation to the public sphere. We do so in a twofold way: firstly, as a history of ideas and discourses about audiences (Butsch 2000; Mihelj 2015) and secondly as a social history of audiences (Eichner et al. 2020).

Section 1 sets the assumptions of Sunstein’s book in the “continual flow of worries about social disorders arising from audiences” (Butsch 2000, 2). Section 2 raises several questions in this regard. Which similarities and differences exist between Sunstein’s echo chambers as well as his user construction and earlier problem definitions of political audiences’ relations to mass media and the public sphere? Which causes were identified? This section will show that Sunstein’s contribution echoed past discourses regarding

- media determinism and overarching interest in media effects (on the individual and on society),
- a psychological perspective on media users (and not a sociological one),
- a normative, dichotomous description of media users (“citizens” versus “consumers”) (Butsch 2000, 1–19).

Section 3 searches for the history of some of the phenomena which Sunstein subsumed under “echo chambers.” It focuses on Germany in the late nineteenth century and early twentieth century. What is known about media usage in communication spaces focused on politics back then? Which relation did exist between a politicized press and societal polarization and fragmentation?

## 1 Echo Chambers: User-related Assumptions

The legal scholar Cass Sunstein identified problems in US-American democracy due to “individual choices.” They are enabled by the “rise of endless communication options” (Sunstein 2007, xii) and personalization and cause a “large set of social difficulties” (Sunstein 2001, 5, 14–15). By means of the metaphor echo chambers he described his observation that people “sort themselves into

enclaves” in the internet, “in which their own views and commitments are constantly reaffirmed” (Sunstein 2007, xii).<sup>1</sup> They would either choose offers that fit their views or completely filter out political news in favor of entertainment. Captured in their echo chamber, people would not hear any alternative opinions and issues. Echo chambers – basically, the loss of a common public sphere<sup>2</sup> – threatened deliberative democracy. Fragmentation on the micro-level implied “serious dangers” for the macro-level (Sunstein 2001, 16): polarization (“which can breed extremism and even hatred and violence”) (Sunstein 2007, 44), “hate groups” (Sunstein 2007, 57–60) and “cyber-cascades” (“social cascades,” “in which information, whether true or false, spreads like wildfire”) (Sunstein 2001, 14). With the rise of social media, he reinforced his gloomy diagnosis of the “power of echo chambers” (Sunstein 2017, 17). The 2017 version introduced a whole new chapter on “terrorism.com” and gave “polarization” and “cyber-cascades” more space than before. Sunstein called his work a “dark book” (Sunstein 2017, 263).

His view of internet usage and users is quite simplistic. Sunstein’s restricted online usage to filtering. His argumentation is (implicitly) based on the theory of selective exposure. There is a belief in technology effects:<sup>3</sup> the “most striking power provided by emerging technologies” was “*the growing power of consumers to filter what they see* [emphasis in original]” (Sunstein 2001, 8). The assumption here is basically that people take technology the way it is given to them without considering social adoption, everyday life, motives, and needs apart from affirmative filtering. Neither personal conversation which exposes people with alternative views nor media repertoires (the idea that people use various media types to get information) were considered.<sup>4</sup>

Individuals were ascribed to make “choices” according to “preferences” (Sunstein 2001, 17). The main influences on preferences are the “number of options”, the “market” and “one’s own past choices”. Sunstein (2017, 166) also mentioned “social influences.” However, this term refers to peer groups only. Sunstein used examples from group behavior to show how groups may foster self-isolation, polarization, and hate. He also referred to behavioral science to

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1 *Republic.com 2.0* introduced the term echo chambers, whereas in the first edition words such as “enclaves” and “self-insulated groups” appeared (Sunstein 2001, 75).

2 Sunstein did not use this concept in 2001. In *Republic.com 2.0* he then discussed Yochai Benkler’s concept of the “networked public sphere” (Sunstein 2007, 114–17).

3 For this criticism see also Bruns 2019.

4 In the 2017 version of the book (p. 114), Sunstein asked “What do we actually know about the use of the Internet?” He answers without discussing corresponding studies: “Not nearly enough. But a picture is emerging.”

explain his observation that internet users “voluntarily choose alternatives that sharply limit their own horizons” (Sunstein 2017, 17, 166). First, people tried to minimize efforts “to attend to topics and concerns” others than their own, and second, attention allocation was a habitual process, without much thinking. Users’ behavior according to Sunstein is guided by cognitive biases, conflicts of interests and occasional lack of willpower (Farber 2001, 280). These dispositions were “built into our species” (Sunstein 2017, 18) and serve Sunstein as basis for the plea for “continuing education for adults” and regulation (Sunstein 2017, 167, 176).

In Sunstein’s idealistic view, in the past, the mass media had educated individuals and turned them into “citizens” by providing them with a spectrum of issues and opinions, with “unplanned encounters,” “irritations” and common experiences. The “consumer” (internet usage according to one’s preferences, market driven) opposes the “citizen,” the term for the desired user. The term user is not applied.

There are few historical hints here and there included to strengthen the overall argumentation, mostly without references to literature. There are “some historical notes” on the technical sides of the internet (Sunstein 2007, 157–160), as well as some reflections on past media regulatory attempts. However, mass media history and public sphere history are widely neglected. Mass media’s performance is (consciously) idealized as non-ideological universe. Communication studies do not play a significant role. Critics have argued that empirical findings on newspaper and television exposure would trouble the “over-generalized conceptualization of internet use” in his work (Hardy, Jamieson, and Winneg 2010, 135). According to other voices, Sunstein provided “a good deal of theoretical speculation” on echo chambers (Brundidge and Rice 2010, 145).<sup>5</sup> Overall, the theory of selective exposure has received “only mixed support” (Brundidge and Rice 2010, 151).

Used as a metaphor without much reflection or criticism,<sup>6</sup> the term echo chambers has anchored in communication studies. It has been stimulating empirical research on selective exposure online and ideological segregation for several years. Both theoretical work and empirical evidence have remained weak. Usually, the theory of selective exposure is simply mapped onto the internet.<sup>7</sup> Echo chambers and related buzzwords such as Eli Pariser’s filter bubbles (Pariser 2011) are only

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<sup>5</sup> Sunstein for instance speculated that mass media could generate effects such as polarization and fragmentation, however, “when they are working well [. . .] polarization is far less likely to occur” (Sunstein, 2007, 71–72).

<sup>6</sup> See for instance the reviews by Calvert (2003), Webster (2008), Zhou (2017).

<sup>7</sup> Jamieson and Cappella (2008) are an exception. They transferred the metaphor to traditional mass media in the US and reflected on how changes of media structure promoted echo chambers. They also discussed linkages to media effects theory.

poorly defined. Basically, while echo chambers are described as communication spaces connecting like-minded people and allowing them to reinforce their views, filter bubbles are said to isolate such groups from contrary perspectives. Apart from single platform studies, these interwoven theoretical speculations lack empirical support (Dubois and Blank 2018; Jungherr, Rivero, and Gayo-Avello 2020). Historically, the long tradition of research on selective exposure to mass media is probably also due to article lengths, rather mentioned than discussed. The same applies to the large number of variables moderating the role of dissonance and consonance (Donsbach 2009, 141; Jungherr, Rivero, and Gayo-Avello 2020). Scarce references to past media environments date back to cable TV, roughly two decades in the past.

## 2 Historical Discourses on Audiences and their Relation to Public Sphere

We contextualize Sunstein’s echo chambers ideas in three historical lines of thought. The first one is democracy and public sphere theory. The second one is the broader historical discourse on audiences and the third one is mass communication research.

Sunstein referred to British and US-American political philosophy to substantiate his ideas on freedom, deliberative democracy and the idea to meet people dissimilar to oneself. John Stuart Mill and John Dewey stand out among the authors he cites (Sunstein 2001, 15, 217; 2007, 212; 2017, x–xi, 252–253). With these sources he cannot be considered a public sphere theorist in a narrower sense. Habermas’ *The Structural Transformation of the Public Sphere*, being one of the most influential works in this field, also in the US, does not play a role.<sup>8</sup> Consequently, the term public sphere does not appear in his book. Instead, Sunstein used the word public. With past thinkers of democracy such as Mill he shares the idea that a public<sup>9</sup> is essential “since without common attention, common issues and some kind of synthesizing of dispersed opinions there can be no well-functioning public rule” (Gripsrud et al. 2010, xv). By referring to Dewey, Sunstein was able to emphasize the public, the collective of citizens

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<sup>8</sup> He critically discussed Habermas’ speech ideals in *Between Facts and Norms* regarding the “blogosphere” (Sunstein 2007, 144–145). The legal scholar, moreover, was (like John Rawls and unlike Habermas) convinced that the supreme court of a democracy incarnates the “public reason” (Gripsrud et al. 2010, xix).

<sup>9</sup> For a definition of this concept see Gripsrud et al., xiv.

who are responsible for public debate. Moreover, with Dewey's thoughts he could base his (voluntary, self-)regulatory proposals in order to avoid echo chambers on the idea that democracy needs "the improvement of the methods and condition of debate" (Gripsrud et al. 2010, xviii).

From the rise of the commercial press in the nineteenth century throughout the twentieth century, causing first vast mediatisation effects, pessimists of public sphere have regarded newly emerging, privately owned media "as platforms for populist deviations from Reason," as channels for propaganda or "filled with trivia and sensations that deflect attention away from pressing political issues" (Gripsrud et al. 2010, xvi). Sunstein shared these negative descriptions of (private) interests steering public communication. New (social) media are potential tools for manipulation and persuasion.<sup>10</sup> Regarding causal attribution, his analysis differed from earlier pessimist thinkers. Commercialization has been seen to be a central cause for fragmentation and dissociation of public sphere. German social theorists for instance identified the monopolization of press business as a main reason for the disaggregation of public sphere (Averbeck 2000, 97). Sunstein was far away from analyzing the capitalist organization of media (Sunstein 2001, 17; 2017, 28), pursuing a quite technical understanding of media ("communications system," "new technologies"). He was skeptical of "consumer sovereignty" (Sunstein 2007, 38). People are not treated as "citizens," instead "we act as if the purpose of a system of communications is to ensure that people can see exactly what they 'want'" (Sunstein 2007, 40).

The next step shows how Sunstein's gloomy thinking about democracy and internet users can be contextualized in the broader historical discourse about audiences. These discourses were largely led by elites (Bourdon 2015, 15).<sup>11</sup> Audiences have been worrisome for elites probably since there were media or public forums, in which opinions other than the ones controlled by power holders could be articulated. Research indicates that worries have increased since relatively autonomous, diversified mass media started spreading into everyday life from the end of the nineteenth century on and throughout the twentieth century in the US

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**10** "Polarization entrepreneurs," "hashtag entrepreneurs," "hate groups" and "extremist groups" would try to employ these tools creating "cyber-cascades" (Sunstein 2001, 14; 2007, 74; 2017, 79).

**11** Reviewers of Sunstein's books have explained his view also by his social position. The Harvard professor has "as elite an education as the US can offer" (Webster 2008, 95). His idealistic view on traditional media reflected the interests of the "dominant members of society" whose interests, unlike those of minority groups, were covered by mass media. The positive communication potentials of the internet for the underrepresented were excluded due to these interests (Chander 2002, 1484).

and Europe. Although the media environment changed, as well as political, social, and economic circumstances, the underlying issues of these debates have always been power and social order (Butsch 2000, 2). In Sunstein's case it was power and social order in US democracy. The historical discourses – led by different institutions such as science, law, policy, economy, pop culture – have usually focused “on the nature of the medium and the psychology of audience members” (Butsch 2011, 164).

Audiences have been described by means of dichotomies (for instance activity/passivity, citizens/consumers, rational/irrational), varying in the assessment to be good or bad (Bourdon 2015, 8). These dichotomies can be found in Sunstein's book, too. In the nineteenth century, “activity” of an individual regarding political participation tended to be evaluated as bad, later on in the twentieth century as positive. “The masses” or “the crowds” in the nineteenth century were feared to violently rise against the order. Would the new industrial and urban workers fulfil their role in a “public” (engaged in reasoned, public discussion on issues of the state)? While crowd psychology regarded the “crowd” to be irrational, easy to be manipulated and impulsive, “publics” represented the positive counterpart. Crowd was replaced with negative media audience terms such as consumer, a term pushed forward by episodes of media commercialization. But “each new term continued to emphasize the emotionality and suggestibility of the audience” (Butsch 2011, 154). Sunstein has conserved elements of this conception as we will describe below. Moreover, the negativity of his users' conception is visible in 1) the exclusion of the citizen empowering sides of the internet as a pool of diverse information and opinion and a tool for civil society's mobilization and protests, and in 2) highlighting internet activities of “hate groups”, “extremists” and “terrorists” (Sunstein 2017, 9, 70, 236). In contrast, the media users with an ideal behavior in public sphere were called citizens in the twentieth century: “educated, informed, cultivated and civic-minded [. . .] capable and committed to their duty as citizens.” Their negative counterpart, consumers, “sought entertainment and self-indulgence, acted on emotion and impulse” (Butsch 2011, 153–154). Societal, political, and media changes have revived concerns about media audiences and their relation to the public sphere. Whereas the rise of fascism in Europe and the spread of broadcasting generated worries about the manipulation of people between the 1930s until the 1950s, since the 1980s in Western parts of the world, a media expansion and differentiation, the end of Cold War, globalization and digitalization (just to name some major trends) revived concerns about audience fragmentation and disaggregation of the public sphere (Butsch 2011, 149).

Sunstein shared with earlier thinkers a skepticism regarding (political) niches being not under control of established institutions and regarding communication spaces where information and opinions can be searched and exchanged uncontained by traditional mass media. Similar to elitist conceptions of democracy theory, there is a paternalistic undertone to Sunstein's user assessment (Sunstein 2001, 67). And

finally, the idea of echo chambers can be seen as part of discourses that are limited and selective in their understanding of the social context and sustenance of publics in a mediated world (Butsch 2011, 164). This aspect directs us to the selective exposure research, which will be the third historical track to contextualize Sunstein.

Sunstein's postulate – that citizens “avoid engaging with opinions that contradict their own's” – has been debated by mass communication scholars in the US and Europe for decades (Hayat and Samuel-Azran 2017, 294). The effects of radio, television, newspapers, and the internet as well as the effects of mixed media environments have been measured again and again. Leon Festinger's cognitive dissonance theory, including the assumption of selective exposure to information (Festinger 1957), is one of the classical studies in this field, although Festinger's book originally did not deal with mass media. Two main strands of behavioristic research traditions on media selection, dissonance, and information reception since the 1970s can be distinguished. On the one hand, there was an approach that tended towards the paradigm of “passive” recipients, assuming irrational behavior in line with dissonance theory (Donsbach 2009, 144). On the other hand, a behavioristic approach followed the idea of an “active” audience. Both research traditions are – to different degrees – “media deterministic,” ultimately sharing an understanding of selection as reaction to media messages (Schenk 2009, 652–657).<sup>12</sup> The issue of how “narrowed domains of political discourse” emerge due to media selection has become a central field of political communication studies (Brundidge and Rice 2010, 150).

Sunstein's work shares several characteristics with behavioristic information exposure research, without, however, quoting much of it (Sunstein 2017, 280–281). First, he drew on media determinism and the belief in media and communication technology effects. Even if intervening variables and a range of factors have been considered, the basic assumption is maintained: effects on attitudes and behavior are ultimately explained by features of present or new media and information technologies. In Sunstein's case, echo chambers are attributed to the explosion of communication options and their algorithmic personalization. He differentiates his argument but nevertheless dramatizes present technology.<sup>13</sup> Second, Sunstein shared modern behaviorism which takes into account that individuals are embedded in some

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<sup>12</sup> German communication scholar Michael Schenk has written that although certain frameworks of selective exposure and information reception consistency attributed “activity” to the audience, “activity” was not introduced as an independent variable but as a mediating “disturbance variable” in the effects process (Schenk 2009, 651).

<sup>13</sup> Whereas Sunstein (2017, 66) admitted that newspapers and magazines also “often cater to people with definite interests in certain points of view,” he relativized this “balkanization” by emphasizing the “dramatic increase in options” due to the internet and “a greater power to customize.”



kind of social relations and that they are capable of rational choice but often decide either irrationally, not “reasonably”, or following dispositions. This kind of behavior is seen to potentially produce negative consequences for society. The psychological approach excludes information selection as interpretive social action embedded in a subject’s everyday life. Societal explanations for narrowed domains of political discourse (e.g., media monopolies, political discourse, media discourse) are mostly disregarded. These exclusions, finally, can be seen to be functional for the ultimate interest: how can people’s opinions and behavior be influenced. Mass communication studies for a long time have called this interest mass persuasion. Being a leading Harvard scholar and earlier Administrator of the White House in the Obama administration, Cass Sunstein’s interest was how human behavior can be effectively shaped by law (Farber 2001).

### 3 Social History of Political Media Usage

The final section explains that the first episode of mediatisation, the spread of mass press in society, had already expanded the choice of information. Information usage in politically focused communication spaces was not only driven by affirmation of one’s world view but by a spectrum of motives. This finding produces awareness of the fact that the spectrum of motives of media exposure is broader than the echo chamber thesis assumes. Communication history also helps to discuss Cass Sunstein’s assumption regarding the effects of media and communication technology on the political system via political information behavior. Historical research suggests that polarization and fragmentation were not simply triggered by an increase of choice due to new communication technologies or types of media. Social, cultural, economic, and political cleavages are important to understand why social groups confirmed, reproduced and fought for their political opinion. These cleavages are also important to understand, why they dissociated themselves from other groups by means of media and which role media usage played.

We choose a limited focus for the purpose of this section. We focus on the late nineteenth and early twentieth century in Germany.<sup>14</sup> There are several

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<sup>14</sup> Research about this time period has widely reflected on the problem of sources in the time before surveys of media users came up. Rudolf Stöber (1998) and Frank Bösch (2004) for instance have used police and authorities’ material, Erik Koenen (2012) an early empirical study in social sciences, Kutsch and Wagner (2014) housekeeping bills. For the spectrum of sources that can be used for audience history research in general, see Jérôme Bourdon (2015) who is also one author of this book (see his chapter on telepresence).



reasons for this decision with respect to geography and time. Unlike the press market in the United Kingdom or France for instance, the German one was highly fragmented around 1900 due to its federalism and decentral Empire structure (Hung et al. 2020, 119). There was a higher number of (local) newspaper titles in the German Empire than in Great Britain (with much lower circulation numbers on average). Moreover, unlike the street sale model in the UK, in Germany subscription dominated, tying readers more strongly to their newspaper (Geppert 2007, 45–46). Choice for readers and close ties to (partisan) newspapers make Germany a good example to discuss assumptions related to echo chambers. The time frame chosen is useful because, at the end of the nineteenth century, a high-choice media environment developed, at first in urban centers. There was a strong quantitative expansion and differentiation of the newspaper and magazine market, as well as of the book and pamphlet market. The amount of news items grew and the number of resorts, articles and topics within one newspaper increased. Readers now could select what to read within a newspaper (Stöber 1998, 269). Other new media such as film and photography started to attract broad audiences. Public libraries offered affordable or free access to all. Mass media became highly significant in everyday life, with differences between the classes. The working class could not yet undertake the expenditures that the middle class regularly made for media offers nor had the workers its temporal means (Kutsch and Wagner 2014). Despite these limitations, reading the newspapers was an important element of workers' habitual leisure activity.

It is well known that, throughout the nineteenth century and far into the twentieth century, societal groups formed by religious, cultural, and political orientation created their own communication spaces and media. Historical research, however, suggests that members of such groups probably did not simply filter news according to their particular world view. This applies at least to the German urban working class around 1900, which we take as an example. A study about the role of the press in everyday bar conversations found a spectrum of motives of newspaper usage during scandals and an exposure to other than reaffirming social democratic papers.<sup>15</sup> Newspaper content was important for bar conversations. It was read for entertainment, emotions, playful use of politics or provided the chance to get social attention. It applies until today's high-choice media environment that journalistic content provides the reader with commonly known issues that more easily than private topics fill conversations in public spaces. While the social democratic press received particular attention, and its arguments were mostly adopted, the (male) pub goer also took note of other partisan newspapers, including mass press (Requate 2006, 128).

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<sup>15</sup> In the following we refer to Bösch 2004.

Workers knew about debates in Parliament with adversarial speakers. Speeches by (mostly famous) politicians with different political stances were picked up by them. Being widely informed promised attention and reputation in the bar, which was a space of particular political orientation. From time to time, conversations brought up the issue of trust in newspapers. This issue required the capability to distance from the “filter” chosen. The newspapers themselves nourished the skepticism by dealing at length with other papers. Here is a parallel to social media in which references to media reality constructions frequently occur (Swart, Peter, and Broersma 2018). Overall, this study suggests that workers searched for information not only to affirm their social democratic stance, but to get a range of social, emotional and cognitive gratifications. Another study about reading needs of workers in the early twentieth century confirms the broad spectrum of motives in media usage.<sup>16</sup> Moreover, to speak of an echo chamber would be undifferentiated also in another regard (Sunstein 2017, 166). Obviously, the well-known social conformity of the workers’ milieu did not prevent critical comment on social democratic opinions and newspaper (Bösch 2004). Altogether, this knowledge casts doubt on the wide-reaching conclusions regarding echo chambers.

The division of German society and its media system along class and belief remained characteristically after the foundation of the Weimar Republic and has been identified as a reason for its fate in 1933. Therefore, Weimar provides a suitable example to study a further assumption of the echo chambers thesis: whether fragmentation and polarization of public discourse emerge above all due to narrowed news offers and narrowed (“personalized”) news media usage. The outstanding circumstances of Weimar Republic as a particular communication era allow the shedding of light on the issue of political consequences of media usage. The Weimar Republic was shaped by the aftermaths of the First World War, by economic crises as well as the new democratic system and led finally, yet not inevitably, to the fascism of Nazi-Germany. Against this background, research has come to various results regarding the role of the press and press usage for fragmentation and polarization. Generally, communication historians consider the fragmentation of Weimar society to be manifested in a politically fragmented press that again reinforced radicalization (Wilke 2008, 355). The media system was not only characterized by a great extent of political parallelism between parties and the press but also by the influence of big industry’s capital interests. National conservative industrialists such as Alfred Hugenberg gained control over various newspapers and contributed to an antidemocratic public opinion and a radicalization of the bourgeois right-wing towards Nazism

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<sup>16</sup> Koenen (2012, 45–49) also emphasized bars as communicative spaces of workers.

(Stöber 1998, 332–333; Wilke 2008, 350). Nevertheless, the conclusion that a politically fragmented press supply led to a fragmented public discourse in terms of partisan echo chambers has to assume very strong media effects and deny intervening factors of media use. Especially the discrepancy between election results of political parties and circulations of their respective newspapers contradicts the assumption of such strong and immediate effects of media use (Meyen 2008; Stöber 1998, 293–295). Against this background, German historian Bernhard Fulda argues that with a sensationalist but still highly politicized style, journalism indeed had an impact on political culture. Press campaigns, scandalization, and a personalized coverage with a focus on single politicians led to a polarization, brutalization, and rejection of parliamentarism in general. However, the immediate effects on readers were limited and depended rather on their general beliefs and milieus than on the newspapers' affiliation to particular parties. This might explain, for instance, why bourgeois right-wing newspapers were able to reinforce anti-communist fears, but their readers voted for Hitler and not for the national-conservative parties the journalists promoted (Fulda 2009).

## Conclusion

From the perspective of a history of ideas and discourse, Cass Sunstein's metaphor of echo chambers perpetuates the long tradition of dystopic views and fears of fragmentation. These views and fears can be found in past public sphere theory, broader historical discourses and mass communication research. Media related dystopias of fragmentation have been underpinned by assumptions about media users and their relations to the public sphere and polity. Media users were described by means of simplistic dichotomies such as active/passive and citizens/consumers and usually ended up by negative assessments of media audiences. Like earlier contributions, *Republic.com* and its successor versions adapted the fragmentation narrative to the changing media environment. Sunstein shared with earlier contributions the distrust in communication spaces that emerge due to new media and are uncontained by established institutions.

Findings from social historical research on media audiences make awareness of social contexts of media usage neglected by the echo chambers' argumentation. Both the case of media use among the lower class in the late German Empire and the fragmentation of the public discourse in the Weimar Republic challenge simplistic assumptions of echo chambers and stress the importance of social structures. On the one hand, users did not just filter news that fit their beliefs. On the other hand, these world views tended to moderate media effects.

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Emiliano Treré and Anne Kaun

# Digital Media Activism

## A Situated, Historical, and Ecological Approach Beyond the Technological Sublime

**Abstract:** This chapter engages with the notion of digital media activism. The starting point is that current studies often fall short in situating digital media activism within a longer historical trajectory and in the context of a complex media ecology, comprising both old and new media interactions. As a result, they frequently assume activism has been (and is) predominantly “digital”. Countering this assumption, this chapter argues for the importance of establishing both a historical perspective and a contextualized ecological lens of this concept, allowing for a nuanced analysis of activist media practices beyond the technological sublime. In the first part, the chapter situates the notion of digital media activism within broader research on media activism and then disentangles its constitutive elements, i.e. “digital,” “media,” and “activism.” In the second part, the chapter brings together attempts to historicize and contextualize digital media activism. It shows that a historical perspective is able to capture the continuities and evolution in relation to a long history of technologically mediated activism. Then, it illustrates how media ecology perspectives can contextualise digital activism by (a) identifying the coexistence of multiple media practices and artefacts; (b) elucidating motivations and obstacles in the adoption and rejection of digital tools; (c) shedding light on how citizens purposely disconnect from media technologies as a form of resistance.

**Keywords:** activism, media activism, mediated activism, social movements, media ecologies

As with other contributions to this edited volume, our chapter engages with a concept that has gained traction in the past two decades with intense debates and periods characterized by less emphasis on digital activism. In parallel with protest waves such as the current Black Lives Matter mobilisations, discussions of media practices also came and went, and digital media activism has emerged as yet another hot topic for academic research. As we already displayed in 2019 (Kaun and Uldam 2018), conferences, special issues and workshops are increasingly dedicated to digital media activism and, according to Google’s ngram graph, references to digital activism have steadily increased since the mid-1990s. In connection with the growing interest in digital activism, different conclusions have



been drawn in terms of its impact and consequences. For instance, Michael Hardt (2017) has linked the emergence of digital media activism to the speeding-up of the protest cycles more generally as a consequence of the focus on communication practices of social movement organisations and individual activists. The much-cited work by Lance Bennett and Alexandra Segerberg (2013) foregrounds the organisational shifts in social movements that emerge with digital networked media, namely a shift from collective to connective action. More recently (digital) media activism has been approached from the perspective of social imaginaries (Barassi 2015; Ferrari 2019; Treré 2019) and frames (Sádaba Rodríguez 2019) that modulate and modify activism across digital technologies and political contexts. Here, the question of how activists relate to and make sense of digital technologies as part of the political repertoire is foregrounded. Others suggest to refrain from using the notion of digital media activism completely as it imposes an unnecessary and unfruitful overemphasis on technology (Kavada 2020).

