

THE ROUTLEDGE COMPANION TO TRANSNATIONAL WEB ARCHIVE STUDIES

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Three subfields and why (and why not)
integrating them

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Introduction

The history of media and communication has boomed in recent decades, with university courses, book series, conferences, sections/divisions of associations, and special issues of journals emerging over time. Likewise, the history of digital and digitisation has also grown rapidly and, more in general, digital communications are increasingly analysed from a historical perspective (see Balbi & Magauidda, 2018, for an analysis on this topic).

Under the impetus of international scholars and organisations such as the Web ARChive studies network researching web domains and events (WARCnet), which is the protagonist of this book, the web has also been increasingly analysed from a historical perspective. However, when we say that the web is analysed from a historical perspective, are we certain of our meaning? Or are there different and potentially conflicting ways of interpreting and studying the relations between the web and history? This chapter aims to highlight the various definitions and subfields that emerge from the relationship between historiography and the web. It is an introduction, or rather a preface, to this book because it makes an upstream theoretical and historiographical argument, which then the various scholars joining the WARCnet community (many of whom are cited in this chapter) have analysed in their writings each in a different way.

Three subfields of the relationship between history and the web can be identified: the “History Web,” the “Web History,” and the “History of the Web.” At the intersection of these three subfields, some research has already been conducted. In his book *The Archived Web*, Niels Brügger (2018) did something similar to what I propose in this chapter, identifying different cases of web history (actually naming “Web History” something I have placed in other categories) and claiming that there are “multiple-strata cases” in which different typologies of historical studies of