In this chapter, we aim to historicise the notion of digital activism and make conceptual connections to other, earlier forms of media activism. In our contribution, we argue for the importance of establishing both a historical and contextualized ecological perspective on digital media activism that allows for a nuanced analysis of activist media practices beyond the technological sublime. We first provide a brief definition of digital activism and review earlier attempts at historicizing the concept and forms of digital activism. Further, we situate digital activism in the context of media activism. We conclude by proposing media ecology approaches to both historicise and culturally contextualize digital activism.

## 1 Digital Media Activism – A Definition

The notion of digital media activism itself is broad and ambiguous. Joyce (2010) defines digital media activism as a form of political engagement that addresses both fixed and mobile devices with access to the Internet, including practices such as hacktivism, denial of service attacks, hashtag activism and open-source advocacy. Other definitions are even broader. For example, Gerbaudo (2012) argues that any use of digital media for political purposes should be considered as digital media activism. Differences in defining digital media activism partly relate to the truly interdisciplinary character of studying digital media activism. Disciplines such as anthropology, sociology, political science, media and communication studies as well as design studies are currently contributing to this growing field that is increasingly rich and disparate. While some studies

foreground forms of mobilisation, questions of opportunity structures as well as framing and information diffusion (Bennett and Segerberg 2013; Garrett 2006; González-Bailón et al. 2011), other more cultural-studies oriented research expands on the broader context of digital media activism including the social, historical, political, and the broader media ecology that envelop digital media activism (Yang 2009).

Besides digital media activism, a broad spectrum of other terms have been used to represent either the same or overlapping concepts including: cyberactivism (e.g. Carty and Onyett 2006), net activism (e.g. Meikle 2010), Internet activism (e.g. Earl et al. 2010; Tatarchevskiy 2011), online activism (e.g. Uldam 2013), web activism (e.g. Dartnell 2011), networked activism (e.g. Beutz Land 2009; Tufekci 2013), e-activism (e.g. Carty 2010), mobile activism (e.g. Cullum 2010), social media activism (e.g. Miller 2015), hashtag activism (e.g. Yang 2016b), digital activism (e.g. Hands 2011) and frontstage/backstage activism (Treré 2020). Several scholars have also adopted some of those concepts interchangeably (e.g., Kahn and Kellner 2004; Meikle 2010). Other related combinations include the description of protests and mobilizations as Internet, web-based or digitally enabled, and the prefix “net”, for example “netroots organisations” for organizations that surged online (Carty 2010, 155) or “netizens” for (active) online citizens (e.g., Mason 2013).

The assortment of terminology in the field stresses the meteoric development and diffusion of the phenomenon and the changing landscape of meanings and significations attached to it. Often, scholars are quick to embrace new terms with scarce attention to conceptual nuances. Further, this changing terminology is clearly linked to technological developments. While “web” and “cyber” reflect early forms of online media, the terms “social media activism” and “hashtag activism” highlight instead subsequent developments following the emergence and spread of Facebook, Twitter, and YouTube. Additionally, the choice of terminology is often related to a particular era in which a given term dominated the language discourse (Wolfson 2014), such as the term “cyber” in connection to activism which evokes “futuristic, science-fiction dimensions” (Lupton 2015, 13). Similarly, digital activism’s positioning in a complex and interdisciplinary field has affected its conceptualization. It has been explored in communications, politics, public relations, marketing, and in the third sector. The contested and problematic character of this term relates to the nature of digital scholarship itself which, as Lupton (2015) has remarked, is necessarily interdisciplinary and incorporates works in the areas of computer sciences, digital anthropology, media studies, cultural geography, sociology, political science, anthropology, and mass communications as well as media, design and data studies.

Expressions such as online activism, cyber-activism, Internet activism and social media activism are not interchangeable. Joyce (2010) has pointed out that some of these terms are not exhaustive, because they only refer to Internet enabled technologies (e.g., online activism and cyber-activism). Other notions, she explains, focus instead exclusively on specific digital platforms (e.g., social media), and thus are not able to account for other digitally enabled forms of activism. This issue has been referred to by Treré (2012, 2019) as the “one-medium bias” in digital activism studies. Terms like “mediated activism” (Waisbord 2018), “information activism” (Stein, Notley, and Davis 2012), “ICT activism” (Hintz 2012) and “hybrid media activism” (Treré 2019) are deliberately broader, aiming to include many varieties of technologically mediated activism beyond the realm of the digital. Another term that has gained traction lately is the notion of “data activism” (Milan 2017; Lehtiniemi and Haapoja 2020), which refers to activism that addresses in particular the role of data in both political engagement and everyday life. Milan (2017) argues that data activism represents the new frontier of media activism and defines data activism as involving both practices that use big data for political purposes – which she calls pro-active data activism – and practices that are taking a critical position towards the collection of large amounts of data on citizens – which she names re-active data activism. While the connections and overlaps between digital activism and data activism are multiple (Beraldo and Milan 2019), most studies tend to separate the two, contributing to further exacerbating the terminological and conceptual confusion around the term.

## 2 Media Activism: Situating Digital Media Activism

In order to historicise digital media activism, we need to situate this concept in the broader context of media activism or mediated activism. This is of particular importance in the current moment as it allows us to reconsider emerging media practices and political activism in terms of changes and continuities (Waisbord 2018).

- More generally we can divide media activism into activism that
- a) has media as an object to be revolutionized or reformed, for example the media reform movement (Pickard 2015), and Hacktivism (Coleman 2014). This is what we call media-centric media activism.

- b) strategically employs media to put forward their political causes, for example Occupy, Movement of the squares, anti-austerity movements. This is what we call non-media centric media activism.

One could question if this distinction makes sense and if the boundaries are not increasingly blurred with (digital) media being so fundamentally engrained in all aspects of our lives. Regardless of the usage of the notion media activism – an increasingly popular concept as well (there are a number of research platforms like MARC<sup>1</sup> and a new interest group was founded in 2017 within the International Communication Association dedicated to Media Activism) – the interrelationship between social movements and the media has a long history including now classical studies such as Todd Gitlin’s (2003) “The Whole World Is Watching.”

Besides the specific focus or centrality of media in the study of media activism, we can, on a very basic level, divide between the study of social movements representation in the mainstream media on the one hand and activists’ media practices on the other; but even this distinction might increasingly be blurred with boundaries between production and consumption of media content being diminished by social media. As we have argued earlier (Kaun and Treré 2018), typologies are always problematic while reducing complexity. However, these distinctions allow us to situate both media as well as digital media activism.

## 2.1 Defining Activism in Media Activism

Yang (2016a) argues that activism itself is an ambiguous term that has slowly replaced the usage of other, more radical terms for political action such as revolution both in academia and more generally. Activism, he argues, is now used for both radical, revolutionary action and non-revolutionary, community action. Hence, it potentially encompasses action both in the service of the nation-state and in opposition to it. Yang traces the etymological roots of the term activism from “advocacy of a policy of supporting Germany in the war; pro-German feeling or activity” to in the 1920s the more general meaning of “the policy of active participation or engagement in a particular sphere of activity; the use of vigorous campaigning to bring about political or social change” (Yang 2016a, 2). In that sense, activism has several different meanings; a philosophical orientation to life

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<sup>1</sup> <https://www.asc.upenn.edu/research/working-groups/media-activism-research-collective>, accessed on May 12, 2020.

and an economic strategy to mobilize citizens for national industrialisation and pro-German activities during World War I as well as vigorous political activity.

Today, activism includes all kinds of citizens' political activities ranging from high-cost, high-risk protests and revolutionary movements to everyday practices aimed at protecting the environment against corporatized NGO activism. In contrast, the usage of revolution declined steadily after the 1970s, in parallel with the rise of activism, NGO and civil society activism that tend to be moderate, institutionalized and corporatized. After the 1990s, activism has mellowed to indicate moderate rather than radical forms of action.

Yang argues that the current ambiguity of the term activism reflects the politics and purposes in the current age of ambiguity. In late-modern social movement societies, protest becomes increasingly institutionalized and bureaucratized, and civic rather than disruptive. The switch in language from revolution to activism marks – according to Yang – a de-radicalisation of civic action towards corporatisation and moderate NGO activism. Yang then continues to discuss online activism as an example for changes in the notion of activism and its ambivalence shifting between the politicisation of everyday practices to the corporatisation of political practices: the push and pull between politicisation and depoliticization.

## 2.2 Defining Media in Media Activism

If with Yang's elaboration we have addressed the activism in media activism, Raymond Williams (1980/2005) offers us a way to address the question of media in media activism. He suggests that we should analyze media along three types of transformation that appear in the context of mediation:

- Amplification that refers to everything from the megaphone to the more advanced technologies of directly transmitted radio;
- Duration (storing) that relates to direct physical resources to store media content such as sound recording;
- Alternative symbolic production that extends the conventional use or transformation of physical objects as signs, development of writing, of graphics and of the means of their reproduction.

We argue that these three transformations that appear in the context of mediation are also helpful to make sense of media activism and its role for social movements. Media amplify the political messages of social movement activists in many ways. Particularly social media with a broad spread have been heralded for their abilities to amplify political messages for mobilisation. At the same time, media technologies are crucial for preserving the histories of social

movements for internal identification, but also external memory practices. Further, media practices allow for completely new ways of (self-) expression, which can be captured by William's notion of alternative. They provide alternative ways of meaning making and signification. Furthermore, Williams concludes his text by alluding to the political importance of considering media not only as means of communication but means of production which are part of a broader struggle for social change. He argues that

we shall have entered a new social world when we have brought the means and systems of the most direct communication under our own direct and general control. We shall have transformed them from their normal contemporary functions as commodities or as elements of a power structure. We shall have recovered these central elements of our social production from the many kinds of expropriator. (Williams 1980/2005, 62)

His point is that we, as political communities, should strive for “new means of production for more advanced and complex realization of the decisive productive relationships between communication and community.” Digital media have been the latest of such means of production of relationships within communities through communication. That, however, does not necessitate the exclusiveness of digital media fulfilling this function. Rather, as we argue, the whole media ecology – a complex system of different means of production for communication – should be considered.

### 3 Historicizing Digital Media Activism

While the hype around digital activism is arguably a recent phenomenon, there is an overemphasis on newness in many studies of digital activism across different disciplines and contexts. This despite the fact that the so-called “digital revolution” started much earlier than the rise of social media in the 2010s. Before social media platforms, mobile phones, video handheld cameras and personal computers changed the way social movements self-organized and documented their activities (Askanius 2012). However, one can find only rare attempts to historicise the role of digital media for political activism. In an attempt to historicise digital activism, Trebor Scholz (2010) links political practices to the history of the Internet, going back to the 1970s. His focus remains, however, on technological development rather than activism. In contrast, Todd Wolfson (2014) traces the origins of the cyber left in the US back to the Zapatista movement in Mexico in the 1990s as one of the first movements to explicitly include “a network of communication among all our struggles” which in turn inspired activists in the US.

While Wolfson is an excellent example of historicizing digital activism, his focus remains on the US. Thus, there is a major research gap on histories of digital activism beyond this single dominant technological and cultural context.

Even though a more thoroughly written history of digital activism seems still to be missing, there are a few attempts at a periodisation of digital activism. Defining digital activism as political participation and protest organized in digital networks, Athina Karatzogianni (2015) explores four waves of digital activism. She identifies the first wave as starting in 1994 with the Zapatista and antiglobalization movements, including alternative media such as Indymedia. The second wave of digital activism stretches from 2001 until 2007 and is mainly constituted by the rise of digital activism linked to anti-Iraq war mobilisations. During the third wave after 2007, digital activism spread to the BRICS and other countries beyond the global north. The fourth wave, taking place roughly between 2010 to 2013, marks the mainstreaming of digital activism that is sparked and dominated by discussions of large-scale digital state surveillance unveiled by Wikileaks and Snowden (Karatzogianni 2015). In contrast, Paolo Gerbaudo (2017) distinguishes only two periods of digital activism. He identifies a first wave of digital activism in the mid-1990s characterized by cyber-autonomism within the anti-globalisation movement that was characterized by attempts to build independent digital platforms and infrastructures such as the Indymedia project. The second wave starts – according to Gerbaudo – in the 2010s and alludes to cyber-populism as constituted within the mass mobilizations of Occupy, the movements of the squares and the anti-austerity movements. In Gerbaudo's periodisation, cyber-autonomism that is oriented towards autonomous communication is contrasted with cyber-populism with a techno-political orientation that is instituted by a web of commercial Internet platforms such as Facebook, Twitter, and Google and is mainly geared towards mass outreach.

While both these periodizations are insightful, they somehow struggle to balance a focus on the evolving media technologies on the one side with ideological changes and the socio-political context within which digital activism evolves on the other. Gerbaudo is critical of technological determinism and foregrounds an ideological analysis of digital activism practices and this surely contributes to a much-needed political and contextualized understanding of digital activism. However, many theorisations tend to lose sight of the character of activism that is specific to different digital media and formats, thus lacking media-specificity in its historical analysis (Kaun and Uldam 2018).

Recently, Bart Cammaerts has provided a historical overview of the ways in which activists and protest movements have both appropriated and shaped media and communication technologies “to fit a set of self-mediation practices in support of their broader movement goals” (2019, 98). Cammaerts carefully balances both

material affordances and the social shaping of technology on the one side, and regulation and the interplay between the state and activists on the other. His overview is able to foreground the continuous dialectic between structure and agency which we believe is essential to understand digital activism. To both further historicise and radically contextualise digital media activism, we suggest employing media ecological perspectives.

## 4 Contextualizing Digital Media Activism: Media Ecology Perspectives

Media ecology perspectives have recently been adopted to explore digital activism and the media practices of contemporary social movements (Barassi; Mattoni 2017; Treré 2011, 2012, 2019). Inspired by the media ecology tradition that conceives media as complex environments, the key strength of this approach lies in its holistic gaze. This gaze does not privilege any specific media technology, but instead investigates how activists, through their communicative practices, make sense of, navigate, and merge newer and older media formats, physical and digital spaces, internal and external forms of communication, as well as alternative and corporate social media platforms (Treré 2019). This conceptual lens is able to foreground the coexistence of multiple media practices and technologies within contemporary movements and activist collectives, casting light on how they often rely on both digital and analogue technologies and artefacts. Hence, media ecology perspectives allow the researcher to better appraise the effective participatory potential of each technology within a full spectrum of activist practices (Foust and Hoyt 2018; Mercea, Iannelli, and Loader 2016).

This perspective has often been combined with a media practice approach (for an extensive review, see Stephansen and Treré 2019) to shed light on the complex, hybrid and multi-faceted nature of the media systems within which activists operate. These two conceptual lenses, as Treré (2019, 205) illustrates, implicate – and reinforce – each other: on the one hand, an analytical approach anchored in practice theory puts us in a position to ask holistic questions regarding a whole array of media used by activists; on the other, a media ecology perspective illuminates the complex interrelations among multiple types of media (old and new, corporate and alternative, online and offline, etc.).

Research based on media ecology perspectives has greatly complicated claims regarding the alleged digital exclusiveness of contemporary activism. It has unveiled how old technologies still play a fundamental role in contemporary activism and counteracted the uncritical celebration of the benefits of the latest



technological platforms to appear on the scene. Treré (2011, 2012, 2018, 2019) has extensively theorized and relied on a media ecology approach to overcome the communicative reductionism that defines most of the literature on social movement and communication. His nuanced ecological explorations of different social movements and activist collectives in Italy, Spain, and Mexico have revealed how the complexity of activists' practices critically unfold over a multiplicity of online and offline spaces, spanning unexpected constellations of old and new communication technologies. Scholars like Bonini (2017) have reached similar conclusions, demonstrating the significance of radios in the protests that took place in Turkey in 2013. The Italian scholar studied the role played by Açık Radyo – the only independent and listener-supported radio station based in Istanbul – in the Gezi Park protests, concluding that radio has not lost its value as citizen media, but has only repositioned itself within the changing media ecology, blending itself with social media in order to continue amplifying radical political discourses and enabling activists to network. Similarly, in her comparative study of the media ecologies of various political organisations in Spain and the UK, Barassi (2013) emphasized the enduring political relevance of print magazines. Even in the digital era, these traditional forms of activism continue to operate and are continuously redefining their role in order to compete within a crowded media ecology where social and mobile media are given more prominence in relation to the spread of political messages.

As these examples illustrate, by embedding digital activism within a history of never ending adaptations, displacements, and abandonments, a media ecology approach allows us to appreciate not only how different technologies co-exist but also how, why, and under what circumstances they co-evolve and subsequently how their role changes.

A media ecology approach is thus complementary with historical analyzes (see the previous section) that examine how the role of particular activist technologies has developed within specific social, cultural, economic and political contexts (Rinke and Roder 2011). For instance, in her study of the media of anti-capitalist food activism in the UK, Giraud (2018) demonstrated how Indymedia, one of the most emblematic online alternative media during the first half of the 2000s, has changed significantly due to shifts in activist media practices and in the broader media ecology. Giraud illustrates that in the context of food activism in the UK, Indymedia has not vanished but continues instead to fulfil an archival function, alongside other newer media that are used for coordinating more pressing political actions. Likewise, in her ethnographic case study of the Salvadoran group *Activista* and the launch of its “*Todos Somos Agua*” campaign, Harlow (2016) demonstrated that online social media like Facebook were reconfigured as a form of activist citizen media in El Salvador. The activists interviewed by Harlow pointed out that they believed Facebook offered a space

that allowed people with non-mainstream views to voice an opinion, making it possible for them to share news about mining, water contamination, and other social issues that the public would otherwise never learn about. Moreover, they saw Facebook as a reclaimed media territory for the youth, who are normally excluded by mainstream media. Harlow's study complicates linear and uncritical conceptions of digital activism by showing how social media can be appropriated in non-hegemonic and alternative ways.

Further, media ecology perspectives can also elucidate why some activist groups still prefer or are simply not able to use digital tools in their activist practices for a variety of different reasons, difficulties, and obstacles (Arcila, Barranquero, and González Tanco 2018). While the dominant narrative of many digital activism accounts is that activists around the world have massively adopted digital tools, indigenous communities, and community radio activists still grapple with several forms of digital divide and inequality that prevent them from fully exploiting the possibilities of digital activism. But more crucially, it should not be assumed that digital technologies are inherently better in serving the needs of some communities and activist groups (Sartoretto 2016). As years of research on community radio and alternative media demonstrate, many communities are often better served by local radio and television stations (Rodríguez 2001). However, one should also resist the temptation to conclude that connectivity levels can unequivocally determine the intensity and spread of digital activism. As the manifold experiences in Latin America (Pertierra and Salazar 2019), Africa (Mutsvairo 2016) and Asia (Postill 2014) clearly demonstrate, vibrant digital cultures and activist practices have flourished despite several infrastructural, political and economic obstacles.

Finally, a media ecology perspective has also sparked reflections about the interplay between connective and disconnective practices within digital activism (Kaun and Treré 2018). Emerging accounts of digital activism practices are increasingly taking into consideration (Lim 2020; Natale and Treré 2020; Syvertsen 2020) how citizens purposely disconnect from digital technologies as a form of resistance, further complicating the concepts of digital media activism and connectivity. Disconnection is here not understood in straightforward terms. Rather it is ambiguous in itself; never stable and always shifting in its expression. The argument to consider disconnection in the context of digital media questions their centrality for political activism. Instead, we situate digital media both in a complex web of other media (the media ecological perspective) as well as media practices including non-use and disconnection. Hence, adopting disconnection as an entry point for understanding activists' (dis)engagements with media technologies unsettles traditional assumptions about the reliance on and the taken-for-grantedness of digital infrastructures and tools.

## Conclusion

Digital activism has been one of the rising stars in the conceptual sky of media and communication studies. As often the case, rising stars may fall. In this chapter, we have critically engaged with the concept of digital activism to firstly situate the term and idea of digital activism historically. We provide both short definitions and histories of the digital and activism to carve out the crucial contributions that the notion of digital activism can still make to the field at the intersection of social movement and media studies.

Secondly, we argue that only with a historically and culturally contextualized approach towards digital activism can we fruitfully explore contemporary expressions of political activism that employs a plethora of media in endless variations, constellations, and combinations (Constanza-Chock 2014; Sartoretto 2016). While the empirical expressions of digital media activism change in relation to technological developments, at the same time, activism always also shapes and reconfigures the forms and possibilities of media itself.

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## **Users and Practices**





Jérôme Bourdon

# Telepresence

Or, We Have Always Been Ghosts, from Cicero to Computers

**Abstract:** From the mid-1970s, new terms (social presence, telepresence, mediated presence) have been coined to refer to synchronous communications at a distance, through telecommunications or computers, with specific affordances: feeling present in a remote space, interacting with faraway humans or machines; a tradition of empirical and theoretical research was soon born. Using telepresence to refer to all those phenomena, this chapter also enlarges the meaning of the term to include previous historical forms of presence at a distance, resorting to “poor” technologies (classic broadcasting, the telegraph, newspapers, correspondence, certain forms of painting) and allowing connection with a variety of creatures, both humans and non-humans, but always, in some ways, humanized. It shows that the experience of human agents was not less rich and complex with “poor” past technologies than with contemporary “rich” ones. It emphasizes the ambivalence of the experience: telepresence has always been celebrated as bridging gaps and criticized for failing to do so, and this basic ambivalence endures across technologies and times. Finally, this chapter suggests a historical research program into various forms of presence, a general anthropological enterprise beyond our obsession with contemporary technologies.

**Keywords:** liveness, synchronicity, social presence, virtual reality, computer-mediated communication

Since the 1980s, the notion of tele-presence has been conceptualized in various fields, mainly through two technologies, which do not necessarily go together: virtual reality and computer mediated communication. In the mid-1970s, telecommunications researchers had proposed a similar notion, social presence. With or without making a comparison with the digital world and connecting the past and present, some media and art historians also used expressions such as “presence at a distance,” “social presence,” “electronic presence” or simply “presence,” to discuss the power of technologies to “transport” people to different spaces and to faraway people or creatures, not necessarily including interaction. They went back to the nineteenth century (the telegraph) but also to the long tradition of 360 degrees painting, starting out in Antiquity. Others discussed, more generally, the power of images, especially religious images. Finally, the power of letters to provide a sense of presence

is sometimes considered in the history of the epistolary, very early on by past correspondents themselves and more recently by researchers.

In this chapter, I will define, organize, and try to enrich the criteria used by these varied researchers to consider these specific affordances of technology of “disembedding” people from their immediate surrounding and transporting them to faraway places and in the company of faraway people, real or imaginary. For each criterion, I start out with the contemporary debate, and show how it can be historicized. In conclusion, I will refute any teleological attempt to write history as a process of movement from “less” to “more,” from low-tech to high-tech: the sense of telepresence (the intensity of the experience) is unseparately social and technological and no simple technological yardstick can be used to measure it, as we shall see throughout our lexical-historical promenade.

## 1 Defining Telepresence

In digital scholarship, numerous reviews of the notion of telepresence have been proposed (Biocca, Harms, and Burgoon 2003; Lee 2004; Lombard and Ditton 1997; Mantovani and Riva 1999; Mantovani and Riva 2001). Such reviews only occasionally wink at the pre-digital world. All quote Minsky’s (1980) article as a turning point, that led to the use of “presence” as an abbreviation of “telepresence.” Minsky defined “presence” as the possibility of feeling present in a distant environment and, even better, of being able to operate in such an environment. This was an ideal to be reached as much as an existing technological capability. “Can telepresence be a substitute for the real thing?” asked Minsky (1980, 46). Since then, much research has been conducted with a practical orientation in mind, addressing issues such as eliminating transportation, danger at work or facilitating e-learning.<sup>1</sup>

I will not abbreviate “telepresence.” I will distinguish between presence per se, or physical presence (actually being in an existing space, with or without other people), and telepresence. This may sound trivial. It is not. Abbreviating “telepresence” is confusing, and this confusion is an ideological matter. The use of the abbreviation “presence” for telepresence reveals the aim of Minsky, no less a prophet of technology than a theorist: making telepresence “as good as” presence.<sup>2</sup>

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<sup>1</sup> See the collection of the journal *Presence. Teleoperators and Virtual Environment*, 1992–present.

<sup>2</sup> Such axiological naming is not new in the history of technology: in broadcasting (starting from radio), “live” broadcasting is about feeling the live presence of something which is not actually there, not “life” itself but a representation, again, “as good as” the real thing.

## 1.1 Social Versus Spatial Telepresence

I also define telepresence more broadly than Minsky, who focuses on the sense of “being there,” whether one is “with” other humans or not, and who primes the possibility of operating in the distant environment (for example, performing surgery). Regardless of nuances in the lexicon used, I follow Heeter (1992) and Biocca, Harms, and Burgoon (2003) in distinguishing two forms of telepresence: social telepresence (being together with another, whether one feels transported into another space or not), and spatial telepresence (being there in another space, whether one feels the presence of others or not). Social (tele) presence was first defined in a pioneering book about telecommunications, addressing the telephone but mainly the then new and exciting videoconference: Williams and Christie (1976, 65) defined social presence as “the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships.”

## 1.2 Physical Presence (Copresence) Versus Telepresence

Such definitions help charter the field but should only be considered as ideal-types. There are many grey zones and much overlapping. First, physical presence and telepresence are not always clearly contrasted, and this is crucial for the historian. There are transitional moments, where one moves from one to the next, especially when leaving or meeting someone. Goffman (1959) who had no direct interest in telecommunications called physical presence with other persons “copresence”. He uses the phrase being “within range” to characterize the situation of “being with someone” (not through technology). He noted that it depended on many physical factors: the sensory medium involved (viewing, hearing, etc.), the presence of obstructions, even the temperature of the air. But being “within range” is not easy to define precisely.

If you “dismember” the “range” according to the various sensory canals and involve the combination of technological mediation and direct sensory contact, the notion of range can be stretched endlessly. Consider a banal contemporary situation. You take a loved one to the airport. You can no longer hug, but still see and hear each other (although social conventions may prevent you from screaming “goodbye”). You can no longer talk but only see each other. As other people obstruct your visual path, you see each other less and less. Then the person passes a door. (S)he is gone! You send your first text message, you get an answer, now you have moved to a different location, let’s say above the duty-free shops where your friend told you (s)he would stop and you receive a

text: “U can c me, look at the entrance of the toy shop”. You keep on sending texts and wave to each other. The friend writes, ok, I am checking in, “goodbye for good.” Yet you remain in the airport until the plane has taken off, you go to the rooftop, see the plane taking off, you are tempted to wave and feel silly (this sense of silliness also belongs to history, as we will see). You leave the airport for good. Then you look at the photo of your loved one (maybe on your smartphone screen) and kiss the smartphone (not the loved one, although you may want to delude yourself for a while). This story shows how the move from absence to presence is gradual, a mixture of various sensory accesses, belief about the chance of access, a combination of sensory access (touch, voice, view) and technological mediation (texting, looking at pictures – or reading texts – in order to perpetuate a sense of presence). This chapter was written before the coronavirus pandemics but we assume readers will immediately relate this discussion to their own experiences of having to resort to the full gamut of applications and machines, to feel as dense a sense of telepresence as possible despite the various frustrations and delays, not to mention the brutal borders of the experience (discussed below), as opposed to the gradual phasing out we just described in our imaginary experience at the airport.

The border between physical presence and telepresence is complicated even in situations of, purportedly, simple physical copresence (in Goffman’s sense of “being with someone”). Consider the peculiar distance created by the theatrical arrangement: the play, the stage, the lighting, the dresses of the actors. You are in the same space, you hear them. But reporting on the event, nobody would say (s)he was “with the actors,” except if (s)he paid a visit backstage, after the show.

This has been much discussed by theorists of performance (e.g., Dixon 2007). The performer is out of reach, to a large extent out of range, because of an arrangement that also includes social conventions (except in already trivialized avant-garde plays, performers and spectators do not cross the border between the stage and the audience space). The set, the voice, and the attire create an artificial presence, which we know to be different from a regular encounter with the “same” person (that is, the actor behind the character) in a known, common space. This should matter to communication scholars obsessed with supposedly new technologies: the old apparatus of the theater involves numerous old technologies, for example acoustics, lighting, the building itself and the very old tradition of the mask. Redefining technology in a broad way will be crucial to our historical enterprise.

I now move to the specific criteria which can be used to refine and compare categories of telepresence. I start, and deal more at length, with social telepresence. I first discuss the nature of the entity “at the other end of the line”: humans, but also other creatures, including the dead. I then consider directionality (is the experience interactive or not), (a)synchronicity, and the quantitative aspect

of social presence (one to one, one to many). I move back to spatial telepresence, discussing the contrast between the simple illusion of being in another space, and more full-fledged immersion. The notion of immersion will lead me to discuss the limits of the experience of telepresence: even idealistic prophets such as Minsky had to accept that the experience is limited, both in space and time, and is never quite “the real thing.” Whether this is, by necessity, a defect, I consider in the conclusion.

## 2 Social Telepresence

### 2.1 Humans, but also Gods and Bots

Discussing our binary definition, I start with a crucial point for historians. So far, I have taken for granted the sense of “being with” (someone) as opposed to being alone. This “someone,” obviously, is assumed to be another human being, known or not known before the experience of telepresence. In the digital context, this border has been discussed only regarding bots. For example, Lee (2004, 32) defines presence online as “a psychological state in which the virtuality of experience is unnoticed.” He then redefines social presence as “a psychological state in which virtual social actors (para-authentic or artificial) are experienced as actual social actors in either sensory or non-sensory ways” (Lee 2004, 45). By para-authentic, he means actual, alive persons. Artificial characters are mainly bots (although he includes fictional characters, let us say in movies, a point which I will not incorporate as it poses problems that I have no space to consider here).

The human collective has many more complex borders with purportedly alive, but non-human creatures. Remaining in the contemporary media age, researchers have shown how media users personalize their technologies, and experience complex senses of presence while they know they are only interacting with a technological arrangement. In a classic book, Reeves and Nass (1996) demonstrate, on the basis of numerous experiments, that in given circumstances, people treat media, broadly speaking, like “real persons”: media may refer to a cable channel (who can be nice or whimsical), a machine (a computer), or, more vividly, a mediated representation of a pseudo-person. People humanize all those entities, get irritated at them or are grateful to them. Especially for online representations they can interact with, they react to gender, to supposed personality traits, they can feel flattered or cheated by a “virtual agent.” Published 30 years ago, their book has lost nothing of its relevance.

Moving backwards, to the first development of electric (the telegraph) and electronic media, Sconce (2000) retraces the history of the numerous ghosts which have haunted our media. He comments on the rich lexicon used across the years, much before computer-mediated communication: “Various described as ‘presence,’ ‘simultaneity,’ ‘instantaneity,’ ‘immediacy,’ ‘now-ness,’ ‘intimacy,’ ‘present-ness,’ the ‘time of now,’ this [. . .] at times occult sense of ‘liveness’ is clearly an important component in understanding electronic media’s technological, textual, and critical histories” (Sconce 2000, 6). This is a different kind of presence than the one conceptualized by Reeves and Naas, a belief in the existence of paranormal communication, communication with the dead or connection with parallel worlds, which, as Sconce shows, can teach us much about our present fantasies regarding “cyberspace.” In addition, Natale (2016) has shown how the rise of this specific form of telepresence was linked to the new entertainment industry: a remarkable example of the rise of telepresence as a new market.

Although Sconce seems to suggest that electronic technologies of communication offered a remarkable chance to connect new technologies with changing beliefs in the afterlife, the whole history of images is replete with beliefs in the presence of distant, paranormal, or religious creatures, residing “in the image.” Belting (1994) has retraced this history from Antiquity to the Renaissance. He has shown how holy images of sacred creatures were endowed with specific forms of presence, often against the advice of theologians who had a hard time disciplining such images: images could provide success, comfort, protect against various ailments. Sometimes, they could bleed or cry. In short, the question of “who is present” in telepresence has been a complex issue for a long time and not only in past media and communication ecologies. In addition, all the above is discussed within the modern Westernized world, while other ontologies (animism, totemism) can provide an even richer spectrum of a sense of presence at a distance (Descola 2013).

Less known is the power of another medium with a very long history, the letter, to provide various forms of telepresence, and not only with other humans. The history of correspondence, starting as early as the Antiquity, has immediately included legends and stories about letters allowing communication with the dead or with the gods. Indeed, in the Middle Ages, some people claimed to have received letters from the Virgin Mary or, more threateningly, from the devil himself (Boureau 1991).

Internet research has only recently started exploring the beliefs in the contact with non-human or dead people in the digital world (Natale and Pasulka 2019). As noted ten years ago, folklorists have neglected cyberspace. Yet, for example, Elizabeth Tucker (2009) offers a fascinating example of websites devoted to missing women, which mix information and legends about their ghosts, or reports about sightings. The study of Facebook pages (Brubaker, Hayes, and Dourish 2013; Georges 2014) devoted to grieving has recently grown, and, then

again, websites where images and information accumulate also express, among some participants, the hope for and belief in a form of electronic survival.

## 2.2 Unilateral or Bidirectional?

Contemporary telepresence (starting from telecommunications) is supposed to be interactive. In media history, the term “interactivity” came to the fore in the first age of cable television in the 1970s: interactivity was supposed to be a remedy to a basic “defect” of television which is mono-directional (see Benjamin Thierry’s chapter in this book). It started modestly, with the idea of a “return path” to give feedback to the transmitting channel, which could be used for different services. More ambitiously, interactivity included the full-fledged “visio-phone,” which was experimented, and later studied as a classic case of technological failure (Lipartito 2003; Ortoleva 1998).

As so often, thinking of a medium in isolation is misleading. Interactivity was celebrated as the remedy for a fault of a previous medium: television. But, without the name, interactive media already had a remarkably long history. The telegraph and the telephone were interactive, although the utopian discourse around these media insisted more on the instantaneity (see below) of communication, by contrast, probably, with a very old interactive (but not instantaneous) medium: correspondence.

For our purpose, it would be worth incorporating correspondence into media history. In the last thirty years, a considerable body of historical work on the epistolary has been accumulated, and not only in the West.<sup>3</sup> The first letters (not on paper, but on numerous other media, including clay, bronze, parchment) were exchanged soon after the invention of writing. Correspondence offered the possibility of exchanging messages in a bi-directional way. For our purpose, we will insist on the fact that time and, again, users of correspondence marvel at its power to make the absent (especially the dear absent) present. In Greek antiquity, the term *parusia* (Greek for presence) was used about correspondence (Ceccarelli 2013). Across history, correspondents used often similar strategies to underline this power, fetishizing the letter, carrying it with them, kissing it, putting into the envelope (when there was one) a lock of hair, a picture, a dried flower, later a photograph (Bourdon 2020).

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<sup>3</sup> One fascinating example of the thick bibliography on correspondence history, which shows us that its powers at “presencing” the absent were reflected upon beyond the West, is by Richter 2013.



Interactivity was key here: the letter was based on an exchange. Although this is hidden by the fact that literary correspondence, especially, has been read as the work of a single author, as the letters of the less valued correspondent (almost always a female one) have been lost, we should think of letters as going in pairs, or in series. An isolated letter never tells the full story of epistolary “telepresence” as a mutual, reciprocated action.

When the other correspondent disappeared, or stopped writing (“ghosting,” in contemporary parlance), emotions ran strong (Farman 2018, for a trans-cultural and historical perspective): moving from worry (is (s)he sick, or worse?) to anger (why did (s)he stop writing?). Remarkably, this anger could be directed at the correspondent, but also at the technological system (the post office) affording presence. Again, this phenomenon of displaced anger can be found across history. When a conversation runs amok on Skype, users can feel an ambivalent anger, at the person who stopped talking, or is doing something else, until a further exchange establishes that the supposedly reliable technology is, yet again, not working. In an earlier age, we blamed the post office for losing our letter (but worried this could be used as an excuse by lazy correspondents).

### 2.3 Synchronous or A-synchronous: The Relativity of Speed

Much research in computer mediated-communication has compared synchronous or a-synchronous devices, with a practical-empirical focus about the advantages and drawbacks of each, for example in teaching, or in professional exchanges (Watts 2016). Is it better to wait, to have time to elaborate a response (and lose the spontaneity, and the to-and-fro of immediate exchange)? Would not it be better to answer immediately (but maybe too quickly, exposing feelings one wanted to control, or rushing to the wrong answer)? Unsurprisingly, there has been a tendency to conclude that, especially in teaching, a combination of synchronicity and a-synchronicity is desirable.

In such discussions, a-synchronicity always refers to very short delays, counted in hours or days, rarely more. Such short delays, in the pre-telegraph era, would have been considered not as delays, but as fast communication, as quasi synchronicity. This brings us back to correspondence. Ancient correspondents (examples can be found from the Antiquity onwards) mostly lamented the slow pace of correspondence, expressed their impatience at delays and used various carriers (before and during the time of official postal systems) to get their letter to travel faster. More rarely, however, they could appreciate the slow rhythms of their exchanges, which gave time to elaborate long, precise answers, and, exactly as in a-synchronous CMC, to control complicated feelings. “A letter doesn’t blush” wrote Cicero while, famously, Madame de

Sévigné (seventeenth century) extolled the pleasure of writing to her absent daughter, confronting a paradox I will return to: “I love writing to you, my dear daughter. This means I love your absence. My God, how dreadful!”

In the history of correspondence, the rise of postal systems in the fifteenth and sixteenth century was felt as a major improvement. Berhinger (2006) has reminded us that the theme of speed became central to the discourse of modernity well before the mechanical engines of the nineteenth century, but with a “low-tech” system, based on the division of labor and the careful calculation of time: the modern postal system. The increase in the rhythm of the circulation of messages was perceived as a major change linked to the new technology, to such an extent that it left specific phrases in major European languages: “post-haste” (found in Shakespeare) “en poste” (meaning, in French, very fast, found in Montaigne), “a la celerita de la estefa” (Italian), were used for centuries.

The nineteenth century and early twentieth century saw the rise of technologies of instantaneity, with the telegraph, the telephone, and broadcasting. Broadcasting, however, proposed a complicated form of instantaneity. While transmission itself was instantaneous, some messages were soon recorded and not broadcast at the time they were performed in front of the microphones and the cameras. In the 1930s, this type of transmission received a specific moniker derived from the idea of life, in some languages (“live” in English, “vivo” in Spanish), or from “direct” in others (“direct” in French, *diretta* in Italian). This brings us to the crucial possibility of cheating about “live presence”, which touches debates about presence far beyond broadcasting (Bourdon 2020). Messages could feel “live” while they had been recorded, especially if programs were recorded in continuity with production (“recorded live,” or “direct *dif-féré*,” in French). These debates did not move “wholesale” to contemporary, Internet-connected television, but they are still relevant, especially when programs combine live and recorded (edited) sequences: a program can be felt as live (as if live) even when it is recorded. This is crucial, for example, for some sequences of reality television, another genre whose authenticity is viewed with suspicion (and liveness remains a crucial resource for providing a sense of authenticity through presence). More broadly, there has been a stream of rich theoretical debates about “the meaning of live” and liveness in contemporary life (e.g., Scannell 2014).

Let us move back in time. The sense of speed, and even the apparently clear-cut notion of synchronicity, depends very much on the context. The first medium which triggered a sense of remarkably speedy communication was the postal systems, starting from the “royal” post services of ancient empires, the Akkadian or the Persian cases, for example (Bryce 2003). From a phenomenological point of view, we have numerous examples, across the ages, of correspondents celebrating the sense of being “as if” with the persons, knowing that

the letter had arrived, or would arrive, within what was, for them, a remarkably short time-span. In short, the sense of liveliness, or liveness, is not a mathematical datum, but a human relation. And, as Farman notes about the rise of written messaging, including through smartphones, “though the mythologies of the digital age continue to argue that we are eliminating waiting from daily life, we are actually putting it right at the center of how we connect with one another” (Farman 2018, 23).

## 2.4 One-to-one, One-to-many: Between Telepresence and Togetherness

We are now moving to a complex form of telepresence, although the lexicon is deceptively simple. For much of the twentieth century, the opposition between one-to-one communication on the one hand, and one-to-many on the other, has been central to communication studies, with broadcasting taking center stage as the powerful, new form of communication allowing one to address many in a synchronous manner. However, the opposition is more complex, and, then again, grey areas abound between the two extreme, pure models, which make it difficult to organize them, for example, into a long-term historical narrative (Balbi and Kitzler 2016).

First, both models have long been combined. The letter may be considered as the “pure form” of one-to-one communication, but this idea of an ideal, private dialogue is a recent, romantic one. Numerous letters (from public figures, especially religious ones) were meant to be addressed to many, as in the Christian tradition of the epistle (Bourdon 2019), while the sense of secrecy has been established only recently (by law, only in the nineteenth century in the West). Letters (including official, highly protected ones) have long been threatened by breach of privacy in many ways (Bryce 2003). Email users who believed they were writing only to one person, and discovered that, among other possibilities, they have inadvertently pressed “reply to all,” or that their email has been forwarded (intentionally or not) by their correspondent, or that a hacker has read it, have numerous historical companions for such unpleasant experiences.

Furthermore, with all due respect to broadcasting, one-to-many has never been as pure as we think, and has always cohabited with one-to-one. The hypostasis of broadcasting as mass communication bypasses the persistence and also the birth of parallel one-to-one forms of communication. Most simply, the telephone has been relatively ignored by media/communication researchers. The idea of broadcasting as mass-communication emerged only slowly from the use of radio as one-to-one “wireless telegraphy.” Any sense of mass togetherness,

through broadcasting or the reading of papers (as famously analyzed by Anderson for the national community), is often linked to other forms of presence: audiences may read in small groups (with someone reading aloud before the era of general literacy), or view/listen to a broadcast program together. They use the material received alone to connect through conversation, anticipate such acts of sharing while viewing or reading. And digital technologies have allowed even more intricate situations of “multicommunicating”: tweeting or texting while watching a program, for example.

### 3 Spatial Presence: From Illusion to Immersion?

From the start of this chapter, I have focused mainly on social telepresence. The notion of spatial presence deserves specific treatment but has drawn less attention per se: imaginary transportation to another space has been treated, in general, as less important than social presence, especially in spaces where there are no humans or living creatures. In science fiction, such transportation to empty worlds brings about fear, more than marveling. See for example the H.G. Wells (1895) story *The Time Machine* in which, at some point, the hero reaches a future without any human presence. Spatial telepresence, so to speak, tends to be treated as the background or the environment of “more valuable” social presence. An exception, of course, is the practical interest in teleoperation (Minsky 1980) in a different space, for example, in abyssal depths. But this wholly practical focus, brought about by new technological affordance, is recent in the long history of telepresence.

However, spatial telepresence is the only aspect of presence which has been the object of a full-fledged attempt at historicization. For example, Grau (2003) starts from the idea that painting has long been used in order to provide spatial telepresence. He discusses at length the first preserved attempt, the room with its four painted walls in the Villa Dei Mister, in Pompei, and the different visual devices used to provide what he calls an “illusion” of transportation into a different space, peopled by humans, gods and mythological creatures. One could say that the aim was practical as well: the illusory space is surmised to have allowed the performance of rituals. Like Belting, Grau is sensitive to the role of religious images but, unlike him, he connects the remote past to the contemporary use of telepresence, especially by artists, at the end of a rich historical voyage through the trompe-l’oeil, the fully painted walls and ceilings of baroque villas and palazzi, and the detailed consideration of a forgotten medium: the panorama.

The panorama's history lasted a century, starting from its invention (and earlier patenting) by Scottish artist Robert Barker in 1792, in a cultural context where the interest in large landscape painting, and the use of a bird's eye view, was growing. A panorama was a 360 degrees huge painting which people viewed from the center of a dedicated building (a *rotunda*), where the landscape "enveloped" them. Such panoramas (unlike the religious frescoes of the past) made claims at being fully realistic representations of existing landscapes and events. Together with the growth of tourism, the panorama was said to be able to replace travel, and also give access to current affairs (the major battles of the time were proposed). The metaphor of "travelling" was widely used to refer to the experience. Variations were proposed: the moving panorama (the paintings circulated and the viewer could remain static) and the diorama (where landscapes changed through the elaborate use of lighting). A whole industry, much commented on in the press, developed. As for other media, utopian and counter-utopian positions existed, the first extolling the wonder of this new form of presence at a distance, the other deriding the cheap illusion it produced, which could, by no means, replace the "real thing." Interestingly, the word "panorama", which we now mostly use for "real" panoramas (but note the option of "panoramic" photographing on your smart phone) was invented for this specific device.

This form of past spatial presence has been easily forgotten, probably because compared to the power of cinema, 3D images and, finally, virtual reality, it feels "weak." Yet, a reconstruction of its history linking it to current forms of telepresence can teach us much about the aspirations of modern societies to create strong illusory spaces. The "realistic" focus of the panorama, for example, as opposed to the religious one of the Villa Dei Misteri, or the massively fictive character of cinema production, tells us much about the desire to see a newly conceptualized, secular "real world". There was a growing market for this, through all forms of nineteenth century communications, including, of course, transportation technologies. In addition, the panorama had a remarkable feature, which made it, if you want, "better" than VR: people did not have to wear an accessory, a prothesis, in order to experience presence. Of course, such accessories may become lighter and easier to manipulate, yet the very act of putting them on and off clearly delineates a border between the "real life" of continuous presence of our surroundings and the pseudo-life of tele-presence. I now turn to this question.

## 4 “Being There” but Never Completely: the Persistent Borders of the Telepresence Experience

I now turn to an issue which is not explicit in most past or present discussions of telepresence, or only as an obstacle to be overcome: the borders of the experience. Telepresence is a specific experience which removes people from the here and now of their immediate spatial and social surroundings. Being absorbed in reading or writing a letter in 500, immersed in a panorama in 1800, under a VR headset in 2010, praying in front of a holy icon in 1300, playing for hours on Second Life in 2000, the human subject feels (s)he is “not there”. However, this “not being there” has a beginning and an end and can only be partial. Even during the experience, simple reminders can destroy the illusion: in all the examples given, think of someone tapping gently on the shoulder saying: it’s lunchtime (which may also trigger the feeling of hunger which had been forgotten, “dissolved” into the experience of telepresence).

Frame has been discussed recently as regards virtual reality. Pleading for the power of VR to be used as an “empathy machine”, through a strong experience of social telepresence, Milk (2015) expresses his desire to break the screen which has so far been a condition of the access to “other realities” (unknowingly echoing the words of Robert Barker, the inventor of the panorama): “I mean, all the media that we watch – television, cinema – they’re these windows into these other worlds. And I thought, well, great. I got you in a frame. But I don’t want you in the frame, I don’t want you in the window, I want you through the window, I want you on the other side, in the world, inhabiting the world”.

The word immersion suggests this: breaking the frame/screen, going through the (looking?) glass: another technological dream whose long roots into myths and literature would be worth a detailed exploration. Assuming VR can successfully “break the frame” of space, there is another frame, that of time. One has to enter the telepresence experience and leave it, “get back” to the real world. Science fiction writers have early imagined experiences of living in a wholly virtual world and no longer being able to distinguish the real places and creatures from the fake or virtual ones, and there is a whole cinematic tradition about this. Importantly, this is mostly treated as a danger, as a pathology (the same was written about the nineteenth century panorama). Being just as good as the real thing may not be a real aspiration. One may need and want limits to the telepresence experience.

One development of telepresence is the possibility of keeping in touch, at a distance, for long periods of time. Madianou (2016) has proposed the term “ambient copresence” for the experience of migrants who live far away from their

family. For example, a mother leaves Skype open on her computer, can hear and occasionally see her faraway children. Interestingly, this expansion of the time frame goes together with a “backgrounding” of the experience, which is, by definition, not very intense. “Ambient presence,” even if it is not activated, may remain the horizon of our possible interaction with faraway loved ones, a dream of telepresence without borders in time.

The whole question of intensity, viewed in a historical perspective, is much more complicated than any simple “quantitative” comparison. The whole discourse of telepresence, once it latches onto the modern discourse of technological progress (a tradition which authors like Minsky or Milk continue, precisely at the time they think they are celebrating a revolutionary development) is about the capacity of technologies to offer “more,” more full-fledged presence, getting closer and closer to “the real thing.” Researchers of contemporary telepresence all mention the increased intensity of the experience, contrasting the “strong” present with the “weak” past, e.g. in the following: “The emphasis on interactive behavior is a more recent component of social presence theories. Most social presence research until the mid-1990s dealt primarily with low-bandwidth media, textual media, or teleconferencing systems [ . . . ]. Therefore, behavioral variation was limited and rarely extended beyond text-based verbal behavior and a narrow range of nonverbal communication behaviors” (Biocca, Harms, and Burgoon 2003, 465).

Yet, art, cultural, epistolary, and media history reveal that old forms of telepresence were no less intense for their users. The analysis of the use of technologies matters here more than the dry comparison between “bandwidths”. Belting (1994) and Grau (2003) are especially relevant regarding visual art and representations. But the written word has its own potential for disembedding its users. Reading past letters of “heavy” correspondents, such as Madame de Sévigné or Diderot, show how they were absorbed, for hours, into their letters. Human beings early developed “second lives” not only through digital media but also through any communication technology. The intensity of the experience lies in the body of the user, and should not be judged anachronically, from the perspective of promoters of “better”, more recent technologies.

The appreciation of intensity is also a matter of the specific historical technosocial configuration. Coming back to our different parameters of presence: when interactivity was lacking, the arrival of interactivity is perceived as key to intensity. When immediacy came (the telegraph), the whole debate switched to immediacy, even for a technology, the telegraph, which performs poorly regarding representation, and offers simply long and short dots to decipher, which one could produce only by going to a dedicated place with the help of an operator. Yet, this “revolution” of instantaneity was a considerable shock for contemporaries.

It triggered mostly a positive utopia: it is hard to find much worry or skepticism about the telegraph. Thoreau is the most famous sceptic, and Walden is ritually quoted by historians of the telegraph: “We are in great haste to construct a magnetic telegraph from Maine to Texas; but Maine and Texas, it may be, have nothing important to communicate . . .” A few other intellectuals or writers express reservations: Aby Warburg stressed the “awareness heightening power of distance, as a condition for intellectual productivity and called it the ‘original act of human civilization’” (Grau 2003, 286); he worried that the sudden proximity made possible by the telegraph would threaten this. This latches onto contemporary critiques of the power of always available, instant communications (Rosa 2015).

## Conclusion

Exposing the long roots of the recent debates of computer mediated communication and virtual reality, I have proposed a few analytical concepts for telling the long history of telepresence. Full-wall frescoes (or even 360 degrees painting), the theatre, or the modest letter have long given their spectators and users a sense of being transported from their here and now to see far-away, imaginary places and people, and even to communicate with them. Telepresence has always been supported by physical presence, and reciprocally, as they are today, although the experience of “pure” telepresence is of course much more frequent than in the distant past.

People have long thought they could make the dead, gods or supernatural creatures present through various magic devices, but also through letters, and this was combined early with electronic presence. This dream of communication with the afterlife continued with television, and today with the Internet.

Intensity is not related to the measurable power of technologies but to the emotional experience. Similarly, the sense of instantaneity is relative: the celebration of instantaneous telepresence, starting with the telegraph, hides from our contemporary eyes the sense of speedy communication with distant persons through the letter, a modest and powerful medium. Finally, the sense of being together with a vast audience has never been the privilege of broadcasting: newspapers, religious epistles, but also, most simply, public speech in vast assemblies and churches, have remarkable histories.

And maybe most importantly, technologies of presence have always been ambivalent for their users. While, starting with the telegraph, the contemporary age has tended to celebrate the power of technologies to make up for absence and distance, the experience of technologies has been replete with experiences



of frustration, delays (Farman 2018), “buffering”, “ghosting” and their ancient accoutrements. It is befitting here to come back to Warburg. In his comments on the merits of distance, what he suggests is that more can actually be less, that being “as good as the real thing” also means being a poorer, one-dimensional access to presence at a distance, unable to go through all the facets of experience and to exploit the human capacity for “scaling” crucial experience in different ways and reflecting upon them. We need presence and distance, the voice and silence, the body and the ghost, together. The whole spectrum of partial presences has long contributed to make us fully human and will continue to do so.

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Edward Brennan

# Digital Loneliness

## Asking Too Simple a Question about a Complex Problem

**Abstract:** This chapter attempts to historicize “digital loneliness.” To do so, it considers two ways to historically contextualize media and loneliness. The first considers today’s discussions of “digital loneliness” as the latest manifestation of the type of polarized “hopes and fears” discourse that cyclically greets new communications tools. The second approach places technology in the background and foregrounds loneliness as a cultural phenomenon that is shaped by long-term historical processes. This, arguably, points towards more fruitful ways of thinking about loneliness as a complex problem.

**Keywords:** loneliness, technology, modernization, privatization, other-directedness, romance

Loneliness has found its way into media discussion and governmental policy agendas. We live amidst an “epidemic of loneliness” (Killeen 1998). Previously associated with the elderly, loneliness is now prevalent among the young (Pittman and Reich 2016, 155). Over a fifth of American adults and almost a quarter of those in Britain always or often feel lonely, lacking in companionship or otherwise left out or isolated (Economist and Kaiser Family Foundation Survey, *The Economist* September 1, 2018). Social isolation has increased. Nearly half of all Britons aged over 65 rely on television or a pet as their main source of company (Davidson and Rossall 2015, 2). Between 2010 and 2019, the number of European households consisting of a single adult without children increased by almost a fifth (18.7 per cent) (Eurostat 2020).

Loneliness has potential impacts on personal well-being, public health, and political stability. Long-term loneliness can destroy health, increasing the risk of coronary disease and damaging immunity (*The Economist*, April 16, 2020). It is associated with mental health problems including anxiety, depression, and substance abuse (Cacioppo and Patrick 2008). The European Commission’s Joint Research Centre (JRC) observed that “loneliness and social isolation correlate with feelings of vulnerability, threat and anxiety levels.” Hence, loneliness is, potentially, “associated with political and social values” (Joint Research Centre 2018). Noreena Hertz, following Hannah Arendt, argues that isolated, lonely people may find purpose and self-respect through a surrender to totalitarian ideologies. For

Hertz, the twenty-first century rise of right-wing populism can only be understood in the context of an ever lonelier world (*The Financial Times*, September 24, 2020).

The diagnosis of this epidemic has broadly coincided with the arrival of smartphones and social media. And these new media technologies are often blamed for an increase in loneliness. For many journalists and commentators, we are in the grip of digital loneliness. Conversely, there are researchers and civil society groups who advocate the use of digital technologies as tools to foster social connections and improve well-being. Digital technologies are typically cast as either a cause or a cure for loneliness. They are neither.

This chapter attempts to historicize “digital loneliness.” To do so, it considers two ways to historically contextualize media and loneliness. The first considers today’s discussions of “digital loneliness” as the latest manifestation of the type of polarized “hopes and fears” discourse that cyclically greets new communications tools. The second approach places technology in the background and foregrounds loneliness as a cultural phenomenon that is shaped by long-term historical processes. Arguably, this offers more fruitful ways of thinking about today’s problems. Before proceeding, however, we need to take a moment to ask what loneliness is.

## 1 What is Loneliness?

Loneliness is complex. For a start, we can divide it into two fundamentally different phenomena. In the short term, loneliness can be positive. Hunger prompts us to eat, and loneliness can prompt us to seek company. Transient loneliness may prompt us to use social media to provide for our psychological needs, to reconnect with friends, to organize meet ups and so on. Like hunger, a brief experience of loneliness bears no resemblance to suffering it in the long term. Chronic loneliness is individually and socially destructive. It can prompt us to ignore our psychological needs. We may become “hyper-vigilant,” viewing the world as a competitive, untrustworthy and threatening place. When chronically lonely we are more likely to avoid company and to experience the social interactions we do have with negativity and suspicion. Those who are chronically lonely are more likely to be victims of cyberbullying, as well as more likely to engage in aggressive online behavior (Nowland, Necka, and Cacioppo 2018, 79). Chronic loneliness is, ironically, a self-reinforcing barrier to social interaction (Nowland, Neck, and Cacioppo 2018, 76).

Social isolation is on the rise, but isolation is not the same as, and does not necessarily lead to, loneliness. A person might live alone without suffering for it. Somebody else could live surrounded by family, friends, and acquaintances

and still feel painfully left out. Isolation is not loneliness but it does make it more likely. For John Cacioppo and William Patrick, the experience of loneliness is shaped by our “mental representations and expectation of, as well as reasoning about, others” (2008, 14). The painful experience of social isolation is to some extent determined by individual perceptions. The level of social connection that satisfies our needs is peculiar to each of us and is moulded by individual psychological and genetic traits (Cacioppo and Patrick 2008, 4). Of course, loneliness is about society as much as it is about individual experience. As such, it is also a cultural phenomenon.

We can experience loneliness when there is a discrepancy between the relationships that we have and those that we imagine to constitute a normal level of connection. It may lie in the perception, not that we are isolated, but that we are isolated relative to our peers. Loneliness among young people, in America, Britain, and Japan, for example, was seen to arise more frequently from a “gap in expectations between relationships they have and those they want” (*The Economist*, September 1, 2018). Experiences of loneliness are shaped by how we perceive ourselves and others. Those perceptions, in turn, are products of the cultures that we inhabit. Loneliness is, in part, cultural and, as such, it can be better understood through historical exploration.

## 2 A Spiral of Hopes and Fears

In 1904, an American telephone salesman wrote that the “telephone takes from the farmer’s family its sense of loneliness and isolation” Largely through its influence the “pathos and the tragedy” of farm women’s lives would disappear (Fischer 1994, 99). Popular magazines emphasized the same theme, with one arguing in 1907 that, between isolated farm houses, “a sense of community life is impossible without this ready means of communication.” Again, the “loneliness and insecurity” felt by farmers’ wives would disappear replaced by a sense of solidarity similar to that of a small country town (Fischer 1994, 99). Claude Fischer’s work reveals a view, common at the time, that the telephone had transformed the social and psychological lives of rural Americans at the turn of the century. Equally there were popular and academic accounts of the telephone that deplored the amount of time that people, and particularly women, would waste on “gossip, chitchat, and chatter” (Rakow 1992, 2; Tufekci 2014, 16).

The arrival of radio in the 1920s was accompanied by predictions that it would foster peace and a new internationalism. Christopher Morash cites, for example, the *Irish Radio Journal*, which in 1925 opined that broadcasts in Esperanto

would bring the world “a step nearer that state of existence that people have been seeking since the confusion of tongues” (2010, 186). Reverend Canon Theodore O. Wedel, College of Preachers, Washington, wrote in 1957 that the “technological triumphs of the twentieth century” had appeared to move people “out of prisons of isolation into intimate contact with one another”. Travel and mass media, like radio, had banished any need to fear solitude. Yet, beneath this he discerned a paradox. Mass communication was not communication between people at all. It was a “tyranny of monologue” that only the lonely and the isolated were likely to need. He concluded that the monologue of the radio may be an anodyne for loneliness but it was “not a cure” (Wedel 1957, 71–72).

In 1961, G.L. Hindson, a British medical general practitioner exploring the relationship between television and health, reported that many people who installed a television in their homes did so because it would help them to relax and avoid boredom. Single people and the elderly thought that they would be better able to “tolerate loneliness, misfortune, or isolation if they had a television set to comfort them” (Hindson 1961, 554). Among its many perceived benefits, the television seemed to be another technology that could ease the torment of loneliness. American advertisements for television would commonly feature a “family circle” with parents and children sitting around the screen. The television was portrayed as the heart of a stable and sheltering home (Spigel 1992, 40). Optimism was not confined to advertisers. Echoing hopes for the new medium, in 1950, Irish journalist John Pudney wrote:

Month by month there are more and more people joining the television audience of Britain. In time, this great service, which, as far as I can see, has no destructive potential about it may extend over Europe. It will do but good in fact if the whole world is linked together not only by sound but by sight. In these days, information and truth is the most valuable currency in the world; and the one currency which all men of goodwill must share.

(John Pudney in *The Irish Independent*, April 25, 1950)

And, at the same time, television was being derided as a technology that would tear families apart and encourage social isolation. Paternal authority would be undermined by the domestic screen. Men would be emasculated as they became couch-bound (Spigel 1992, 63). Housewives would be distracted from their work. Children would be diverted from their lessons and dulled by the medium’s passivity (Spigel 1992, 50–51).

In 2014, Zeynep Tufekci lamented that the “lonely world of cyberspace” had become the latest example of the “vast gap that every so often opens between an idea’s popularity among pundits,” which was considerable, and “its basis in empirical research,” which was scant. *The New York Times*, she recounted, had run op-eds that social media or our phones could be eroding

human connections. *The Atlantic* had run a cover story asking if Facebook was making us lonely? MIT psychologist Sherry Turkle had published her 2011 book *Alone Together*, arguing that new media undermined personal relationships. Pope Benedict cautioned young people not to “replace their real friends with virtual ones.” But, in the meantime, Tufekci countered, a “growing pile of empirical research” showed that “if anything, the relationship runs the other way – Internet users are more social and less isolated” (Tufekci 2014, 13). Of course, as is often the way in studies of media effects, we can locate a competing pile of research to show that internet users are less social and more isolated (Nowland, Necka, and Cacioppo 2018, 70–71). This pattern, present in academia, is repeated among journalists and social commentators. The internet is either a hotline to friendship or a siren song that seduces and isolates. It is rarely contemplated that it might be both at once. As we can see, this polarized reception for a new communication tool is not new. It is cyclical.

For Nancy Baym, the complaint that new communications technologies have corrupted the youth and furthered the undoing of society are a perennial social fixture since antiquity (2010, 25–26). “There is a strong tendency” she wrote, “especially when technologies are new, to view them as causal agents, entering societies as active forces of change that humans have little power to resist” (Baym 2010, 24). Here “predictable negative stories are met with predictable positive alternatives in a familiar contradictory binary” (2010, 27). As Klaus Schoenbach has suggested, what the hopes and fears dichotomy reveals to us are two underlying myths in modern cultures: a pessimistic belief in the fecklessness of media users, and an optimistic faith in the emancipatory power of technology (2001, 365). These cycles may reveal more to us about elements of our culture than they do about the effects of communications technologies.

To argue that polarized discourses may be recurring symptoms of underlying mythologies is not to dismiss concerns about how mediated communication may be connected to loneliness. Cycles of hopes and fears surround a core of long-term social transformations that are, arguably, more helpful in an attempt to understand how media are related to twenty-first century loneliness. There is a different history of media and loneliness to be told. We need to explore how media have developed in tandem with society serving structural and psychological needs. To better understand “digital loneliness” it is useful to consider how loneliness, social isolation and media have been interwoven since the eighteenth century.



### 3 The Novel Psychology of Domestic Privatization

Computer technologies allow us to experience simulations of reality. For Turkle, there is a risk attached to our ability to spend part of our lives engaged with virtual worlds. Slow real world people and relationships may not be able to compete with the pace of the virtual where something new is ready at the first hint of boredom (Turkle 2011, 287–288). From gaming to music to social media, change is constant. Newness is a habit. Turkle worried that people might expect a similar level of drama from their real world relationships. When real lives failed to yield comparable excitement people were even more likely to retreat into life lived through a screen. Simulation could be addictive. However, Turkle clarifies that “if there is an addiction here, it is not to a technology. It is to the habits of mind that technology allows us to practice” (Turkle 2011, 288). And these “habits of mind” long pre-date digital media.

European modernization saw the disappearance of “knowable communities.” John Durham Peters recounts that “Novels, newspapers, encyclopedias and social statistics all make their decisive first appearance in the eighteenth century. All attempt to describe a social world in which first-hand acquaintance alone is no longer sufficient.” These new forms of representation offered “panoramic surveys of the social horizon in varying ways.” They mediated society for us and as such modern media became “means of imagining community” (Peters 1993, 565–566). Amid the disruption of modernization, new media forms also became means of imagining ourselves.

In the late 1700s, the homes of merchants and business owners became the epicenter of a profound cultural and emotional revolution. The privatization of the middle-class home was pivotal in European modernization. The bourgeois home, unlike its aristocratic predecessor, was not designed to be a venue for meetings or celebrations that served an economic or political role. It was, unprecedentedly, private. Bourgeois family life was experienced as something separate from, and independent of, both society and economy.

In reality, the experience of family in familial, rather than economic or political, terms depended upon a patriarchal capitalist society (Habermas 1989, 55). For Raymond Williams, the dependence of the private home on the structures and resources of the outside world, “created both the need [for] and the form of a new kind of ‘communication’”: news from “outside,” from otherwise inaccessible sources.

Already in the drama of the 1880s and 1890s (Ibsen, Chekhov) this structure had appeared: the center of dramatic interest was now for the first time the family home, but men and women stared from its windows, or waited anxiously for messages, to learn about forces, “out there”, which would determine the conditions of their lives. (Williams 2003, 21)

The privatization of domestic space brought with it a new psychological and emotional experience. Privatized individuals had a new need for psychological validation through vicarious living and reflection (see Habermas 1989, 43). There was a newfound curiosity about psychology. Thinking about oneself became a way of relating to others, and vice versa. The new mindset was audience-oriented. Letters and diaries became “experiments with the subjectivity discovered in the close relationships of the conjugal family.” The diary for example became a “letter addressed to the sender, and the first person narrative became a conversation with one’s self addressed to another person.” As Jurgen Habermas wrote, the new subjectivity, as the “innermost core of the private” was “always already oriented to an audience” (1989, 49). People made sense of themselves in dialogue, spoken or written, with others.

Initially, the personal letter provided the media substrate for this privatized, purely human subjectivity (Habermas 1989, 48). This was an age of sentimentality and letters were “containers for the ‘outpourings of the heart’”. They could not simply report events, the letter was an “imprint of the soul” or a “visit of the soul.” They were to be “written in the heart’s blood, they practically were to be wept” (Habermas 1989, 49). Quickly transcending the personal, letters were written for wider audiences. They were borrowed and copied. Private, sentimental letters and diaries turned into fiction.

Thus, the directly or indirectly audience-oriented subjectivity of the letter exchange or diary explained the origin of the typical genre and authentic literary achievement of that century, the domestic novel, the psychological description in autobiographical form. Its early and for a long time most influential example, *Pamela* (1740), arose directly from Richardson’s intention to produce one of the popular collections of model letters. (Habermas 1989, 49)

Shortly after the publication of *Pamela*, public libraries appeared. Book clubs, subscription libraries, and reading circles became popular (Habermas 1989, 51). Following *Pamela*, and fictional works from Rousseau and Goethe, the “rest of the century reveled and felt at ease in a terrain of subjectivity barely known at its beginning” (Habermas 1989, 50). The novel became part of middle-class life.

The relationship between authors, works and readers became “intimate mutual relationships between privatized individuals who were psychologically interested in what was ‘human,’ in self-knowledge, and in empathy.” As David Riesman observed, “to be alone with a book is to be alone in a new way.” Reading provided an escape from society and offered a new space for reflection (Riesman, Glazer, and Denney 2001, 96). There was an intimate conversation

between authors, readers and fictitious characters. Habermas singles out the work of Jonathan Sterne (*Tristram Shandy*, 1759) which directly addresses the reader within the narrative as placing “a final veil over the difference between reality and illusion” (Habermas 1989, 50). Literature became a backstage that allowed privatized individuals to rehearse for reality.

The reality as illusion that the new genre created received its proper name in English, “fiction”, to shed the character of the merely fictitious. The psychological novel fashioned for the first time the kind of realism that allowed anyone to enter into the literary action as a substitute for his own, to use the relationship between the figures, between the author, the characters and the reader as substitute relationships for reality. (Habermas 1989, 50)

As people wrote to others, and read of other private lives, fiction became part of personal reality. For themselves and others, they became characters to be understood and projected through media.

As we have seen, loneliness can occupy the gap between the relationships that we have and those that we feel that we ought to have. Media may promote such loneliness. Melodramatic and psychological novels served as a salve for the newfound domestic privacy of the eighteenth century. The novel offered vivid, emotionally-heightened insights into other lives. Romantic love was installed as a literary obsession. It became a central life goal, particularly for women, to find their “soul mate” rather than to marry for position or out of convenience. The idea of love changed from companionship to something individualized and idealized. Indeed, a quest for deep, human connection was an intrinsic part of Romantic ideology (Bound Alberti 2019, 68–69). Novels created psychologically realistic visions of jeopardy and passion that could make real life look flat by comparison. The “habits of mind” that concerned Turkle, where reality is not enough, thrive through digital media but they originated in the privatization of domestic life and the psychological and emotional needs that it created.

## 4 Lonely, but Never Alone

The privatization of the family home created a need to turn to media for validation and social comparison. Ironically, however, part of the problem with twenty first century loneliness lies in our inability to be alone. For Turkle, people find it difficult to, and indeed are reluctant to, experience solitude, which can refresh and restore. Devices offer constant connection and endless distraction. To experience solitude, “you must be able to summon yourself by yourself; otherwise, you will only know how to be lonely” (Turkle 2011, 288). Loneliness then could be

described as failed solitude, where we are unable to achieve some degree of contentment in, and by, ourselves.

Explaining failed solitude, Turkle referred to Riesman's work in *The Lonely Crowd* (published 1950). The book's central concept is other-directedness, a type of social character predominant among professional middle classes in mid-twentieth century America. This mode of social conformity originated in mid-century transformations in work and consumption, which had become less concerned with physical material and more concerned with the management and manipulation of people. The essence of other-directedness is the need to constantly read, and adapt to, one's peers. Neil McLaughlin has emphasized the renewed salience of Riesman's analysis in an age of folksy politicians, confessional reality television and social media as an endless scramble for attention and popularity (2001, 15–16).

The other-directed society values popularity but constantly threatens ostracism. People must compete while fitting in. Polite wars of “antagonistic cooperation” are waged in the workplace and in spheres of taste and style (see Riesman, Glazer, and Denney 2001, 81). The peer-group is the constant, ever-changing moral authority that imposes conformity amid the impression of personal autonomy (Riesman, Glazer and Denney 2001, 82). Peers, however, did not need to be real to enforce conformity.

In mass media, Riesman, saw the rise of synthetic company. Mass-mediated and often entirely fictional peers became examples of what was normal. They became visions of how to be. From childhood, media would “picture the world” and “give both form and limits to . . . memory and imagination” (Riesman, Glazer, and Denney 2001, 84–85). Media represented social groups through stereotypes. Whether these representations were met with acceptance or rejection did not matter. They engendered conformity because people acted in relation to them (Riesman, Glazer and Denney 2001, 97).

Mass media are central to Riesman's vision of the other-directed society. They replaced traditional teachers and storytellers as agents of socialization (2001, 97). Importantly, new twentieth century media forms were instrumentalized. They were funded by, and designed around, the sale of advertising and the promotion of consumerism. New forms of storytelling on radio, in comics and later on in television were central aspects of the training of children as apprentice consumers (Riesman, Glazer and Denney 2001, 96–97). Media became part of how people understood the world and their place in it. They told people how they compared, how they fitted in, what was currently socially desirable and so on. Celebrities through their fame, popularity and success became exemplars in the other-directed society. Instrumentalized, mediated personalities offered models of how to be. They were, in effect, peers.

For Riesman, media shaped standards of personal performances in the same way that they standardized taste and acts of consumption. Mediated peers, for example, could undermine personal investment in pursuits and hobbies. They forced an inevitable comparison with the best of the best in fields like music, sport, and so on. This process would become internalized to the extent that a child could feel themselves in competition with the stars, even if no one else were about (Riesman, Glazer, and Denney 2001, 76). Thus, for Riesman, it was “difficult for an other-directed child to cultivate a highly personal gift.” There was too “little private time to let it mature and the standards, imposed by peers immediate and mediated” were too high (Riesman, Glazer, and Denney 2001, 76). In the mid-twentieth century, people were relating to, and fitting in with, instrumentalized, mediated peers that banished effective solitude.

There is, perhaps, no better example of other-directed conformity than in the relationship between television and suburbia. The American suburbs of the 1950s were an amalgam of reality and media representation, of everyday culture and consumer capitalism. Television advertised social aspiration as much as it did consumer products. It also, in its ubiquitous representations of the suburban nuclear family, tutored audiences in what was possible, normal and desirable. Commercial representation and reality merged. As the line between “domestic economy and the commercial culture” became increasingly unclear, “Americans and their families were treated to entertainment designed to sell not only a product, but a way of life.” Moreover, echoing more longstanding processes of domestic privatization, this was “a way of life that was reinforced by the design of the very houses in which they lived” (Kelly 1993, 36)

The suburban dream excluded black people, lesbian, and gay people, the elderly, the homeless, the childless and the unmarried. These people did not exist in mid-century television representations of the suburban good life, which was white, middle class, and centered around the nuclear family. Spigel, however, treats the category of “white middle class” itself as a media construction rather than as a real reflection of how people of different faiths and ethnicities experienced their “fractured and complex” identities. Nonetheless, the category is significant because “. . . it was the particular aim of the mass media – especially television – to level class and ethnic differences in order to produce a homogenous public for national advertisers” (Spigel 1992, 6). Media marketers hoped that people would fit in with peers that were imagined for them.

Social media can be taken as an arch example of other-directedness in action. They facilitate peer surveillance. They can collapse together spaces that were previously separate, opening some of our behaviors to unwanted audiences (Tufekci 2014, 17). As Joshua Meyrowitz has demonstrated, this can compromise our ability to inhabit and perform the various social roles and identities

that make up life in a modern society (1986). Social media are often, in effect, mandatory. Tufekci remarked that for many, and particularly younger people, they are only formally optional. To abandon social media would be to “isolate oneself outside of vital spaces for contemporary social life” (Tufekci 2014, 17). We may be condemned to fit in with our mediated peers. And still, none of this is anything new. It is the continuation of a well-established trajectory.

## 5 Friends, Time, and Money

In *Alone Together*, Turkle offered emotive descriptions of people who had to resort to, or even preferred the simulated company of robots and other machines to that of human beings. In overstretched care homes, for example, nurses and physicians saw seal-like companion robots to be better than the fleeting attention of staff, or no company at all (Turkle 2011, 109). Elderly residents related to robots as though the machines could feel and understand. Students admitted to Turkle that they would accept the company of a machine rather than a romantic partner if the machine could offer a sense of company and a “no-risk relationship” (2011, 8).

The idea that we are ready to accept the synthetic as if it were human is at the heart of what Turkle calls the “robotic moment.” This describes a state of emotional and philosophical readiness where people are “willing to seriously consider robots not only as pets but as potential friends, confidants, and even romantic partners”. It seems not to matter that a machine might not “know” or “understand” anything of the moments we share with them. Socially and individually, we are increasingly ready to bond with, and confide in, inanimate objects. In the “robotic moment, the performance of connection seems connection enough” (Turkle 2011, 8–9).

The robotic moment emerges, in part, from a desire for control. Smartphones and social media make staying in touch easier but they also allow us to manage our relationships. We can engage with friends and acquaintances on our own terms. We can turn to our devices to fend off loneliness and we can use them as a throttle for engagement and commitment (Turkle 2011, 13). New technologies can offer the benefits of communication without the inconveniences and obligations of the real world. Turkle explored the robotic moment in terms of “human vulnerabilities” and largely through a psychoanalytic exploration of childhood socialization (2011, 26). She revealed that, for many, machines, predictable and controllable, could feel safer than people. Once again, however, we can look to history to see that tendencies to mediate human relations through technology are longstanding and may be rooted in economics as much as in psychology.

For Adrian Franklin, loneliness is a “dominant emotional feature” of market-led societies (2012, 16). Values of freedom and choice supplant those attached to collective belonging. In his examination of loneliness in Australia, Franklin argued that the logics of the market and consumerism replace the bonds of family, community, and work (Franklin 2012). With an economic imperative for flexibility, people may wish to avoid bonds that create limits, obligations and duties. We may prefer bonds that last “until further notice” (Franklin 2012, 15–16). The choice-based logic of consumerism may apply to relationships as much as shopping.

Consumerism now organizes our individual stance to things in general; everything, including relationships, is aestheticized and evaluated in terms of their capability to offer beauty, desire and pleasure. Everything and consequently everybody becomes disposable (or exchangeable), and the experience of being disposed of (or exchanged), the ever-present fear of immanent disposal (or replacement) and the background steady state of disposability all serve to undermine, erode and ultimately destroy human bonds. (Franklin 2012, 16)

Loneliness might then be driven, not by technology, but by the commercial colonization of everyday life.

Alison Hearn identified self-promotional behavior and self-branding as a central characteristic of the neoliberal age. Hearn attributes this to the dominance of precarious employment and flexible recruitment practices (2008). Such behavior can be found online and in real life, among friends and family as much as in attempts to find work or drum up business. The self is reduced to a “set of purely instrumental behaviors” that are circumscribed by market discourse. The predominance of such behavior promotes Machiavellian cynicism but discourages connection and trust (Hearn 2008, 206). The “branded self” is not only instrumental and performative, it is also mediated. Hearn argues that the self-promotion that we witness on social media, and the anxiety that can accompany it, have their roots in economic transformation. The 1970s, with the rise of neoliberal governance, are commonly seen as a moment when a sea change occurred in economy, work and culture (Harvey; Sennett 2006). The idea of seeing oneself as a product to be promoted is, however, older than this.

In the 1947 book, *Man for Himself*, German psychoanalyst and critical theorist, Erich Fromm, noted the emergence of a “marketing orientation” in twentieth century American society. He saw that “the package, the label, the brand name” had “become important, in people as well as in commodities” (1947, 59). Making a livelihood depended on being accepted by others. Capabilities were necessary but not sufficient for success. Being in demand required a personality. As people became concerned with being “saleable,” a “personality market” emerged. Self-esteem became a product of market value. Determined by fashion and other vicissitudes of the market, it lies beyond our control. Identity and

self-esteem are provisional. We are left to find our worth in the opinions of others. Acclaim, status, and success can, temporarily, shore up fragile identities. Fromm acknowledged that “man naturally wants to be accepted by his fellows.” However, “modern man wants to be accepted by everybody and therefore is afraid to deviate, in thinking, feeling, and acting, from the cultural pattern” (1947, 123). Fromm’s analysis suggests that a culture valorizing a life lived in pursuit of “likes” was entrenched decades before the internet, let alone Facebook, and existed in its most rudimentary form.

At the core of the marketing orientation there is, necessarily, an emptiness. There is the absence of any kind of personal quality that cannot be changed in response to the market. Persistent character traits are likely, one day, to clash with market demand. Personal qualities, principles and peculiarities must be rooted out. Above all, Fromm wrote, “the marketing personality must be free,” free that is “of all individuality” (1947, 56–7). The personality market demands that people appear authentic, while abandoning any fixed sense of self. In mid-twentieth century America, Fromm’s work provides a trace of a society that demanded performance, and insisted on nothing more. It anticipates a key ingredient of Turkle’s “robotic moment.” Turkle announced the twenty-first century concern that people may turn to machines for the performance of a relationship. This moment, however, has been a long time in the making.

McLaughlin argues that *The Lonely Crowd* “cannot be understood apart from the dialogue between Riesman and Erich Fromm” (2001, 8). Fromm was Riesman’s therapist and, later, friend. The concept of the other-directed character was, according to Riesman, “stimulated by, and developed from, Erich Fromm’s discussion of the “marketing orientation” in *Man for Himself*” (McLaughlin 2001, 10). David Riesman was a university mentor to Turkle (Turkle 2015, 8). And, Turkle herself described *The Lonely Crowd* as the book that had most influenced her own work (*The Boston Globe*, December 19, 2015). The psychological vulnerabilities discussed by Turkle have a clear intellectual lineage in the work of Riesman and Fromm. They also have clear roots in historic, structural transformations beyond individual “human vulnerabilities.”

## Conclusion

Loneliness is shaped by cultural and normative expectations. Our success in coping with the pain of loneliness is influenced by how we see other people, how we think about them and what we expect from them. Over centuries of modernization, chains of economic dependence have become global, while



social relations have often contracted into the domestic sphere. Our social and economic dependencies have become detached from the places that we live. The disappearance of “knowable” communities has contributed to social isolation. As the centrifugal forces of modernization have spun families and communities apart, media have acted as connective tissue. They have become central means of connecting to, and knowing, the social world. Thus, they profoundly shape how we perceive others and what we expect from them.

*Pamela*, as the first sentimental novel, has been identified as the earliest origin of the television soap opera (Cantor and Pingree 1983, 20). Like so many media forms, the soap opera provides a resource that allows people to understand and contextualize their personal experiences. It is a mediated compensation for the privacy of modern domestic life. From the novel, to soap opera, to Reality TV, to Instagram, media offer opportunities for vicarious living, social comparison and personal reflection. Media can compensate for the costs of social fragmentation and help create a richer society and inner life.

Media can also create false impressions of what constitutes a “normal” level of connection. Mediated peers can influence whether we experience our real world relationships as being adequate. Brian Primack and colleagues, for example, observed that rather than offer accurate representations of reality “social media feeds are in fact highly curated by their owners.” Regularly viewing “such highly idealized representations of peers’ lives may elicit feelings of envy and the distorted belief that others lead happier and more successful lives” This, in turn, is likely to increase perceived social isolation (2017, 6–7). Media allow us to look into the lives of others. They also, necessarily, amplify the drama and emotion of other lives. They show us the world but they must work to maintain our interest. Richardson’s *Pamela*, after all, marked the birth of a fictional form that emerged from embellished accounts of daily life.

As Nowland and colleagues have argued, the question of how the internet is used is a far more pertinent question than whether it in itself constitutes a cause of, or a cure for, loneliness. The same media that facilitate social outings for some can be a means of separation for others (see Nowland, Necka, and Cacioppo 2018, 79). How we use the internet is, obviously, connected to who we are and where we are located in an overall culture. Our culture can form a taken-for-granted background but it also carries the historical momentum of long-term movement towards privatization, commercialization and rationalization. Finally, we need to recall the difference between transient and chronic loneliness. There is a tipping point for many of us where tools for connection can become a means of anaesthetizing and perpetuating isolation.

Questions about media and loneliness are questions about a total way of life. Baym observed that “when we communicate about digital media, we are

communicating about ourselves, as individuals, groups and societies” (2010, 23). The same is true of questions about the problem of loneliness. These are questions about economics, architecture and values as much as they are queries about media. The internet can offer neither a scapegoat nor a quick fix here. If we are to successfully address complex problems like loneliness we can no longer approach them through simple questions.

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Susan Aasman, Tim van der Heijden and Tom Sloopweg  
**Amateurism**

Exploring its Multiple Meanings in the Age of Film, Video,  
and Digital Media

**Abstract:** In the current digital age, media amateurs seem to have taken over a large part of cultural production and revised traditional hierarchies between professionals and amateurs. This development has been characterized as a form of “mass amateurisation,” or even “mass cultural production.” This present state of affairs is deeply embedded in an ongoing discourse on the value of being an amateur. Both in public discourse and in scholarly debates, amateurism has been conceptually categorized as either a self-assigned role or as a label that is conferred by others. To explore the multiple meanings of amateurism, this chapter demonstrates how a media historical approach helps to better understand the full complexity of the concept. In addition, we propose that future research can benefit from the development of clear analytical approaches to identify various amateur modes of practice, while also acknowledging the ongoing hybridity of the media amateur.

**Keywords:** amateurism, amateur media practices, hybridity, modes of practice

Amidst the explosion of social media platforms in the first decade of the 2000s, when consumers transformed into producers and distributors of expressive cultural content, Ralph Rugoff (2008, 9), a curator of contemporary art, observed how “amateurs have returned with a vengeance.” He noticed how cultural production saw a strong resistance in the arts against “hyper-professionalization,” which resulted in nothing less than a “cultural revolution” (Rugoff 2008, 9). This resistance to the cultural industry and artworld was an ongoing concern for many artists in the twentieth century. One such artist was Andy Warhol, who explicitly praised the amateur in his book *The Philosophy of Andy Warhol*: “Every professional performer [. . .] always does the same thing at exactly the same moment in every show they do. What I like are things that are different every time. That’s why I like amateurs . . . You can never tell what they’ll do next” (Warhol 1977, 83).

The appreciation that speaks from the quote underlines an interesting moment in both art and media history. Warhol’s observations should be understood within the context of the 1960s and 1970s when a quest for alternatives to the mainstream, a plea for better access to the means of cultural production

and a desire for authenticity and real-life experiences were taken up by many media makers and artists. In the current digital age, however, amateurs seem to have taken over a large part of cultural production and revised traditional hierarchies between professionals and amateurs. This development has been characterized as a form of “mass amateurization” (Shirky 2008), “mass cultural production” (Manovich 2009) and an “amateurized media universe” (Zimmermann 2013). One could even argue that amateur media production moved from being marginal to a mainstream pursuit, thereby reconfiguring the media landscape (Motrescu-Mayes and Aasman 2019).

This present mode of amateurism is embedded in an ongoing discourse on the value of being an amateur. One that is furthermore embedded in a history of everyday media use, with material, economic, aesthetic, cultural, and social dimensions. However, the question remains whether the ideals Warhol and others adhered to have come to fruition in the digital age, or do they represent a mythical conception of what the amateur and amateurism mean? Should we value amateurism as something that is closely related to ideals of democratisation, valuing a specific aesthetic and a desire for personal and intimate representations of everyday life? In order to deconstruct and better understand the current debates and discourses surrounding the notion of amateurism, we think it is crucial to historicise these notions of the amateur. By exploring the historical dynamics of the media amateur, we will be able to understand the multidimensional complexities of what it means or meant to be (called) an amateur.

In the first part of this chapter, we will discuss various scholarly debates around the amateur and trace the main themes and perspectives, in particular those related to amateur media. As we will show, the complexity of the debates around the amateur are connected to the idea of how amateurism has been conceptually categorized as either a self-assigned role or as a label that is conferred by others. The latter distinction will be conceptualized in terms of “emic” and “etic” approaches to amateurism. In the second part, based on empirical research, we historicise the notion of amateurism by focusing on film, video, and digital media as amateur media technologies and their appropriation by users within three historical periods of time. For each media technology and time period, we discuss the ways in which “the amateur” has been defined and how conceptualisations of amateurism have developed over time.<sup>1</sup> In the conclusion, we propose two

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<sup>1</sup> This chapter is based on the results of the NWO-funded research project “Changing Platforms of Ritualized Memory Practices: The Cultural Dynamics of Home Movies” (2012–2016), in which the authors traced the history of amateur media from a long-term historical perspective. More information about this research project can be found on the project’s weblog: <https://homemoviesproject.wordpress.com/>.

complementary conceptual lenses – amateur modes of practice and hybridity – for analysing the notion of amateurism in its historical complexity.

## 1 Getting a Grip on the Amateur

Over the years, the meaning of amateurism has been subject to change. Today, the term amateurism often refers to informal, self-taught, hobbyist or do-it-yourself practices, all of which tend to evoke mostly pejorative connotations, such as being unqualified, or non-professional. In the late nineteenth and early twentieth century, however, identifying oneself as an amateur was often a matter of pride and honour: being an amateur meant that someone devoted a considerable amount of time, energy, and commitment to practicing a particular hobby for the purpose of sheer enjoyment. Etymologically speaking, the word amateur is derived from the Latin word *amare*, meaning “to love.” This etymology thus clearly connotes a favourable, even idealist meaning of amateurism. The amateur practitioner loves the hobbyist pursuit in and of itself, without any financial motives, as opposed to the professional practitioner.

In her 1965 essay “Amateur versus Professional,” the American avant-garde filmmaker Maya Deren argued that amateur filmmakers should take inspiration from this original meaning of amateurism and “make use of the one great advantage which all professionals envy him, namely, freedom – both artistic and physical.” At the same time, she underscored how “[t]he very classification ‘amateur’ has an apologetic ring” (Deren 1965, 45). Four decades later, media scholar Broderick Fox argued that in the digital age “the ringing has only intensified, negative connotations of the term moving up to first definition status in the dictionary of popular consciousness” (Fox 2004, 5). Clearly, current connotations and understandings diverge from the original idealist meaning of amateurism which, as film historian Ryan Shand argues, is “so out of step with contemporary ideologies that it requires a historical explanation to be properly grasped” (Shand 2007, 7).

A number of historians, sociologists, and scholars from the field of cultural studies have tried to grasp amateurism, both as a historical and a sociocultural phenomenon. The American historian Steven Gelber, for instance, understood amateurism as part of the broader rise of hobbyism, a phenomenon that came to prominence with changing notions regarding the relationship between work and private life during the processes of professionalisation, industrialisation and modernisation in the nineteenth century. Amateurism, then, according to

Gelber, was understood in relation to meaningful “leisure”, which served as a bridge between working life and the home (Gelber 1999, 2–3). Moreover, leisure and amateurism were often strictly gendered categories. Whereas public leisure was often seen as male oriented, women’s leisure was considered strictly private, belonging to the domestic sphere. As a result, a “distinctly female culture” developed with characteristic home-oriented activities (Gelber 1999, 157). It is important to note that this led to new cultural hierarchies and values related to male hobbies, such as photography or home movie making, as opposed to typical women’s “crafts” like embroidery or sewing. This gendered division of activities remained dominant throughout the twentieth century. For instance, in the early 1960s, a manual for amateur filmmaking encouraged husbands to buy a film camera while their wives were presumed to acquire a sewing machine (Aasman 2004). Of course, there were also forms of “leakage” (Gelber 1999, 157), because these categories were and are much more complex, and do not endlessly reproduce the “ideology of ‘separate spheres’” (Jordan 2000).

The sociologist Robert Stebbins, in his writings on “serious leisure,” furthermore distinguished between amateurs, hobbyists and volunteers. Unlike Gelber, Stebbins did not define amateurism as a form of hobbyism. A hobbyist, he argued, does not have a professional counterpart: “hobbyists are often enamoured of pursuits bearing little or no resemblance to ordinary work roles” (Stebbins 1992, 11). Amateurs, on the other hand, always have a professional counterpart. Therefore, according to Stebbins’ typology, “the term ‘amateur’ should be used only with those activities that constitute [. . .] a *professional* work role. That is, there must be a professional counterpart to the status of amateur” (Stebbins 1992, 41–42; original emphasis).

However, this division between the amateur and the professional (or expert) is not always straightforward. As Kristen Haring shows in her study on the technical culture of ham radio: “Despite hams’ proud insistence at times on their status as ‘amateur’ radio operators, there was a significant overlap between the groups that worked with electronics during the day for wages and in the evening for pleasure” (Haring 2007; cf. Douglas 1986). The same applies to the group of home computer amateurs from the 1960s and 1970s, who were likewise positioned “between work and play” (Gotkin 2014; cf. Kerssens 2016). The blurring of boundaries between amateurs and professionals seems to intensify in the digital age, as indicated by the rise of such new terminology as “pro-ams,” “prosumer” and “producers” (Leadbeater and Miller 2004; Bruns 2006; van Dijck 2009). These new terms are not neutral, however. Andrew Keen, for example, underscored the more negative connotations of amateurism in the digital age by stating that “On today’s Internet [. . .] amateurism, rather than expertise, is

celebrated, even revered” (Keen 2007, 37). Others point at more positive meanings of the term that, according to Nick Prior, relate in particular to a renewed valorisation of the amateur: “In the last two decades or so, the status and position of the amateur have been redeemed and a new, less aristocratic, breed of amateur has emerged” (Prior 2010, 401).

In tandem with these broader discussions on amateurism, various conceptualisations of media amateurism have also been discussed in scholarship on the topic over the years. Defining amateurism clearly, with analytical precision, has proven to be more challenging than might be expected for such a seemingly quotidian phenomenon in media culture. A recurring trend in the scholarly pursuit of a clear definition, or conceptual framework, is the pervasive impulse to understand it in terms of what it is not. Broderick Fox, for example, remarked that when we ask “for a concrete definition,” we rarely “respond with an answer of what amateurism *is*, constructing a meaning, [but] instead, in terms of what it is *not* – not sophisticated, not technically adept, not pretty or polished, not of popular interest, or perhaps, most frequently and opaquely, ‘not professional’” (Fox 2004, 5). This stance furthermore seems to align with the manner in which the amateur is defined in everyday discourse. The Cambridge Dictionary Online, for example, defines an amateur as “a person who takes part in an activity for pleasure, *not as a job*,” and as “someone who does *not* have much skill in what they do” (Cambridge English Dictionary 2020; emphasis added). Moreover, in addition to the efforts to define the amateur in terms of what it is not, as media scholar Kevin Gotkin (2014, 5) observed, amateurs seem to “emerge in the cracks between extant categories, and even the label ‘amateur’ has a historically mutable character.” He furthermore reminds us that every intellectual effort to grasp the amateur, whether from a synchronic or diachronic perspective, must acknowledge that the amateur is essentially “a moving target” (Gotkin 2014, 6).

## 1.1 Fixing the Target

In order to make some headway in “fixing” the target, we hence propose to cluster the definitional strategies derived from the historical sources and literature on the topic according to four types of amateurs. This typology of amateurs, we should emphasise, is by no means exhaustive or exclusive but rather serves as a pragmatic categorisation of the amateurism debate, in which each amateur type places a different heuristic or analytical emphasis.

The first type is the amateur as non-professional user. This amateur type, for instance, is discussed by sociologist Robert Stebbins (1992) and media theorist Patricia Zimmermann (1995; 2008), who respectively defined, analyzed, and



criticized the amateur in relation to their professional counterpart. Furthermore, the amateur as non-professional user is prevalent in marketing discourses that regularly differentiate between “amateur” and “professional” types of technologies and their (configured) usages, e.g. the domestic consumption of technologies (cf. Silverstone and Hirsch 1992). In the current context, where amateurs are taking to commercial social media platforms like YouTube, the classification of the amateur as non-professional has been challenged further. Media scholars such as Jean Burgess (2013), for instance, observed amateurs crossing the line from traditional, domestic to more public, market-oriented modes of participation. This then started a large-scale process of professionalisation and formalisation of amateur media production.

The second type is the amateur as tinkerer. Unlike the first amateur type, this one does not merely regard amateurs as (passive) consumers but rather considers they play an active part in the innovation and development processes of media technologies. Through tinkering, that is the technical playing with technologies and their (creative) appropriation, amateurs can function as active agents in the co-shaping, or “co-construction,” of a technology and its usages (Oudshoorn and Pinch 2003). The amateur as tinkerer and innovator foregrounds a technical and political understanding of amateurism in the debate (cf. Haring 2007; Gotkin 2014; Bruyninckx 2018). In the words of media theorist Sean Cubitt (1999), this type of amateur “is ready [. . .] to transform every material, to show respect through manipulating and changing what comes to hand, seizing a technology, a technique, a shape or melody or image and making it anew”. Moreover, the idea of “craftsmanship” is equally important, which implies that the development of skills and making an effort are part and parcel of the amateur practice (cf. Sennett 2009; Roepke 2013). Thus, the amateur as tinkerer type strongly foregrounds a particular do-it-yourself mentality.

The amateur as tinkerer is closely related to the third type: the amateur as avant-gardist. The discourses surrounding, or representing, this type of amateur are less technically oriented but rather underscore the amateur’s wish to experiment with new technologies and explore new topics or alternative aesthetics. This type also spurs a more political connotation that refers to the potential of amateurism in processes of cultural participation, democratisation, and valorisation (Prior 2010). This is done, for instance, by emphasizing the amateur’s sense of freedom (Deren 1965) and do-it-yourself ethos. Therefore, this category received various different labels over the years, such as counter practitioner, grassroots artist, media activist, or independent media maker. According to Michael Z. Newman (2008, n.p.): “The notion that do-it-yourself amateurism can stand on equal ground with media industry professionalism signals a democratic challenge to hierarchies of aesthetic value. And at the same time that

amateur media are gaining ground, so is the communitarian alternative to traditional, top-down mass media distinctions between production and reception.”

The multiple, often contrasting discourses surrounding the fourth type, the amateur as naive practitioner, demonstrate the complexity of this category. Within the debate, this type of amateur is often conceptualized as someone who lacks certain expertise or particular skills, which resembles the popular, dictionary understanding of the amateur pointed out earlier. In the influential book *The Cult of the Amateur*, Andrew Keen (2007) used this negative definition to typify the amateur as a non-expert. However, the amateur as a naive practitioner is not only limited to negative discourses and contemporary definitions. It can also reflect positive connotations, in which the naive is valued as “authentic” and can therefore be regarded as an asset. Here, the amateur is someone who, unlike professionals and serious hobbyists, is not hindered by any aesthetic conventions or pre-defined social structures as an operational framework. The amateur as naive practitioner, in this sense, reminds of the distinction between “naive artists” and “integrated artists” made by art sociologist Howard S. Becker. Naive artists lack institutional training and work independently from any artistic points of reference, whereas integrated artists do operate, often collectively, in such art worlds (Becker 2008; cf. Flichy 2018). It is exactly this (ideal of) amateur naïveté that was pursued and cherished in the avant-garde filmmaking practices of members of the New York underground, such as Jonas Mekas, Stan Brakhage, and Ken Jacobs. The notion of the naive practitioner is furthermore prominent in the work of the visual anthropologist Richard Chalfen. He connects “cinéma naïveté” with home movie making as a specific form of visual communication, in which the main goal is to make “use of filmmaking technology to symbolically record, document and *reproduce* a reality” (Chalfen 1975, 93; cf. Odin 1995). In the amateur handbooks, magazines, and instruction guidelines, the naive practitioner is often contrasted to the more ambitious or “aspirational” practitioner (Buse 2018).

## 1.2 Emic versus Etic Approaches

Following these four types of amateurs within the debate, we can detect a clear pattern that shows either a form of self-assignment or labelling of the term amateur as a particular value, either positive or negative, or appropriating it as an identity. To better understand this dynamic, we can learn from the field of anthropology, where the division between “emic” and “etic” is used to distinguish between the perspectives of the observer, or outsider, and participant, or insider, of a social group (Goodenough 1970; Harris 1976; Headland, Pike, and Harris 1990). An emic approach includes the ways in which the participants of a

social group perceive themselves, their behaviour and beliefs from an insider and cultural-specific or “native” perspective. An etic approach, on the other hand, includes the ways in which a (scientific) observer analyzes the behaviour and beliefs of the participants of the social group from an outsider and cross-cultural perspective.<sup>2</sup>

When looking at the four types of amateurs described above, we can see how the distinction between emic and etic approaches to amateurism can be helpful for better understanding the historical dynamics of the appropriation and labelling of the term “amateur.” The amateur as tinkerer, for instance, can be found in emic approaches to amateurism. As became apparent in discussions on radio and computer amateurism, this is how amateurs saw themselves especially in the early twentieth century. The amateur as naive practitioner, on the other hand, is more dominant as an etic approach in the amateurism debate. This perspective comes to the fore most prominently in the work of Andrew Keen (2007). For the amateur as avant-gardist, the emic approach is more dominant again, as Jonas Mekas and other filmmakers from the New York underground exemplify. The amateur as non-professional is more neutral and can therefore be found in both emic and etic approaches. Emic approaches include those amateurs who did not pursue professional standards, while etic approaches include the perspective of the industry when striving for a standardization and domestication of non-professional technologies. Nevertheless, emic and etic approaches can be found in all four amateur types. Instead of deploying the emic-etic framework in an oppositional or mutually exclusive manner, we would rather regard it as a complementary concept in the historical analysis of the dynamic between appropriation and labelling in amateur discourses.<sup>3</sup> In other words, both the etic and the emic should be taken into consideration when historicizing amateurism. We will show the benefits of such an endeavour in the next part, where we focus on amateur film, video, and digital media in three different historical time periods.

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<sup>2</sup> For a history and development of the emic-etic concept, and its different conceptualizations within the field of anthropology, see Headland, Pike and Harris (1990).

<sup>3</sup> In the field of anthropology, the complementarity of the emic-etic approaches is likewise embraced. As Jingfeng Xia argues: “Although emics and etics are sometimes regarded as inherently in conflict and one can be preferred to the exclusion of the other [. . .], the complementarity of emic and etic approaches to anthropological research has been widely recognized, especially in the areas of interest concerning the characteristics of human nature as well as the form and function of human social systems” (2011, 78).

## 2 Historicizing Amateurism: Film, Video, Digital

The history of amateur media in particular can help us to understand the constantly evolving discourses on amateurism. Several important observations point at the relevance of a historical approach to the topic: the ongoing stream of emerging and disappearing media technologies; a longstanding tradition of vocal practitioners embracing various ideological positions; a strong rise in the economic interests of the media industry; and last but not least, the increasing cultural and social investments of millions of practitioners, or media users, make this a fascinating but complex and contested field of historical research. As Patricia Zimmermann (1997, 74) observed: “any study of amateur film throws us into a mapping of submerged historical discourses on technology, aesthetics, politics and social relations.” Indeed, we should acknowledge how histories of amateur media can reconstruct socially and culturally specific experiences of meaning that do justice to media as “unique and complicated historical subjects” (Gitelman 2006, 7). Therefore, in this part, we will historicise the notion of amateurism by discussing the ways in which the amateur has been defined and conceptualized in the age of film, video, and the digital (cf. Aasman, Fickers, and Wachelder 2018). Media historians are often confronted with a sheer diversity of direct and indirect sources that can provide various possible answers (Motrescu-Mayes and Aasman 2019). The sources available to reconstruct the historical media amateur allow for the analysis of complex dynamics between discursive labelling, self-assignment, and perhaps also the “othering” of the amateur (Buckingham, Pini and Willett 2007, 191).

### 2.1 Film Amateurism

Who or what is the film amateur? While the first users of the film camera can be called amateurs, there was arguably no strict distinction between amateur and professional filmmakers between the late nineteenth century and the early 1920s. Rather, as Zimmermann (1995, 9) argues, “professionalism and amateurism complemented each other” in this early historical period.<sup>4</sup> This changed in the years 1922–1923, when the French Pathé Frères Company and the American Eastman Kodak Company respectively introduced their 9.5mm and 16mm “small-gauge” film technologies for the amateur user. While several attempts had been made by

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<sup>4</sup> For a discussion on the definition of amateur film in relation to its professional counterpart, see among others: Hogenkamp and Lauwers (1997); Hielscher (2007); Czach (2014).

the industry before to release a substandard film format for amateur and domestic usage specifically, such attempts failed to produce a truly cheaper, safer, and easier to use alternative to the standard 35mm film technologies that were used by professionals (Kattelle 2000). With the releases of the Pathé's 9.5mm and Kodak's 16mm (and later 8mm) safety film formats and accompanying film equipment, amateur filmmaking developed into a practice of its own right as it became accessible to a larger group of middle-class families and amateur hobbyists who had grown curious about the possibilities of recording and screening moving images.

Among such users were many amateur photographers. In the amateur photography magazines, they could read about the latest developments of the practice of filmmaking – then called “kinematography”. Two ideals of amateurism are particularly dominant in these discourses. The first is the nineteenth-century ideal of the amateur as someone who could elevate the profession to a higher artistic level. This ideal type reflects the amateur as avant-gardist: someone who, unlike their professional counterpart, is not bound by the conventions and limitations of the medium as set by their profession, but rather can explore new aesthetic avenues or directions to the medium in its development. In 1928, the Dutch amateur photography magazine *Lux-De Camera* projected this ideal type of amateurism onto the emerging practice of kinematography as follows: “Amateurism stimulated a better and artistic form of photography, and this will happen with respect to kinematography as well” (N.N. 1928, 222; translated from Dutch). This ideal type of amateurism was particularly prominent within the avant-garde movements of the late 1920s and 1930s (Horak 1998; Zimmermann 1995; Linsen, Schoots, and Gunning 1999). In several countries, cine-clubs became the sites where amateurs and the avant-garde would meet, exchange ideas, and cross-over practices occurred (Hagener 2007; Shand 2007; Craven 2009; Nicholson 2012; de Cuir Jr 2014; Tepperman 2015; Sloomweg 2018b). The second ideal of amateurism is the amateur as tinkerer who, similar to the amateur photographer, maintained a certain do-it-yourself mentality. This ideal type of amateurism can be found in normative discourses emphasizing the importance of film amateurs to develop their films themselves instead of outsourcing the development process to a manufacturer, so as to maintain as much technical and aesthetic control over the creative process as possible.

It should be mentioned that these two ideal types of amateurism originating from the domain of photography are not applicable to all amateur filmmakers; neither for this specific time period nor in later times. Rather, they particularly apply to the category of serious hobbyists and leisure practitioners who were interested in filmmaking as a hobby and form of expression. This in contrast to the large group of users who did not carefully plan, shoot, and edit their films but were primarily interested in the function of the amateur film camera to

record and preserve family memories (Hogenkamp and Lauwers 1997). This last group of users corresponds to the type of amateur as naive practitioner, who similar to the snapshot photographer practiced their hobby as a private or “home mode” form of communication (Chalfen 1987). Within this home or family mode, the French film theorist Roger Odin (1995) argued, the social function of (recording and watching) family films is more important than their aesthetic quality. Although for many users the making of family films was indeed the main reason to buy a film camera in the first place, the more ambitious or aspirational amateurs often regarded this only as a first step towards becoming a “real” amateur (van der Heijden and Aasman 2014).

This tension between amateur filmmaking as a hobby and memory practice is a recurring theme in the history of amateur filmmaking (Aasman 2004, 254). With the emergence of amateur ciné-clubs in the late 1920s and 1930s, the differentiation between user groups would only solidify (van der Heijden 2018b). The amateur in the film era, in other words, is neither synonymous nor complementary to the non-professional user. What makes or defines the amateur is rather the outcome of a complex negotiation process between labelling (etic) and appropriation (emic), in which various ideas, norms, values and motivations play a role.

## 2.2 Video Amateurism

Who or what is the video amateur? Can we even speak of the video amateur? These questions arise when engaging with the historical traces left behind by the video cultures of the 1970s, 1980s and 1990s. Media scholars David Buckingham, Maria Pini, and Rebekah Willett attempted to create some clarity when they analyzed not only the discursive construction of the historical film amateur but also of the video amateur. They concluded that the latter in particular shows an ever “increasing diversity of amateur video production [that] is making life more difficult for those who would seek to discipline and regulate it” (Buckingham, Pini, and Willett 2007, 199). Scrutinising the numerous amateur video productions made in the past will indeed reveal a staggering amount of diversity: home videos, activist and community videos, video diaries, spoof videos, bootlegs, amateur porn, skate videos, and the list goes on (cf. Hilderbrand 2009). Having a look at the content of these videotapes is nevertheless only one path to take in order to trace the video amateur. We can locate them as well in amateur magazines, manuals, in oral histories (memories), and other material sources.

The historical context in which the dynamic of the emergence of the video amateur comes to the fore is different from that of the film amateur. Media

scholar James M. Moran (2002), for instance, pointed at the various sociocultural and aesthetic ramifications of video technologies for amateur practices. Moreover, as an electronic medium, video was intimately related to television, the dominant mass medium of the latter half of the twentieth century. As Michael Z. Newman reminds us, this intimacy dates back to the 1950s and early 1960s when “video was another word for television” (Newman 2014, 2). Moreover, the various consumer video formats and cameras at the disposal of the amateur from the late 1970s onwards afforded many new possibilities to the amateur as non-professional user. Two of the most prominent new features were the automatic recording of synchronous sound and image and the significantly extended amount of recording time, sometimes up to several hours, compared to the precious minutes available on small-gauge film formats (Moran 2002; van der Heijden 2018b; Slootweg 2018b). Interestingly, video’s proximity to television and its new technological features were approached differently by various types of video amateurs, representing various versions of labelling and self-assignment.

The first example comes from the work of Jan A. Kleyn (1927–1998), a cineclub member since the late 1950s and a prominent figure in the Dutch world of amateur film and photography. In 1990, he published a book on video after years of writing on various, more advanced topics, such as the creative use of editing, sound, and cinematography in amateur filmmaking. Embracing a do-it-yourself mentality, he represents the amateur as tinkerer. For Kleyn, video aroused considerable suspicion among serious film amateurs and he highlighted that “good” video amateurism was a highly controversial notion (Kleyn 1990, 8; translated from Dutch). Video was based on different technological principles than film and belonged to the often-maligned electronic world of television. According to these amateurs, video encouraged sloppiness and furthermore lacked the “aura” of analogue film (Slootweg 2018b).

These concerns were not shared by every new user, especially those who were part of socially progressive video collectives from the 1970s and 1980s. An example might be the members of the Dutch video collective Meatball who recounted what attracted them to video: they explained how video’s intimate relationship with television was not seen as problematic but rather as an opportunity for media democratisation and participation (Slootweg 2016; Slootweg and Aasman 2015). They were certainly not the only ones who labelled themselves activists or experimenters seeking to challenge mainstream television broadcasting by exploring the social use of video. With various experiments of community and local television, the video collective aimed to give a “voice” to those people who in their view were absent in media discourses at the time (Slootweg 2016, 144). As such, these video amateurs represent the amateur as avant-gardist type, highlighting the amateur’s

potential as a counter practitioner in processes of cultural participation and media democratisation.

The third example underscores the importance the “voice” video can literally give to its user thanks to the new technical affordance of synchronous sound. For the father of an expat family in the 1980s, the camcorder allowed for the recording of his “autobiographical voice” when capturing and narrating on noteworthy events of his family’s everyday life abroad (Slootweg 2018b, 214). The home video of his family furthermore showcases many choices that would be considered as “bad” video amateurism in the first example, such as unsteady handheld long takes, poor synchronous sound recording and unsophisticated in-camera editing. At the same time, the condescending tone of “bad,” as a label for a particular form of amateurism that is represented by the type of amateur as naive practitioner, reminds us of Roger Odin’s analysis that there is no such thing as a “bad” home movie or video, because it should be understood in the context of the “space of communication” of family and friends (Odin 2014, 15). In other words, according to Odin, “mistakes” only add to the social function of this practice. The new features of video furthermore allowed for a far more layered, narrative mediated memory artefact of the family, certainly when compared to home movies (van Dijck 2007). For now, however, the cases discussed above indicate that it is perhaps more accurate to speak of video amateurs, in the plural, with a wide variety of practices, intentions, beliefs, worries, hopes, and expectations.

## 2.3 Digital Amateurism

Who or what is the digital amateur? In the twenty-first century, the amateur has become an even more complex category. Consumer media technologies diversified, adding to ongoing processes of multi-mediatisation, miniaturisation and convergence, which further widened the affordances for everyday users to document their life or create stories. Moreover, the ubiquity of digital video cameras, as something that is potentially always with us and ready to be used, truly transformed it into a vernacular technology, deeply embedded in our daily life and our communication routines. This process was strengthened by the ability to produce user-generated content as an integrated functionality of a wide variety of emerging (and sometimes quickly disappearing) apps and platforms like Vine, Snapchat, WhatsApp, Facebook, Twitter, YouTube, Instagram, and TikTok. In the current digital era, media amateurism merged with social media. People communicate more than ever via (moving) images, whether they pull pranks on one another, make selfies, perform a beauty tutorial, record their day



in a life while in self-quarantine or videos of themselves preparing evening meals.

It is interesting to note that users perform these practices not only in private but also in public spaces. The World Wide Web made possible the distribution of their footage beyond the confines of the home, the club or other locally defined spaces. This attraction of the Internet, as a participatory space where anyone might share, exploded after 2005 when YouTube became almost overnight the dominant platform for sharing videos online. The amateur has become a highly visible category in contemporary media culture, which forces us to rethink Roland Barthes' description of the amateur as someone "who does not exhibit, the one who does not make himself heard" (Barthes 1991, 230).

Scholars have observed how discourses on the amateur became central in ideals about empowerment through a "participatory culture" (Jenkins 2006; cf. the chapter on fandom by Benecchi and Wang, in this volume). Even before the emergence of YouTube, the rise of a more empowered form of amateurism was acknowledged, notions of the amateur as non-professional were redefined through an increasingly hybrid terminology, such as "prosumer," to denote how user agency alternates between bipolar categories of producer versus consumer, and professional versus consumer (Bruns 2006; cf. van Dijck 2009). This rethinking of the amateur also becomes clear in the notion of "pro-am," which redefines the hierarchy of the professional as expert and a mark of high standard versus the amateur as the non-professional: "Pro-Ams are knowledgeable, educated, committed and networked, by new technology" (Leadbeater and Miller 2004, 12). Instead of a hybridisation between the amateur and professional, Patrice Flichy rather speaks about the amateur in the digital age as an "in-between" category: "Amateurs find themselves halfway between non-professionals and professionals, between the ignorant and the expert, and between ordinary citizens and administrators and/or politicians" (Flichy 2018, 172).

In conclusion, the digital amateur as a non-professional practitioner has become a contested label (*etic*), but also as a form of self-assignment (*emic*), in which – as with the film and video amateur – again ideas, norms, values, and motivations play a role. A good example of this would be the popular YouTuber Casey Neistat, who publicly complained when YouTube in 2017 changed its rules and demonetized certain vloggers (Motrescu-Mayes and Aasman 2019, 44–65). This had a devastating effect on the income of many YouTubers who were now unable to make a living. Many of Neistat's followers applauded him for defending the "small creators" or "small YouTubers," as some of them described themselves. The rhetoric used here has an interesting connotation, referring to "small-gauge" filmmakers, a historical term indicating amateurs using a sub-standard film format. However, not all commentators agreed with him as they

fiercely rejected the emphasis on monetisation. Indeed, they considered the act of monetising (and with it the idea of professionalisation) to go against the idea of YouTube as a place for amateurs as independent, grassroots or non-professional practitioners (Hunter et al. 2013).

## Conclusion

Both parts of this contribution show that, as Andy Warhol claimed, with amateurs “you can never know what they’ll do next,” or, as we would like to add, who they are from a media historical perspective. Not only have many scholars explored a variety of ways to get a grip on the amateur, also among the various historical sources can we detect many points of departure to answer this seemingly straightforward question. In the first part, we concluded that much of the academic debate on the amateur revolves around etic attributions, broadly grouped into four amateur types. We furthermore proposed conceptualizing attempts at self-assignment by historical amateur media practitioners as mostly being emic in nature. In addition, we would like to note here that the plethora of heterogeneous historical traces available, to be found both inside and outside of institutional archives, might also trigger what could be termed an etic impulse in the historian as an observer and interrogator of the past. The inherent “messiness of history” (Darnton 1990) can entice historians to “discipline” and “regulate” it for their own purposes, by using carefully chosen analytical and heuristic lenses with an acceptable degree of explanatory power or sometimes allowing for normative evaluations. The lack of scholarship on women as amateur filmmakers, for instance, requires more attention. Only recently have several initiatives in film and video archives dug up historical traces of these neglected amateurs (cf. Hill and Johnston 2020; Motrescu-Mayes and Nicholson 2018).

In this concluding reflection, we bring together three points, based on the insights yielded in this contribution that merit further reflection. First, we want to include some additional reflections on our specific usage of the concepts of emic and etic. What is the heuristic value of such a distinction for understanding the debate on amateurism, and for analysing historical cases and time periods? These concepts, we believe, will help to historicise the notion of amateurism because it allows for distinguishing how amateurs – as actors within a social group at a certain moment in time – have been appropriating the term to describe their own ways of doing and thinking compared to how external observers have been using the term to analyze and label certain historical actors and their activities as such. Making such a distinction is meaningful in

relation to the four amateur types we have distinguished in this chapter. Moreover, as we have shown, to understand the amateur, one needs to be conscious of the complexities in the explicit or implicit labelling and self-assignment to certain categories.

In addition, by exploring the film, video, and digital media amateurs in particular, we can work towards identifying continuities and discontinuities in the practices of and discourses on the amateur, in particular by those practitioners who, over different periods of time, were committed to using various media technologies to capture moving images and later also sound. By doing so, it is not our intention to make a determinist argument on the transformative impact of certain media technologies on their users at a particular historical juncture. What we rather propose is to make a rough distinction between eras where the use of certain media technologies dominated amateur media practices and discourses. Such a technology-oriented perspective hence allows for a more precise analysis of the similarities and differences in amateur media practices between various moments in time, including the current digital age. In relation to the film amateur, for instance, we have shown how amateurism at the beginning of the twentieth century still draws on the nineteenth-century idealist meaning of the amateur originating from discourses on amateur photography. For the video amateur, the meanings of amateurism had already become more complex due to the diversification in the use of amateur video technologies within a rapidly changing media landscape. In the digital age, this complexity intensified, which has not only given rise to new, hybrid terminologies, like the “pro-am,” “prosumer” and “producer,” but also made the amateur more ubiquitous and visible within popular culture and the public domain (Flichy 2018).

Finally, on the basis of the two previous reflections, we would like to emphasise the need for conceptual lenses that help to understand this increased complexity in the amateur debate. From a media historical perspective, the proposed typology of four amateur types, in combination with etic and emic approaches to amateurism, can be productive as an analytical framework for analysing and grasping the multiple and ever-changing meanings of amateurism. However, we believe that media historians could benefit from additional or complementary conceptual lenses that enable both diachronic and synchronic analyses of media amateurism. This is particularly relevant when taking into consideration the variety of perspectives on media amateurs found among the sources and historical actors discussed in the second part of the chapter. Elsewhere, for example, Slootweg proposed the discerning between three, sometimes overlapping, modes of practice and functioning: the community mode, counter mode, and home mode (Slootweg 2018a). As Motrescu-Mayes and Aasman furthermore pointed out, “the counter mode, represented by social and political activists who embraced video

as an oppositional practice, the home mode, driven by a desire to use video as a technology of memory, and the community mode, presented by self-proclaimed serious organized film amateurs” (Motrescu-Mayes and Aasman 2019, 16–17).<sup>5</sup> Distinguishing between these three modes of amateur practices can be helpful in adding a “perspective on media amateurism that will provide the means to bring more descriptive and analytical clarity to the different intentions among historical film and video amateurs” (Slootweg 2018a, 204–205).

In addition, the notion of hybridity is crucial to emphasise as a key term for describing the blurring of boundaries in the digital age (Moran 2002, xiii). Elsewhere, van der Heijden suggests applying the notion of hybridity not just as a descriptive category but rather as an analytical lens for studying “the intermingling and co-existence of old and new media technologies, user practices, and discourses as evolving in an ongoing process” (van der Heijden 2018a, 36; 2018b). Maintaining both a synchronic and diachronic approach to media historiography, the notion of hybridity provides a potentially valuable heuristic and analytical lens for studying media transitions in their historical complexity. Moreover, van der Heijden argues, this can be helpful for highlighting “the actual complexity and ‘messiness’ of media history and historians’ preoccupation with constructing narratives of change and discontinuity, rather than highlighting also the things that happen ‘in between’” (van der Heijden 2018a, 40).

In conclusion, we can therefore say that this chapter not only explored the multiple meanings of amateurism from a media historical perspective but also revealed how the notion of the amateur, which is so central to our contemporary digital age, can also function as an analytical lens in and of itself – both synchronically and diachronically, as historical actors within various modes of practice, and as a hybrid construct.

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<sup>5</sup> For definitions of the “home mode” and “community mode”, see Chalfen (1987); Shand (2007); Moran (2002).

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Göran Bolin

# User-Generated Content (UGC)

## Understanding the Activity of Media Use in the Age of Digital Reproduction

**Abstract:** User-generated content was launched in the early 1990s as a concept for describing media content produced outside of professional media institutions by everyday media users. It gained widespread popularity around 2005 and in the article it is argued that the rise of the concept coincides with the interactive web and the ability for industrialized media and culture production to take advantage of the productivity of ordinary users. The article discusses first the frameworks of production of UGC, including the business models of the platform economy into which this kind of content is drawn. Secondly it discusses the types of users who generate content, and thirdly it accounts for some of the criticism the concept has met. The article ends with situating UGC in the longer history of media production and suggests an explanation for why the concept appeared at the time it did.

**Keywords:** media production, media users, media content, amateur production

User-Generated Content, or UGC as it is commonly abbreviated, is a concept that gained popularity with the widespread use of personal computers and the launch of user-friendly interfaces for search engines, video-sharing, and social networking sites, etc., in the early 2000s, when media users suddenly became equipped with advanced means of production. The concept was connected to the rise of the Web 2.0 (O'Reilly 2007), that is, the interactive or participatory web, and refers to the ability for everyday media consumers to suddenly turn into producers through the uploading and distribution of self-produced media content on blogs, wikis, social media platforms or other public online media.

UGC can be defined as (digital) “media content generated by people outside of professional media institutions, often for no pay, which is made available to the public” (Daubs 2019, 1825). The first mentions of the concept in academic writing appeared in the early 1990s, perhaps inspired by the concept of “user-generated data” that had already appeared in computer science in the 1970s. The popularity of the concept within media and cultural studies is often attributed to writers such as Henry Jenkins (2006), who in his *Convergence Culture* points to the activity of media users on digital social media platforms. A Google Ngram analysis of the search term “user – generated content” reveals that its

peak popularity was in 2005, the year before the publication of Jenkins' book, and although the UGC concept is listed in the index of *Convergence Culture*, Jenkins in fact never mentions the term in the book but instead writes of "audience-generated content" or "consumer-generated content." Admittedly, Jenkins had studied active audiences for more than a decade by then, and especially various types of audience productivity, and he also soon followed up on the success of *Convergence Culture* by co-authoring *Spreadable Media*, emphasizing the ease by which such content could be disseminated (Jenkins, Ford, and Green 2013). With reference to Jenkins, UGC has often been held forth as the possibility for media users to counter the one-way communication structure of the mass media, thereby introducing a more democratic tool for citizens to make their voices heard, and to participate actively in the societal communication structure.

In parallel to the work of Jenkins, UGC was also related with adjacent concepts such as producers – an amalgamation of the concept of producer and user launched by German-Australian media researcher Axel Bruns (2006), who developed it influenced by Alvin Toffler's (1971) concept "prosumer," which Toffler used to emphasize the productive side of consumption in the information society. Alternative concepts were also launched for describing the same phenomenon at the time, for example Pro-Ams – a combination of professionals and amateurs (Leadbeater and Miller 2004; Anderson 2006), or peer production, as discussed by Joshua Benkler in his influential book *The Wealth of Networks*, where he positions this production in a new and decentralized "networked information economy" that is replacing the previous stage of "industrial information economy" with its more centralized production processes (Benkler 2006, 3). Famous examples of such peer-production are Wikipedia, founded in 2001, but also video-and music-sharing sites such as YouTube and Soundcloud. It was also applied to phenomena such as "crowd-sourcing" (Brabham 2008), a web-based business model based on online, distributed problem-solving, and production which is less about the content itself but rather the ways in which media industries can benefit from small contributions from a lot of people.

The rise of concepts for business models in relation to USG is significant, and as I will show in the following, the concept of USG was born in relation to the technological affordances and commercial potential of digital media even if the productive activity of everyday media users itself has a very long history. Against this short background, I will in the following discuss the longer history, or perhaps pre-history, of the phenomenon itself. The concept itself focuses on users and content, but I will start by describing the prerequisites to this specific kind of content generation by users as it is my point that it is within the technological and commercial frameworks of production that the concept itself becomes

intelligible. I will then discuss the users that generate content, and how their content production has been seen as non-profit motivated, non-professional or amateur textual production. Third, I will account for some of the criticism that the uses of the concept of user-generated content have generated. Lastly, I will bring this discussion together to make some conclusive reflections on the rise and popularity of the concept.

## 1 Prerequisites for UGC

Although the concept of UGC is relatively new, dating back to the early years of the twenty-first century and the rise of the interactive web, the phenomenon that it refers to has a very long history. It might therefore be instructive to account for some of the analogue predecessors to digital UGC, in order to understand its specificity and in which ways it differs from historical communication forms. Portions of the content in the press and on the broadcasting media can, for example, be considered as early such forms of UGC. One can, for example, think of letters to the editor, where readers can voice their opinion in textual form, or phone-in programs on the radio, where ordinary listeners can make themselves heard. Obituaries are another example that is common in the print media. As has been discussed by Lobato, Thomas and Hunter (2011), such forms point to the tensions between formal and informal media production in which UGC is often produced by non-professionals but distributed within industrialized frameworks which are formally regulated through state policy, taxation, and regulation, especially UGC distributed via the mass media press, radio, and television. This places the producer in relative control of the construction of the text but not over its distribution since there is no guarantee that letters submitted to the editor get published. And even if they do get published, the newspaper editors can, and often do, edit the letters or obituaries. The content also needs to follow editorial principles in terms of length and tone of language. The same goes for debate articles which, to the contrary of letters to the editor or obituaries, are often written by people in their capacity as experts, such as researchers, politicians or corporate executives. All these types of content are produced outside of the distributing organization but are subsumed by its editorial processes of selection, policy, and quality assessment.

However, it could be argued that what we today consider to be UGC precedes the mass media, and that it is one of the central features of traditional communications systems such as the postal system, or the telephone system. Just like the postal and telephone system, social media platforms such as Facebook,

Twitter, and Instagram, and sharing platforms such as YouTube, Flickr, and Soundcloud are not content producers themselves, but are offering a service where users can communicate with distant others. They are infrastructures for communication, offering a service to the user, and their business models are founded on that type of functionality.

The earliest known postal systems were established in ancient Egypt and China ca. 2.000–1.000 BC. The Roman empire developed the most advanced postal system of the time – the *cursus publicus* – composed of stations equipped with fast-running horses distributed with regular intervals along the main roads of the empire (Siegert 1993/1999, 6–7; cf. Balbi and Kittler 2016, 1976). This communication system was, however, mainly used by the emperor and his provincial governors for messages between the different parts of the Roman empire. In this exclusive function, it was largely similar to the telegraph in the early 1800s (Carey 1983). Like the *cursus publicus*, the telegraph was for the most part not a medium that was operated by private citizens. Electronic communication networks for the general public came first with the telephone, patented by Alexander Graham Bell in the 1870s, and spread among the general populations first in the US but also in many other industrialized countries in Europe and elsewhere. And even if this medium initially had its experiments with mass distribution, its dominant use was for interpersonal communication at a distance (Marvin 1988, 223–228).

Both the postal and the telephone systems, when introduced to a general public of users, provided them with a service to take advantage of for a fee. The business model was then based on selling access to the service to customers wishing to communicate across distance. When sending mail, you needed a stamp, and when making a phone call you paid a subscription rate in combination with a fee per call made, and per minute used. Long-distance and especially international calls were more expensive, just as sending letters with express delivery was more expensive. Prices were thus set according to the service level delivered to the customer.

This is, however, how the postal and telephone systems also differ from the platform companies of today, since most of them – Facebook, Twitter, Instagram, or search companies such as Google, Yahoo, etc. – do not provide the service for a fee but for access to the data that the users provide them with when they act in the digital space, and sometimes also for the content they produce. This is because in this business model it is not the user of the service that is the customer. Those who use the service in order to communicate with friends and relatives only contribute to the revenues for the platform companies indirectly as their data are not directly sold to advertisers. The customer is instead those advertising companies, or their representatives, who wish to reach the attention

of users in order to promote their products or are in other ways seeking to gain the attention of the service users. In that sense, platform companies are more similar to traditional commercial broadcasters who get their revenues from the sales of advertising. Platform companies are thus merging two business models: that of the traditional commercial mass media that build on the selling of texts to users (the text-based business model), or on delivering users' attention to advertisers (the audience-based business model) and that of the telecommunications business (the service model). The latter is necessary because it is the telecommunications sector that controls the flows of digits through their fiber optic cables and Wi-Fi networks, and thus controls access to the IP numbers of digital devices, which is needed in order to produce the digital consumer based on his or her movement in digital space. It is the combination of these business models that makes contemporary platform companies unique. Content, in this case, is both the actual texts produced by media users but also the data produced as a result of the users' activities.

What distinguishes contemporary platform companies from the service providers in the pre-digital era is that the telephone companies never sold the content provided by the partakers in telephone conversations, and the post companies did not provide third parties with the content of letters. This is, however, exactly what is the basis for the platform companies' business models. Of course, there are anecdotes of wire-tapping by telephone operators in the early days of manual switchboards, and in some totalitarian states this has also been part of systematic state surveillance strategies (e.g. Weiner and Rahi-Tamm 2012). However, these are examples of state surveillance for political purposes, for crime prevention, or simply snooping behavior by private individuals. Commercial companies have not had any incentives to open mails or wire-tap customers. Arguably, this is also one of the reasons the concept of UGC is seldom used in relation to all service providers but reserved for production that in the end produces economic value. We shall return to this point and what it means for the rise of the concept of UGC but, before that, we need to say something about those who are generating the user-generated content, that is, the media users.

## 2 UGC and Amateur Media Production

Within media audience studies, a recurring discussion has approached the degrees to which audiences are active or passive recipients of media messages. The history of media audiences research is often described in terms of a pendulum that swings between the views on the audience as either passive or active. The

media were initially seen as powerful agents that injected their messages into the audiences who received the messages in a uniform manner. When research had a hard time establishing these uniform influences, the question “what do the media do to people” was reversed and uses and gratifications research regarded media users as active subjects who sought to satisfy individual “needs.” Both the theories of uniform influences and the uses and gratifications theories focused on the effects or the needs of the individual as a psychological subject. With theories on cultural imperialism and cultivation theory, the relationship between the media and their audiences was again reconsidered, and it was no longer individual texts or individual users who were under focus but the power of the cultural environment in its entirety that influenced users as social subjects on a societal level. With the rise of Cultural Studies as a research field, the active audience was again re-evaluated, and with the ambivalences and resistance potentials to dominant messages emphasized as well as the empowering potentials of popular culture. This is also where audience activity got thematized in terms of productivity: the concept of audience was largely abandoned to the benefit of the more active noun “users” and these became theorized in terms of their “identity work” (Ziehe 1982/1986), or “symbolic work” (Willis 1990), or in terms of their engagement in social or textual productivity (Fiske 1992).

Parts of the productivity resulting in UGC stems from amateur production, for example the writing of diaries, poetry for the desktop drawer, or amateur photography and film-making. The English word *amateur* is borrowed from French, and has its root in the Latin word *amator*, i.e. one who loves or is fond of something, but has become understood as one “who cultivates anything as a pastime, as distinguished from one who prosecutes it professionally” (Oxford English Dictionary; see also the chapter on amateurism in this book). To be an amateur producer usually also means that the activity is less formally organized than commercial media production or other types of professional media production, such as production within public service broadcasting. Amateur production is, in fact, a broad category that includes everything from individual scribblings of poetry or diary writing to quite complex online broadcasts of amateur music festivals or theatre plays.

The concept of amateur as opposed to professional media producer of course only makes sense in a capitalist economy where production and consumption of cultural objects and texts is separated. The first such market was the market for books, following the possibilities of mass production of the written word since the mid-fifteenth century. This market was, however, quite restricted until the rapid modernization of European infrastructure in the nineteenth century, including new means of transport such as railroads. This expansion of the market can also be related to further developments in print technology, where setting machines and rotary presses made it possible to drastically increase print runs of

books and newspapers (Williams 1958/1963, 290). With the subsequent introduction of continuously new media technologies, the market for cultural products expanded to include photography, film, radio, television and so on. Some of these technologies, such as photography, have always also been areas where the lines between professional and amateur might not be too sharp. Other media forms that are reliant on large investments and complex production apparatuses, such as filmmaking, have had stricter lines between them, where separate technical formats have been reserved for professional filmmaking (35 and 70 mm film) and amateur formats (8 mm, with 16 mm as a middle format between these) (Zimmermann 1995). Beyond the technological formats, professional film and television production also requires a distribution network that goes far beyond what amateurs have access to.

A specific form of amateur production is the productions made by fans (see also the chapter on fandom in this book), that is, highly engaged followers of a specific media content or a specific star or artist. Many studies of UGC have in fact taken fans and their textual production as their point of departure and, unsurprisingly, this is also the point of departure for the above-mentioned Henry Jenkins, whose first book was a study of fans of the television series *Star Trek* (Jenkins 1992). These fans were highly active and productive, and arranged conventions, produced artworks, wrote stories, made fanzines, etc., all of which circulated within the “participatory culture” of *Star Trek* followers. Jenkins’ *Star Trek* study was published in 1992, and the research that led up to it therefore preceded the interactive web. He was not the first to do research of fans, not even on *Star Trek*, but his ideas sparked off an avalanche of studies on participatory culture over the next decades (Hills 2002).

Amateur media production naturally needs to be related to professional production within the technological framework of digital telecommunications systems. Elsewhere, I have suggested that this can be theorized as two separate fields of cultural production: one that is commercially driven within the framework of a market economy, and one which is non-market driven within a social and cultural economy, and where the non-profit motivated production of everyday media users in this field of “prosumption” gets appropriated and taken advantage of by the industrialized field of media production where it is converted to economic profit (Bolin 2012).

What distinguishes amateur production from its professional counterpart is not quality in itself, but the motivations and the frameworks. Professional media production is goal-oriented, organized and remunerated. Amateur media production is based on a “labor of love,” and admittedly also professional producers can love what they do for a living but their labor is only compensated for economically if it meets the objectives of others. An amateur musician is not necessarily less



skilled or talented as a professional musician but is mainly motivated by other values such as aesthetic or social values. Many professional journalists are less eloquent than amateur writers, but they are conducting their writing within a framework of formal employment, union membership, etc. that gives them access to accredited places at certain events and places (cf. Lobato, Thomas and Hunter 2011).

### 3 Critical Perspectives on UGC

The concept has also met with a fair deal of criticism. One such criticism concerns the idea that the boundary between media production and consumption had disappeared with the new interactive technologies. This idea has been criticized on the grounds that, first, there are clear differences between the production conducted by large-scale media corporations, such as the big television networks, the film and publishing industry, the music industry, etc., and the more limited and less profit-driven production by everyday media users. There are also empirical studies which have analyzed the extent to which media users contribute with content in the commentary fields of newspapers and concluded that it is not much, and that users are fairly restricted in what type of content they can contribute with (Örnebring 2008). Typically, UGC is produced by a small but very active minority of media users (Balbi and Magaudda 2018: 100f). The language of “activity” and “passivity” is also reflected in how everyday media users talk about their own online behavior, where it is common to refer to one’s own behavior in passive terms (Bolin and Velkova 2020).

A related reflection on the concept is that it overstates the activity and productivity of users. Most of what is published and disseminated on social media and sharing platforms such as Facebook, Twitter, YouTube, etc., is actually produced by the traditional cultural industries – the film industry, the television industry, and the press. The activity of users is mostly in the form of distributing video clips and text snippets, and very little of what is circulating is actually produced by everyday media users. Lothar Mikos has thus suggested that it would be more accurate to talk about “user-distributed content,” since 83 per cent of the most popular content on YouTube was actually produced by professional content-producers in the media industries, and only 17 per cent produced by everyday media users. Fans, he argues, have become part of the marketing and promotion activities of large-scale professional productions, for example, various talent shows such as *X-Factor* and fiction franchises such as *Lost* (Mikos 2010).

Another type of criticism focusses on the fact that UGC contributes to the exploitation of “free labor” (Terranova 2000). This criticism is directed to the fact that those who produce data through their activities on social networking media and upload and distribute content provide the basis for the profit of the platform companies in the digital economy, and that their “labor” is not remunerated. The argument is that the activity of users is what generate the revenues for the platform companies. This labor is “free,” both in the sense that it is free to exploit by the platforms but also freely given by the laborers. This criticism is highly influenced by the Italian autonomist Marxist paradigm, with authors such as Michael Hardt and Maurizio Lazzarato theorizing this type of activity as “immaterial labour” (Lazzarato 1996). This is the kind of labor “that produces an immaterial product, such as ideas, images, forms of communication, affects, or social relationships” (Hardt 2005).

Now, it can be argued that it is not really the labor itself that is immaterial, but the result of labor – even signifying how practices that are at the bottom of the production of sign commodities are material. Furthermore, those who actually conduct work in producing the digital media user commodity are not the ones who generate data but the ones who process these data and package them into the audience commodity that is then offered to advertisers and others who wish to buy this kind of intangible commodity. Thus, it is not the audiences who work but rather the statisticians at the analytics and marketing departments of the platform companies (Bolin 2009). José van Dijck also problematizes the activity on the grounds that the relations between media use and industry is much more complex than both the affirmative “produsage” paradigm or the free labor paradigm accounts for (van Dijck 2009), whereas Søren Mørk Petersen has argued that UGC would be better labelled “loser-generated content” because the fruits of the labor are robbed from the media users (Petersen 2008). David Hesmondhalgh (2010) has also thoroughly criticized both the affirmative stance of the “produser” debate and the free labor discourse and argues that the analogy with work is misleading. His main argument is that the idea of media use as work does not fit into the Marxist theory of exploitation because of the lack of force and forced relations between capital and labor. Hesmondhalgh refers to a distinction made by Mark Andrejevic between “user-generated content” and “user-generated data”, where it is mainly the latter that is the basis for profit in the media industries (Andrejevic 2009).

The question, however, is why do people contribute with their data, and sometimes with their content, if they know that the data collected is intrusive, and that the platform companies are making money on their actions in the digital space? Elsewhere, I have suggested that one might think of the mechanisms behind the activities as two separate but related fields of action (Bolin 2012). In

the field of “presumption”, as we might call it for want of a better term, social subjects produce posts on social media, communicate in chat rooms, share pictures on sharing sites, all for the benefit of social and cultural value. This field is based on a social and cultural economy, not profit-driven, and producing social and cultural value for the involved subjects. These activities, both the user-generated data produced and the UGC, get drawn into the field of professional media and cultural production into a field that is indeed profit-driven within the framework of a commercial economy, where the main value is economic. If seen from this perspective, it is hard to talk about the subjects generating data as doing labor or being exploited. Their activities do admittedly result in data, which is then appropriated by the commercial media and culture industries and enters into the commercial economy. But the motivations for user production are rewards in value forms other than the economic.

## 4 The Long History of Everyday Media Production and the Short History of UGC

Before media texts became commodities in the wake of print technology, media production and consumption were less separated. It is only with print capitalism, and the fixation of the text or the cultural object to a tangible carrier, and hence a controllable commodity that a market for texts appear. British-Danish literary scholar and Shakespeare expert Tom Pettitt (2007) launched the concept of “The Gutenberg Parenthesis” to argue that print technology introduced the prerequisites for the media market and the separation of textual producers from consumers (in addition to several other consequences of the printed text, discussed by historians such as Elizabeth Eisenstein 1979 and Walter Ong 1982). With the introduction of the printing press, the word became affixed, whereas it in earlier times had been a floating object that could change, for example in the performance of a song or a theatre play, or when hand-copied scripts became altered in the copying process in chirographic culture. The object form thus paved the way for the commodity form. Pettitt argues that we are now at the end of this parenthesis, and that texts are again becoming freed from their affixation to a specific carrier.

In a historical perspective, a concept such as user-generated content thus only makes sense after this market has separated production and consumption from each other, and hence also separated those who produce texts from those who consume them. Before this separation, the concept does not make sense. Furthermore, it continued to be largely unintelligible as long as this separation

was upheld, and early media studies rather talked of audiences, recipients, listeners, viewers or readers of media content. With the re-evaluation of audience activity in the 1980s and 1990s, the “user” was born, and “user-generated content” appeared for the first time. But it is not until the culture and media industries develop business models for capitalizing on this content production that the concept takes off in popularity. With the interactive web it became, for the first time in history, possible for the media and culture industries to capitalize upon the activity of media users, to integrate their productivity into the industrialized and profit-driven production circuit. Indicative of this was the rise of the concept of user-generated content, which was introduced in the early 1990s, but took off rapidly with the launch of the interactive possibilities of digital and online platforms in around 2005. As Walter Benjamin (1936/1977) observed, something happened with cultural objects in the age of mechanical reproduction; we could say that we have now witnessed another transformation of cultural objects in the age of digital reproduction and the re-integration of production and consumption.

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Eleonora Benecchi and Erika Wang  
**Fandom**

Historicized Fandom and the Conversation between East  
and West Perspectives

**Abstract:** Digital fandom is traditionally connected to the concept of “participatory culture” (Jenkins 1992) and framed as a novelty developed thanks to the so-called “Internet turn”. We cannot deny the fact that fandom has changed with digitalization, but the focus on “digital fandoms” has often led to an overestimation of the novelty of modern fan communities. In this chapter, we study fandom using a historical and comparative approach demonstrating that, if we historicize fandom, we can easily see how digital fan practices can often be dated back to a pre-digital era. We will try to understand why scholarship has been focusing on the “Internet turn,” neglecting other shifts, by looking at the key issue of fan productivity as one of the most popularized traits of digital fandom. By inserting fandom in a broader transnational context and analyzing different case studies, from the East and West, we will also show that different kinds of fandom definitions and fan traits might become visible if we focus on nonwhite fans’ historical participation.

**Keywords:** digital Fandom, fan productivity, participatory culture, media fandom, transnational fandom

In this chapter, we interrogate the concept of fandom in a historical dimension. This dimension is often neglected in fan scholarship or reduced to a single historical change: the advent of the Internet. Instead, fandom must be historicized since digital fan practices can often be dated back to a pre-digital era. We will try to understand why fan scholarship has been focusing on the “Internet turn,” neglecting other shifts. In order to do that we look at the key issue of fan productivity as one of the most popularized fan traits. As we think about the concept of fandom and the productive interaction of fans with the media before and after the digital age, we need to take into account different sources and perspectives. One of the problems with fandom histories is that they tend to be whitewashed histories of fandoms (Pande 2018) as the discipline has been dominated by white scholars (De Kosnik and Carrington 2019).

Therefore, we will try to re-historicise the widely accepted definition of fandom so as to both “name” its western origin, in other words its whiteness, and



to register the presence of different concurring definitions. In a second step, we will show how the traditional concept of fandom changes if observed by a non-white, in our case Asian, perspective. In the third paragraph, we point to the complexity of the material contributions of fans to fandom spaces, when observed in a historical way, and we take into account both a Western and an Eastern perspective in response to the push to decolonise fan studies in the digital age in terms of bibliographies and frameworks (Wanzo 2015). The analysis of different case studies, from the East and West, will detail how specific fan definitions and practices were used before the digital age while showing that different kinds of fan traits might become visible if we look at nonwhite fans' historical participation. Additionally, as already demonstrated (Morimoto 2019), exploring transcultural/transnational fandoms where the source text is non-Western and in languages other than English can help destabilise the anglophone focus of our field.

## 1 Defining Fandom

The definition of “fandom” has been historically disputed among Western researchers who approached the field with competing agendas. Especially in the context of the first studies focusing on cinema, music, comics and TV, fandom is alternatively described based on the intensity of the relationship it has with its cult object (Jensen 1992; Abercrombie and Longhurst 1998; Le Guern 2002), as an interpretative and sometimes productive community (Bacon-Smith 1992; Jenkins 1992; Baym 2000; Hills 2002; Booth 2010) and as a cultural identity built through a specific type of attachment to a media text (Tulloch and Jenkins 1995; Askwith 2007). Fandom as a concept is also related to the meanings that in different times and contexts have been attributed to the word “fan”. According to the first wave of fan scholars, the term “fan” is short for “fanatic,” from the Modern Latin “fanaticus” and originally referred to religious membership “of or belonging to the temple, a temple servant, a devotee” (Jenkins 1992, 40). As noted by Le Guern (2002) the interpretation of the word “fan” as short for “fanatic” led to a connection between fandom and religion, as the usage of “fanatic” generally referred to an unwavering, uncritical belief in (usually religious) dogmas. In turn, the negative connotation of “fanaticism” reflected negatively back on the people labelled with the term “fan” (Fiske 1992). If we look at the representation of fans in the media, the recurring image is that of irrational, unsocial, obsessive and in some cases even dangerous individuals (Bennet and Booth 2016).

But, if we look at the realm of sports fandom, we find a concurring definition since the word “fan” is traced back to the nineteenth-century writings of Pierce Egan (1823) who used the term “fancy” to refer to the fans of a specific hobby or sport, especially of boxing. This sports connection is also credited by William Hazlitt who wrote in the *New Monthly Magazine* of February 1822 of a man “whose costume bespoke him one of the fancy, and who had risen from a three months’ sickbed” to go to see a prize fight (Dickinson 1989). According to William Henry Nugent (1929), baseball borrowed the term “fancy” and shortened it to “fans” and “fan” to refer to enthusiastic followers of this sport and it was later popularized in US baseball circles in the 1880s.

In any case, there is such detailed documentation of negative characterizations of fans in popular culture that early Western fan studies set out to debunk many of the negative stereotypes that had been associated with fan activities (Gray, Sandvoss, and Harrington 2007).

One of the first scholars to challenge the common presentation of fans as solitary and obsessive individuals or part of a massified culture was the sociologist Joli Jensen (1992), whose work acknowledged fandom as a respectable and traceable social phenomenon occurring in all those situations in which someone shows a deep interest in something. But it is by focusing on the more creative and productive sides of fandom that early fan scholars such as Fiske (1992) and Bacon-Smith (1992) challenge the negative connotation of fandom while also connecting fan practices with the concept of “participatory culture” introduced by Henry Jenkins (1992) to explain the culture and logic of fan communities. During the first wave of fan studies, fandom was also connected to the concept of resistant consumption (De Certeau 1984) to indicate how fans would usually appropriate the media text through a series of tactics openly in contrast with the intentions of the original authors and that fan spaces were inherently subversive, considering that fans work “against the grain” of hegemonic popular cultural texts (Coppa 2008). Therefore, the concept of fan productivity became one of the distinguishing traits of fan practices.

This association was reinforced by the transition of fan communities online (Benecchi 2018) and with studies focusing on digital fandom (Askwith 2007; Caldwell 2008) that attribute a central role to fans within the contemporary media universe, highlighting how some sectors of the cultural industry have developed production policies explicitly aimed at incorporating and taming the most typical fan practices. In the digital era, the productions of fan communities are reframed as resources for the mainstream media and culture, both from a creative and a commercial point of view (Jenkins, Ford, and Green 2013; Benecchi 2018). The Internet is seen as the leading factor of this reframing and is connected to an overarching “sense of community” and “positive participatory

practices” that many fan scholars still find attractive. This attraction could be one of the reasons the “Internet turn” is widely used by recent fan scholarship.

## 2 Fandom from a Chinese Perspective: From Fans to *Fensi* and Beyond

If we look at the definition and history of fandom from a non-Western/non-white perspective, in an attempt to decolonize the history of fandom, we open up different perspectives both on the origins and the evolution of the phenomenon.

Descriptions of the development of fandom in China take a very different route from those in the West, starting from the word used to describe fans and fan communities. The western word “fan”, in its “fanatics” acceptance, can be directly translated in Chinese as *mi* “迷”. But, in contrast to the western history of fandom, this literary translation is never utilized, as it is, to label a person as a fan intended as someone who is an enthusiast or a devotee or even a fanatic of something. When it comes to the Chinese language, the word *mi* “迷” cannot stand by itself. We need to specify the object of fandom for the word to make sense: therefore, we cannot use *mi* “迷” to describe a person, but we can talk about “*dianying mi* 电影迷” to describe fans of films (Zheng 2016). It is only recently, and in connection to the migration of fandom online, that a new word emerged and became more common: “*fensi* (粉丝)”, a phonetical translation of the word “fans”. Interestingly enough, Chinese fans seem nowadays unwilling to be labelled as “*fensi*” a word that in time “turned from a neuter into a derogatory noun linked to specific acts, such as quarrels, irrational insults toward others, or forcing other *fensi* to choose a camp” (Yin and Xie 2018). Another problematic aspect of this word in connection to Chinese fandoms is that its endogenous origin appears to be a reflection of the foreign sources influencing the new generation of Chinese fans. Indeed, if we look at the origins of modern Chinese fan culture, we can see that it developed as a cultural re-appropriation of foreign media products and within the context of transnational fluxes observed in the realm of popular music (Zhang and Negus 2020), but also in anime (Mōri 2011), manga and TV dramas (Fung 2009; Chen 2018). It must be noted although this foreign, and especially Japanese, heritage is often neglected by Chinese fans, especially when retracing the origins of Chinese fandom: in their reconstructions and oral histories, Chinese fans build a lineage that connects Chinese fandoms and canonical high art literature (Zheng 2013).

While we have precise dates and origin stories, even if contrasting versions, when it comes to the Western and Anglophone history of fandom, if we look at

the history of China, it is difficult to get an accurate answer about the origins of fandom. We might get a glimpse of early fan culture from the legendary stories dating back to the Western Jin Dynasty (AC 265–316) more than 1700 years ago – with stories similar to the fanatical behaviour of fans depicted in some historical books of that period (Li 2017, 36). In contemporary China, as a product of the development of modern industry and market economy, popular culture is essentially a civic culture (Zou 1998, 55–60). Therefore, after the reform and opening up (since 1979), the era of mass culture in Chinese society was gradually established (Hu 2020, 112). At the same time, the rapid development of the electronic media, represented by television and radio, has not only laid the technical foundation for the mass production and widespread dissemination of cultural products; but also the characteristics of the electronic media, with visual images as the main symbols of communication, have lowered the threshold of cultural reception so that the content of their dissemination can reach a wider range of people (*ibid.*). The development of fans in China in the modern sense could be said to have witnessed the migration and integration of East Asian popular culture. Chinese scholars (e.g., Yang 2009; Xu 2012; Hu 2020) have roughly divided the development of fan culture into three stages. The first stage was in the 1980–90s, when the films, TV dramas and pop music of Hong Kong and Taiwan, which had developed and emerged in mainland China, were imported in large numbers. Singers and actors from Hong Kong, represented by the “Four Kings” (Andy Lau, Jacky Cheung, Leon Lai, Aaron Kwok), became very popular in mainland China, and their fandom first began to emerge at that time. Since then, “star-chasers” (追星族), before “fans”, were widely recognized and became known to the public (Hu 2020, 113).

The second phase began with the TV show *Super Girl* in 2005. The 2005 season of the televised singing contest *Super Girl* (超级女声), organized by Hunan Satellite TV, swept the whole nation with amazing popularity and success. Fans from all walks of life and age groups not only provided enthusiastic support to their favourite contestants but also formed their own unique fan cultures. The *Super Girl* television show in 2005 inadvertently created a new profit model for the mainland pop music industry: the idol economy, which applies the rituals of valorisation, including fan magazines, awards ceremonies, television or radio programs about idols’ personalities, to achieve the profitability of record companies (Guilbault 2002, 192). Focusing on the *Super Girl* champion Li Yuchun in 2005, for example, Ling Yang (2009) argues that the rise of *Super Girl* fans represents a more active, autonomous and participatory cultural consumption model in China. This model of cultural consumption, with pleasurable identification and fantasy at its core, is based on Internet fan communities and characterized by the use of new media and fan production, while breaking the traditional production/

consumption dichotomy and changing the power relationship between producers and consumers in the media-entertainment industry (Yang 2009, 104–112). As a phonetic translation of “fans,” “fensi” not only began to become known to the public, gradually turning “star-chasers” into a historical word, but also with fans gradually becoming a group that could not be ignored.

During the third stage, starting from 2014, a large number of Chinese K-Pop stars, typically represented by Luhan, Lay Zhang, and Kris Wu, who returned to China to develop their careers (Jin 2018, 66), started to emerge and the Internet-based fan communities began to form. The fan economy has become an important part of the mass culture industry. With the rise of Internet entertainment shows, many idol shows were born, which attracted large numbers of fans and created huge economic revenues. Fans are active in almost all areas of the creative industries as an emerging community but we can see how cinema, TV and music media texts are dominant in the histories of fandom both in the western and eastern contexts, even though we will show how fan practices are also historically connected to non-media texts.

Particularly through the lenses of history and ethnography, Chinese fan cultures are revealed to be very different from their Western counterparts. Recent studies (Yin and Fung 2017; Zhang 2016; Zheng 2016) have shown a pivotal difference between Western fandoms, conceptualized as groups of fans with similar interests, consumption or production practices around the same fan objects and Chinese fandoms where the individual (in some cases even elitist) and affective experience is the most important aspect, especially if we look at pre-Internet fandoms. In the past, Chinese fans divided themselves by “pits,” or fan objects: to enter a pit meant building an affective bond with a fan object (Yin and Xie 2018). As argued by Zheng (2016), even when we move from traditional to online fan cultures, the intimate relationship between the fan object and the fan remains a defining trait of fan cultures in China, also influencing the collective aspects of the fan community. This is not to say that fan communities are not relevant or that fandom is only an individual phenomenon in China but the way we look at the existing fan communities, mostly developing after the migration of fandoms within the online space, must be adapted to the local context. Recently, a new expression – “fan circles” – entered the realm of fandom in China and is now used by fans instead of the Western label “fandom.” “Fan circle” implies the fact that a fan is connecting not only with an object but also with other fans. More importantly, Chinese fans in such fan circles have formed subcommunities with hierarchical power structures. Even though popularized in the digital age, the Chinese concept of “fan pits” and “fan circle” is not a digital invention: fans have always been organized in circles, as in communities, both in the East and the West. But, in contrast to the typically imagined active

fan we can retrace within classical Western fandom literature, Chinese fan circles are not “a subversive community in the periphery that simply rebels against the centre but are a constantly negotiating subculture that adopts various evaluation system and hierarchies from the mainstream culture and the educational institution” (Zheng 2016, 3). As Yang and Xu (2016) have suggested, under the censorship regime in mainland China, fans have mostly taken up what James Scott (1985, 241) has called “the weapons of the weak,” that is, “cautious resistance and calculated conformity.” Other studies underline that Chinese fans are extremely conscious of how their online activities are monitored and tracked to produce metrics within the context of the music industry (Negus 2019; Prey 2016). These “tech-savvy” fans auto-labelled themselves as data fans (*shù jù fēn*, 数据粉), meaning that they “recognize their importance as data and use this to benefit the musicians or idols they are following, and to enhance their sense of achievement and agency” (Zhang and Negus 2020, 3).

This is further proof that fandom, whether in a pre-Internet or digital context, cannot be easily generalized and quantified: fan cultures are deeply rooted in their social and cultural environment, and must therefore be observed as simultaneously decentred but interconnected, globalized but localized, mainstream but subculture.

### 3 Debunking the Novelty of Digital Fan Productivity West to East

Fandom is not a modern or Internet-based phenomenon. Early fan practices, at least the ones that we can document, are not even connected to twentieth-century media. One of the oldest and best documented Western fandoms is that composed by railway enthusiasts (Gray 1986). Many different labels, from “railfan” and “railway enthusiast,” to “trainspotter” or “anorak,” were used to describe people who were fans of rail transport. We have also seen that in Asia, accounts of “fanatical behaviour” can be seen in some historical books even dating back to the Western Jin Dynasty, AC 265–316 – legend has it that Pan An (潘安), the most famous beautiful man of the time, was warmly greeted every time he went out by his fanatical female followers, who expressed their love by throwing fruit into Pan An’s carriage, so much fruit that it spilt out of the car (Li 2017, 36). Literature was a native realm for early fan practices in the West as well. Courtney A. Bates (2011) recently studied a corpus of fan letters addressed to Willa Cather (1873–1947), which are now held by the University of Nebraska–Lincoln’s Special Collections. During the First World War, there were even those who advised soldiers to read Jane Austen’s books and

share stories and interpretations of the characters. This specific fan practice was documented by the writer Rudyard Kipling in his *The Janeites*, which tells of the bonds created between Jane Austin fans with very different roles and uses at the front (Kipling 1926). In 1901, it was under the pressure from the fans of the detective Sherlock Holmes that Sir Arthur Conan Doyle resumed the adventures of Sherlock Holmes with *The Hound of Baskerville*, after “killing” his most famous character in the literary adventure *The Final Problem* in 1893. In correspondence to Holmes “resurrection,” fans organized well-documented tribute campaigns to greet the return of their favorite detective and explicitly pointed out that Sherlock Holmes “is alive and well” as a 1901 sticker distribution and posted campaign shouts (Benecchi 2018).

The pre-Internet or even pre-electronic media origin of many fan practices is also demonstrated by insider histories of particular fandoms (Moskowitz 1974; Lellenberg 1990; Heinemann 2000) and some historical accounts of early fan practices retraced by fandom studies scholars (Nieminski and Lellenberg 1989; Hayward 1997). “Fan productivity” is an example of how, when talking about fandom’s distinctive traits, we must adopt a perspective that both historicizes and decolonizes the concept. The case of *Boys’ Love* (referred to as BL) fandom in Taiwan shows how fan productivity can activate transcultural fandoms and be connected both to digital and pre-digital contexts. Fan productivity connected to BL manga in fact shows the persistence of fan practices connected both to the physical sphere and to analogue spaces even in a digital era.

BL originated in the 1970s as a genre of Japanese *manga* which featured “love, sex and romance between boys and young men,” and later transformed into different forms of cultural texts (Martin 2012, 365). As the popularity of the BL genre increased, a *fujoshi* (rotten girls) community arose along with it: young and heterosexual women who proactively consume, circulate, reproduce and associate with the BL culture as can be seen in a wide range of cultural products, including *manga*, animation, video games, light novels, and cosplay (Galbraith 2011). Since the 1980s, along with the popularity of Japanese *manga* and anime, Japanese BL culture has become popular among young people in East Asia, including Taiwan. Similar to the ways that BL culture developed in Japan, in Taiwan, BL female readers discussed and shared their reading experiences and comments with friends or in online forums, blogs, comic markets, and tea parties that they planned themselves. Therefore, in recent years, a *funü* community (its counterpart in Japan is *fujoshi*) has also emerged in Taiwan.

In 1949, martial law was declared in Taiwan to suppress political dissidence (Huang 2005, 2). The people’s freedom of speech and publication were strictly limited by the government to the significant detriment of comic publishing. This censorship lasted for a long time, and consequently, the quality of domestic



comics decreased, and the number of local cartoonists shrank (Chou 2007, 79). Albeit being illegal, publishers smuggling comics from Japan was frequent. 1976 marks the beginning of the “piracy period” (Su 2010, 104) in Taiwan, thereafter, publishers pirated Japanese *manga* by photocopying them to enter the comic market in Taiwan to fill the gaps (Li 2002, 192; Ye 2010, 7). Many major Taiwanese *manga* publishers were founded during the piracy period by selling cheaply copied Japanese works. It was during this “piracy period” (1976 to early 1990s) that Japanese BL culture was brought into the country, as were a huge number of Japanese *dōjinshi*.

BL *dōjinshi* (fan-made magazines in Japan) refers to parodic and amateur works by fans of BL that serve to reproduce the original BL artefacts (Galbraith 2011, 212). At that time, the Japanese *manga Saint Seiya* was the most popular among *manga* readers. Because *Saint Seiya* was still serialized in Japan, it took the Japanese publishers three to four months to publish one paperback. Each new paperback was published almost immediately in a pirated edition in Taiwan. However, Taiwanese publishers wanted to publish *Saint Seiya* more frequently to meet the needs of the market so they divided the original paperback into thinner ones. Then, publishers added to each of the paperbacks about 50 pages of additional content, which mostly originated from fans’ *dōjinshi*. More and more Japanese *dōjinshi* of *Saint Seiya* were circulated among students in Taiwanese high schools, and the vast majority of these were of the BL theme (Miyako 2016, 80). Responding to the popularity of BL *dōjinshi*, the comic publishers pushed a lot of BL *dōjinshi* into the market and after 1988, BL *manga* and novels became very popular among young Taiwanese girls who created BL *tongrenzhi* (Chinese translation of *dōjinshi*) by themselves and set up BL focused activities.

The importation of BL into Taiwan not only stimulated the creativity of Taiwanese authors but also inspired many BL fans to reproduce the Japanese BL culture in Taiwan by organizing BL activities, such as *tongrenzhi* markets. Together, the imported Japanese BL *dōjinshi* and the amateur Taiwanese BL *tongrenzhi* constituted the main products of Taiwanese BL *tongrenzhi* markets (Zhang 2013, 100). At the same time, many semi-underground publishers also started to publish Japanese BL *dōjinshi*. Taiwanese *funü*, inspired by Japanese *dōjinshi*, were discovering a new way to express their passion for a certain work. A *tongrenzhi* always contains a snippet of the original work, usually a few pages, and uses the same story background and characters as the source material so readers would easily accept and share them. As printing costs gradually dropped in the 1980s, it became even more convenient for Taiwanese *funü* to create their *Tongren* works (ibid.).



The early Taiwanese *tongren* groups were formed in much the same way as their Japanese counterparts, thus mostly in schools. In the 1990s, many *tongren* communities, which created and circulated BL products, were still set up in high schools and universities (Miyako 2016, 86), while online *tongren* communities and BBS were still in their infancy. However, fan desires to communicate with other *funü* inspired them to seek creative solutions. By 1992, the Taiwanese *funü* community had developed a special “message book” system (Miyako 2016, 84), which helped members make friends and share their experiences. These message books were placed where *funü* gathered, such as comic bookstores and the print shops – wherever female high school students gathered to exchange their *tongren* works (Su 2010, 113).

By the mid-1990s, as the BBS Forums became widely known, Taiwanese *Tongrenzhi* creators began to make extensive use of forums to discuss BL topics, post BL novels and pictures, or advertise BL *tongrenzhi*. The Internet was helpful for Taiwanese *funü* to establish a platform for real-time communication and circulation, which in turn has promoted the popularity of Taiwanese BL culture. The practice of *funü* in Taiwan indicates a cultural link between BL culture and LGBT support, which becomes an important characteristic of Taiwan’s BL culture: in the 1990s, Taiwanese culture changed drastically when martial law and state control of mass media were abolished. As Miyako (2016) mentioned, the student movement had a strong influence since it awoke an awareness of democracy and freedom. Inspired by this, Taiwanese students began to fight for lesbian, gay, bisexual, and transgender (LGBT) rights. Overall, from an Asian perspective, the attitudes of BL fans towards masculinity and homosexuality can be seen as a subculture that provides a space of resistance and advocacy in opposition to the mainstream culture, independently of whether or not the space is digital.

Despite all that, much scholarship has neglected the historical dimension of fandom or has emphasized the importance of a single historical change: the advent of the Internet. Certainly, we cannot deny the fact that fandom has changed with digitalisation so much so that fan culture has emerged from an underground and community-based activity to become a vibrant social platform operating on the Internet (Yin and Xie 2018). This is particularly true and well documented when we look at fandom in countries such as China, where the acceleration of the process of globalisation and the emergence of the Internet has led to a transformation of fan cultures (Iwabuchi 2010; Ito, Okabe and Tsuji 2012; Fung 2013). In this new context, “patterns shifted from individual fan practices in relatively private lives to the collective fan practices across the social life of fans” (Yin and Xie 2018, 3326). Nevertheless, the focus on “digital fandoms” has often led to an overestimation of the novelty of modern fan

communities as demonstrated in the very first published collection of historical studies of fan communities and activities (Reagin and Rubenstein 2011). According to recent historical studies, compared to the pre-Internet age, the reading and (re)writing practices of online fan communities, especially, do not present a significant break in taste, content or form.

Consequently, without denying the transformation of fandom in specific social contexts over time, we must be careful not to flatten the history of fan cultures as the sole by-product of changes in media technologies. Fan culture is never an independent entity but is deeply rooted in the contemporary social and cultural environment, responding to social issues and cultural debates (Chin and Morimoto 2013; Benecchi 2015; Pande 2018).

As fandom migrated online at the turn of the 2000s, new forms of expression appeared, with fans simultaneously collaborating with new platforms, such as social networking sites (Hills 2013; Yin and Xie 2018). Nevertheless, even digitized forms of fan productions can be traced back to pre-Internet examples of the same fan practice: an example of this is that of *vidding*, a grassroots form of audiovisual production, which combines clips from a TV series or movie with the music of various genres (Coppa 2008). When YouTube was founded in 2005, fans celebrated the thirtieth anniversary of this practice in a dedicated convention called *Vividcon*, demonstrating that *vidding* is a form of amateur audiovisual production that precedes the digital age with the first fan video of this genre dating back to 1975, when the web and social media platforms did not yet exist, made by Kandy Fong, one of the founders of the United Federation of Phoenix, the longest-running *Star Trek* fan club: it is a slideshow of restored images presented with background music at a fan convention but still represents a first model of amateur audiovisual appropriation and production (Fong 2014).

As demonstrated by the case of BL fandom, we may also find a similar phenomenon in East Asia, where fan productivity has existed among Asian fans long before the Internet was born. One of the informants (Miyako 2016), interviewed during four months of fieldwork in Taiwan in 2016, recounted how, as a comic fan in Taiwan, she was able to conduct the cultural production of fans in the 1980s. Miyako was born in 1974 and grew up in Taipei. During her childhood, pirated Japanese comics were very popular among Taiwanese teenagers. In the meantime, the first generation of local cartoonists like You Sulan (游素兰) were also receiving more and more attention. When Miyako was in middle school, she was a fan of You Sulan and learned to paint in You's manga style. At that time, manga magazines were popular in Taiwan and manga fans had opportunities to publish short manga or post their illustrations. Special columns were even provided by the magazines for manga fans to post a brief self-introduction and mailing address, in the hope of finding pen pals. In this way, Miyako made

friends with other manga fangirls. At first, they wrote letters to each other to share their opinions about certain manga but this discussion sparked their strong desire to write new stories based on the original manga. Therefore, they began to draw their own manga inspired by the original material and to send them to other fans. These manga were the origin of *tongrenzhi* in Taiwan, which means fan-made magazines.

## Conclusion

This chapter observed fandom as a sociohistorical practice, highlighting the longitudinal transformations of fan practices from a pre-digital to a digital environment, and also taking into account different cultural and social contexts in order to decolonize fandom history. We showed how fandom has evolved and shifted in specific contexts but also how much modern fan practices resemble traditional ones. This certainly does not deny the fact that fandom has changed with digitalization so much so that fan culture has emerged from an underground and community-based activity to become a vibrant social platform operating on the Internet. This is particularly true and well documented when we look at fandom in Asia, as we demonstrated through our analysis. Nevertheless, this focus on “digital fandoms” has often led to an overestimation of the novelty of modern fan communities. Through the analysis of case studies from the East and the West, we argued that in the evolution of fandom the significance of digital media has not resided in forming new fan practices. Rather, digital media have played a role in changing the forms and scope of some traditional fan practices, making them more visible, and sometimes more acceptable, to a larger audience. In doing so, digital media also stretched some of the limits of fandom and made visible some of its hidden and often discarded tensions. In the case of Asian fandom, the deep affective relationship between fan and fan object has been built relatively consistently, while the means, but not the practices, of fan participation have been changed by digitization. Asian fans showed the same transformative productivity before and after the digital age, as is clearly demonstrated by the case of the *dōjinshi/tongrenzhi* markets in Taiwan.

By focusing on the traditional concept of fan productivity, we also demonstrated that while fandom has become more visible, this does not mean that fandom has become more productive in the digital age. Indeed, when studying concrete cases, one immediately realizes that only a small part of fandom is productive, as already demonstrated by the study of online communities by Ben McConnell and Jackie Huba (2006) and the study of social media communities

by Paul Schneider (2011), both based on producing a Nielsen pyramid (1997), in turn addressing the issue of active participation by drawing on the Pareto law. Recent studies of fan communities have also confirmed the issue of applying the idea of active participation in connection to digital fan communities and the so-called Internet turn (Benecchi 2018). And yet the aspect of “productivity,” which in early fan studies was just one of the traits defining fans and not a discriminating feature, has been reinforced and put forward as the main characteristic of fandom in the digital age. The term “fandom” has itself been mainstreamed, thus becoming a powerful metaphor for the over present and often overvalued “online participatory culture.” This inevitably led to a misunderstanding of the complicated cultural and social contexts the word “fandom” connects to and the granularity of fan communities that are constantly shifting not only in accordance with changes in the media but also due to cultural and social changes.

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Andreas Fickers

# Authenticity

## Historical Data Integrity and the Layered Materiality of Digital Objects

**Abstract:** This chapter investigates how digitality has affected the idea, concept, and meaning of authenticity of historical sources. A key question in media history is that of the historical authenticity of mediated representation of the past. Digitization affects the indexical relationship between past realities and their digital “appresentation” and therefore asks for a critical understanding of how digital infrastructures, tools, and technologies affect historical methodology and claims for a new multi-modal literacy.

**Keywords:** authenticity, data integrity, source criticism, indexicality, aura

Throughout twentieth-century cultural history, the idea of authenticity emerged when revolutions in media technology challenged prior modes of perception. The speed of communication (i.e., telephone), the precise mimesis of the world (i.e., photography), the nearby audibility of distant sounds (i.e., radio), and the dreamlike movement of pictures (i.e., film) changed reality along with the perspectives implemented by those “new” media.

(Zeller 2012, 75)

This quote resumes a theoretical and intellectual discussion, which material traces in forms of books and papers easily fill a library. The question of the so-called indexical relationship between reality and its mediated representations has been foundational for media theoretical reflections in the twentieth century (Cowie 2011). The complex relation between a “sign” and “the signified,” between an iconic or symbolic representation and its meaning in a given semiotic system and historical context, has produced a highly specialized scholarship in such different disciplines as philosophy of language, semiotics, film and media studies, art history, and literary sciences.

The notion of authenticity, originally referring to the Greek semantics of αὐθεντίας (authéntēs) meaning “to author / lead / rule,” has been at the heart of philological and historical thinking when discussing questions of reliability, originality, and credibility of historical sources. But, as Achim Saupe has shown, next to this “object-related authenticity,” the semantics of the term also refer to a subjective dimension. The development of the modern concept of authenticity has been closely linked to the history of the modern subject – staying true to oneself has turned into a key idea of modern subjectivity (Saupe 2016).

While the link between “saying” and “being” and the idea of an “authentic self” has long been the credo of moral conceptions of identity, post-modern theories have deconstructed the idea of single authorship, and constructivist approaches in philosophy and sociology of knowledge have questioned the idea of objectivity and truth and dismantled the “biographical illusion” of the fragmented self.

The aim of this contribution is not to deal with the many philosophical, semantic or even aesthetic reflections on authenticity as a key topos of modernity (Saupe 2017), neither to offer a historiographical discussion of the changing meanings and interpretations of the concept over time. Instead, this chapter aims at taking a slightly different approach to most of the other chapters of the book by transferring the concept of authenticity to the phenomenon of digitality. More specifically, I want to discuss the impact of digitality on the idea and practice of historical source or data criticism and to what extent the specific mediality of digital representations and their staging of the past influence our historical imagination and/or experience of history. Digitality characterizes itself through the duality of digital materiality and the digital as symbolic form, and both dimensions have to be historicized in their own right. In the area of the symbolic, the question of the authenticity of the digital must be located in the tradition of heuristic and epistemological debates on truth, credibility, and originality of historical sources or testimonies. On the other hand, questions of material authenticity of digital media, i.e., of their integrity, exactness or permanence, must be discussed in the context of technical authentication processes and institutional authentication discourses. Both dimensions will be briefly sketched out in the following in order to then address questions of the significance of the digital for the historical imagination and experience and the question of “aura” in digital representations of the past.

If the “aura of the authentic” can be qualified as the “myth of modernity” (Sabrow 2016, 30), the aura of the virtual could be qualified as the myth of the digital age. The mass digitalization of historical testimonies and their online availability on the Internet has brought about a new turn in the longing for the authentic, the original or the genuine. Even though the term “digitality” explicitly refers to the intertwining and networking of analogue and digital technologies and life worlds (Stalder 2016), the equation of the digital with the “non-material,” the “virtual” and thus “non-real” dominates in general usage. The omnipresence of the digital – both material (for example in the form of smartphones or tablets) and symbolic (i.e., as the socially dominant socio-technical imagination) – reinforces the longing for the supposedly authentic, whether in the field of culture, technology or historical experience. The transition from the “age of scarcity” to the “age of abundance” (Rosenzweig 2003) has led to a renaissance of the analogue, even on a popular cultural

level – “retromania” and “technostalgia” have become catchwords of this movement (Boym 2002; Reynolds 2011; Sax 2016).

## 1 Traces without Traceability: The Historian’s Belief in “Sources”

The longing for an “authentic historical experience” is by no means a contemporary phenomenon of our digital and virtual age. As Frank Ankersmit has shown, this “desire” of being as close to the past as possible has emerged as an intellectual ambition during Romanticism and ever since inspired philosophical reasoning about history as an intellectual and scholarly endeavor (Ankersmit 2005). This desire for an authentic historical experience obviously cannot be realized – history as historical writing can only take place in the present – which only increases the yearning for a transcendental experience. It was only towards the end of the nineteenth century that the university-based “science-history” gradually came into its own. It rests essentially on three pillars: firstly, on the ideal of objectivity; secondly, on the authenticity of “documentary sources”; thirdly, on the professional behavior of academically trained historians (Barrelmeyer 1997). Even today, these three elements still form the basis of the epistemological identity of historical scientific research – the highly problematic metaphor of the “source” has lost nothing of the pathos, which has resonated since the time of European humanism with the call of the motto “*ad fontes.*”

Indeed, in the words of Achim Landwehr, it is a question here of a true “faith in sources” (“*Quellenglauben*” in German): the historical source has been treated as a relic, which derives its truth from the singularity of the testimony it gives about a past event (Landwehr 2016). This function as guarantor of the truth and reality of the “source” remains largely intact, despite the fact that a “source” is never connected to a causal relationship, but always to a correlation between the image, the representation and the historical reality. The art of source criticism lies precisely in the ability to reveal the complex relationship between the past and its medial representation, i.e. to discover the different levels of the indexical relationship between past reality and its written, pictorial or sonic documentation. The historian’s sources – generally subdivided into different genres – are thus already based on narrative conventions, which are primarily due to the materiality of the representations (Droysen 1974).

This is due, firstly, to the material (e.g., hieroglyphics carved in stone), secondly, to the technical properties of the documentary media (e.g., the wax plate

of Edison's phonograph for early sound recordings, or the influence of collodion mixture for coating glass plates in early photography) and, thirdly, to the narrative means of expression of various media (the length of a telegram sent in the Morse code or an epitaph differs markedly from that of a newspaper article or a television or radio program). The "decoding" of the external (material) and internal (content and formal) qualities of these "traces" of the past and their interpretation as a representation of a past reality are the tools of any qualified (media) historian (Ginzburg 2001). To understand and interpret the intrinsic relationship between the "truth of the art" (the artistic and literary quality of a historical source) and the "truth of the fact" (the historical evidence) is the very fundament of the hermeneutic tradition of humanities in general and of the method of historical source criticism in specific (Palmer 1969; Michel 2019).

## 2 Reality Effects and the Narrative Conventions of Factual Storytelling in History

The claim to truth in historical narrative is therefore based on strategies of objectification and verisimilitude, which aim to make the narrator as invisible as possible. Among the most important stylistic elements of this strategy are the footnote and the proscription of the "I" and the use of a narrative meta-perspective, which gives the historian the role of a universal and, above all, uninvolved observer. This narrative "habitus of objectivity" creates what Roland Barthes has called the "effect of reality" (Barthes 1968). This effect of reality as a result of narrative conventions and a repertoire of scientific styles is, as it were, the literary expression of methodical objectivism and thus contributes to the linguistic confirmation of the scientific requirement of the work of historical reconstruction. Even if there are still some historians today who cling to the positivist ideal of objectivity, a large part of today's historical community agrees that it cannot be a question of seeking historical truth in historical science: "To do social science is not therefore to find the truth", as Ivan Jablonka put it, "but to construct reasoning, administer proof, and formulate statements with a minimum of solidity and explanatory relevance" (Jablonka 2014, 183). "Dire du vrai" – and not "dire la vérité" – history is about the production of evidence-based arguments, not about telling the truth.

What about the "authenticity" of such historical narratives then? In the production of a historical narrative, which Siegfried Kracauer once compared to the technique of film editing, narrative techniques such as fading, changing of lenses, rewinding or fast-forwarding allow for a change of perspective and rhythm, and can help to create "thick descriptions" (or close-ups) or to produce a distanced

bird's-eye perspective suitable for macrohistorical reflections (Kracauer 2014). The technique of “zooming in” on a character, or a particular historical actor, allows for the individualization, psychologization, and emotionalization of history with a capital H, and masters virtually all popular and historical television formats and film productions as a stylistic means. The transmission of history in popular forms and formats is largely based on the dramatization and emotionalization of the narrative and the sacral revaluation of the period witness as the guarantor of historical authenticity. Event television of history has emancipated itself in docudramas, docufictions, and reconstructions of the “veto power of sources” (Jordan 2010) and plays effectively with the combination of fictional and factual narrative models. The indexical quality of the moving image, combined with original sounds, background noises, and the authoritative voice of a narrator, produce a “reality effect,” whose suggestive power is greater than that of written descriptions (Delage 2006). As the British film specialist Elizabeth Cowie convincingly demonstrated in her book on the documentary film “Recording Reality, Desiring the Real,” photographic or film recordings paradoxically give rise to two different and apparently contradictory needs (Cowie 2011). On the one hand, our fascination with revisiting original recordings can be seen as part of our scientific appropriation of the world – the sense of sight being considered since antiquity as the most objective sense, by the distance it puts, yet providing sensory access to our immediate environment. On the other hand, there is also a profound joy in looking that is part of our modern visual habits, a fascination with spectacle inherent in photography and cinema.

Documentary film and photography must therefore be considered as narrative formats, based on specific narrative conventions. Like textual representations, it is the narrative conventions that justify the right to “non-fictional truth” (Tagg 1993; Ellis 2011). These conventions influence our perception so strongly that we have great difficulty in detecting “false” or “fake” audio-visual recordings – even if they clearly represent nonsense. Many films or television programs are the skillful result of a staging that plays with the apparent visual evidence of audio-visual recordings: the “authentic style” of a live television program is systematically combined with the narrative conventions of documentary film. Both play with the viewer and his or her desire for reality. As I want to argue in the next paragraph, it is the intrinsic paradox of the mediality of all history – the fact that mediation enables immediacy – that continues to trigger the utopian thinking about “mediated immediacy” in the digital realm in very much the same way it did with any analogue media.

### 3 The Layered Materiality of Digital Objects

In fact, what happens when changing the physical nature of a source, e.g., when retrodigitising a family photo album with Polaroid pictures of the 1970s, turning a VHS tape into an mp4 file, translating a Schellack record into a compressed audio file, or scanning a book or handwritten letter and treating it with an optical character recognition software for making them searchable? In the field of historical studies, the question of the authenticity of digital sources – be it retro-digitized archival holdings, 3-D reconstructions of museum objects, spatio-temporal simulations of complex historical processes based on relational databases or large amounts of digitally born formats such as tweets or e-mails – is part of the hermeneutic tradition of modern source criticism (Föhr 2019). Even if clarifying the integrity of a digital source requires new technical skills and methods, classical questions of source criticism – such as the provenance or the credibility of a source – remain of central importance in the digital age. However, the enrichment of the historian’s toolbox with digital aids, infrastructures, and techniques requires an “update” of classical source criticism to a digital form of data criticism that does justice to the dual reference character of digital sources as representations of historical events or processes and their mediality as fluid and unstable matter (Fickers 2020).

The first thing to abandon when thinking about digital representations as historical sources is the misleading idea of qualifying digitality as freed from materiality (Negroponte 1995). From an etymological perspective, the digital does not refer to the electronic or computer-based processing of information, but to the numerical representation of information in a finite series of discrete elements – ones and zeros. The measurement of the quantity of data in defined units – bytes and bits – dates back to the 1960s, when the American Standard Code for Information Interchange (ASCII) became internationally accepted. Data as “objects” and historical sources thus always have mass and momentum, i.e. their material properties determine both the costs and the physical possibilities of storage, retrieval and use (Strasser and Edwards 2017, 331). In order to make the information encoded in the bits and bytes readable and usable, transcription and migration, i.e. translation or decoding by computer programs (software) and the transfer of the data to different storage media (hardware), are required.

When we speak of digital sources or data, we are thus dealing with a “layered” or “distributed” materiality (Blanchette 2011), which is characterized by the interweaving of hardware and software environments. Johanna Drucker describes the principle of “distributed materiality” as follows:

Distributed materiality focuses on the complex of interdependencies on which any digital artefact depends for its basic existence. In a distributed approach, any digital “entity” is dependent on servers, networks, software, hosting environments and the relations among them [ . . . ] the distributed concept requires attention to the many layers and relationships of hardware, software, bandwidth, processing, storage, memory, and other factors. The distributed approach registers a shift from materiality grounded in a single feature or factor to an approach based on multiple systems of interrelated activity.

(Drucker 2013, paragraph 21)

## 4 Is the Concept of the “Original” Obsolete?

The principle of the distributed materiality of digital data poses a fundamental problem for historical source criticism, as it renders obsolete the idea of the “original”, whose symbolic capital is so deeply inscribed in the self-understanding of historical science (Landwehr 2016). If, in the course of retro-digitization measures, digitized archival documents are turned into digital copies, an ontological transformation of the “source” takes place, transforming the analogue object (e.g. a postcard) into a relational data conglomerate. As soon as the source is scanned, technical settings (resolution, storage format) as well as the metadata attached to the digitized material determine which software can be used to read the data in the future, to what extent it can be retrieved by search algorithms in OPACs, and how much storage and thus cost is required for long-term storage. Even during the production of digital sources – be it retro-digitization or the creation of digital born data sets – multiple coding processes take place that remain largely invisible to the user. In addition, the retrieval of digital data sets on the user’s own computer and the recontextualization of digitized data in online environments lead to further manipulation and overwriting of the original data.

According to Matthew Kirschenbaum, from a forensic perspective, every storage process means digital manipulation:

One can, in a very literal sense, never access the 'same' electronic file twice, since each and every access constitutes a distinct instance of the file that will be addressed and stored in a unique location in computer memory. Access is thus duplication, duplication is preservation, and preservation is creation – and recreation. That is the catechism of the textual condition, condensed and consolidated in operational terms by the click of a mouse button or the touch of a key.

(Kirschenbaum 2013, paragraph 16)

The same is true for digital documents on the Net: the dynamic and relational architecture of the WWW is responsible for the fact that when we retrieve archived Web pages, according to Niels Brügger, we are dealing with “digital



rebirths” whose information-technological, content-related and representational integrity is corrupted in multiple ways (Brügger 2018). What is depicted as a “digital source” on the computer screen or smartphone is thus always the result of a digital recoding and recontextualization inscribed in the software and hardware of the user technologies. “When working with digital objects it’s essential to remember that what they look like on the screen is a performance,” says Trevor Owens (Owens 2020, 6), head of the “Digital Content Management” department at the Library of Congress in Washington D.C.

In order to reconstruct the digital life cycle of a document made available online, a new terminology and new instruments and skills of digital forensics are required, which have so far hardly been included in the training of archivists or media historians (Rogers 2015). According to Matthew Kirschenbaum, the determination of authenticity in the sense of technical authentication of digital sources can only be achieved by checking the integrity and consistency of data. Kirschenbaum differentiates here between “forensic materiality” and “formal materiality” of digital objects. While “forensic materiality” refers to an official certification of the “authenticity” of digital objects, as is customary for the long-term storage of digital documents in state archives on the basis of the OAIS standard, for example, the term “formal materiality” reflects the fact that file formats pre-configure later possibilities of using the data (Kirschenbaum 2008, 132–156). If, in the context of “forensic materiality,” classical questions of source criticism can thus be discussed in terms of authentication strategies, this will hardly be feasible for the “normal historian” when confronted with the question of analyzing the “formal materiality” of digital objects (Ries 2019).

This shift in knowledge and competence from the critical historical method to computer and information science procedures provokes a break in the “control zones” of archival or historical science institutions and disciplines (Lagoze 2014). Just as the emergence of historical hermeneutics can be read as a mirror of the scientification of the discipline of history in the nineteenth century, the current debate on authentic storage, reproduction, and use of digital information must be interpreted as a discourse of professionalization in which archives and historical research re-explore and renegotiate fundamental criteria and concepts of scholarly practice. The authenticating authority of archival institutions is just as much a matter of debate as the critical competence of historians in dealing with digitized material (Hirtle 2000).

## 5 The Aura of the Digital and the Meaning of History

While the aspect of “object authenticity” in the context of digital source criticism, i.e. the technically induced change in authentication strategies, has been dealt with so far, I will now turn to the question of to what extent the specific mediality of digital representations and their staging of the past influence our historical imagination and/or experience of history. Do digital representations and narratives of history change our perception and interpretation of the past? According to Simon Reynolds, we have already

become victims of our ever-increasing capacity to store, organise, instantly access, and share vast amounts of cultural data [ . . . ]. Not only has there never before been a society so obsessed with the cultural artefacts of its immediate past, but there has never before been a society that is able to access the immediate past so easily and so copiously.

(Reynolds 2011, 21)

But does the digital abundance and online availability mean that our historical experiences change? As Wulf Kantsteiner (2018) and Todd Presner (2016) have shown using the example of Holocaust remembrance, digital media such as Twitter, Facebook, and Instagram or the virtual staging of contemporary witnesses in the “Visual History Archive” of the Shoah Foundation can have a direct impact on the perception and experience of authentic testimonies or places – for example during a visit to the Auschwitz-Birkenau concentration camp. The “selfie debate” of 2014 exemplifies the complex overlap between institutionalized commemorative culture and digital media practices: authentic on-site experience and synchronous sharing of one’s own “dark tourism” experiences in social media effectively merge into a new historical experience of digital memory culture. According to Kansteiner (2018, 119), the successful staging of “the authentic experience” in the digital age even requires the use of digital media.

If one accepts the sociological observation made by Hartmut Rosa (2005) that our present is characterized by increased rhythm and a higher speed of co-construction of our mediated reality, it seems but logical that our experience and imagination of the past – which is essentially mediated by the media – are also affected by this development. While the historical culture of the nineteenth century was characterized by the “sensual appeal” (Sabrow and Saupe 2016, 14) of historical novels or national museums, that of the twentieth century by the auratic effect of sound and image recordings, that of the twenty first century are shaped by historical network visualizations, “deep mapping” technologies and multi-linear timelines in virtual exhibitions or web-documentaries (Fickers 2017). Interactive interfaces and relational

databases, filled with thousands or millions of historical data of different genres, create a new historical sense that, according to Alan Liu, refuses the ideology of linearity in historical thinking.

We might say that the essential hermeneutic – or what we might today call algorithm – of Historismus was to interpret all the spatial (and political) barriers that impeded full-on human sociality as temporal delay. Civilization was the delayed action of sociality unfolding in historical time. [. . .] The temporality of shared culture is thus no longer experienced as unfolding narration but instead as 'real time' media. (Liu 2018, 29–30)

Dynamic visualizations of the complex relationship of historical processes and events generate a new historical knowledge, which Liu calls “hypergraphical knowledge”: “The digital age promotes hypergraphical models of knowledge that conform to a world view in which knowledge is conceived by default to be multiperspectival and multiscalar, distributed in its foci and relations, and (connecting all the disparate nodes and levels) ultimately networked”. (Liu 2018, 73)

When we as (media) historians approach such digital visualizations, i.e., the computer-based interpretations of the past, we perform a hermeneutic movement that has always been at the origin of a problem-based approach in history: we perform the diagnostic paradigm of searching for traces and simultaneously generate historical meaning by assembling them into a narrative – but now in the digital space of “retrospective divination” (Ginzburg 2011; Boucheron 2016). The fact that the “back end” of such performances of digital historiography often remain hidden or black-boxed is probably what constitutes their contemporary aura. As Walter Benjamin stated in his famous article on “The Work of Art in the Age of Its Technical Reproducibility”: “The trace is the appearance of a proximity, however distant that which it left behind. The aura is the appearance of a distance, however close that which it evokes may be. In the trace we get hold of the thing; in the aura it takes possession of us” (Benjamin 1982, 560). The invisibility or concealment of database structures, digital infrastructures, and software when interacting with computer screens and the interface of our smartphone therefore ask for a new form of critical reading of digital representations of the past. To deal with such “appresentations” (Knorr-Cetina and Brügger 2002) of knowledge and to be able to deconstruct the apparent “lure of objectivity” (Rieder and Röhle 2012) or “look of certainty” (Drucker 2013) of fancy word clouds, network visualizations, analytics dashboards, and heat maps. “If displays of data are to be truthful and revealing, then the design logic of the display must reflect the intellectual logic of the analysis [. . .]. Clear and precise seeing becomes as one with clear and precise thinking” (Tufte 2001, 53).

The mediation from world to data, data to visualization, and visualization to the eyes and minds of the “reader” ask for a new literacy of data infrastructures

and interface criticism that embodies new ways of seeing, knowing, and understanding (Gray, Gorlitz, and Boucher 2018). For media historians of the digital age, new skills – which are part of the broader framework of digital hermeneutics – are key when trying to understand the “codes” and “conventions” of digital representations of the past and to grasp the complex meanings of “authenticity” as a key concept of digital media studies and history. Such skills are not only quintessential for a critical deconstruction of digitally mediated representations of the past, but equally important for the reconstruction and recontextualization of the past by means of digital storytelling. A digital literacy which encompasses a critical understanding of both the “encoding,” “decoding,” and “recoding” of historical data seems to become ever more important in the age of “fake news” where the “semiotics of authenticity” are to be studied on the level of tweets (Shane 2018), comics journalism (Weber and Rall 2017), photoshopped images (Keller 2010), and audio-visual narratives online (Lees 2016).

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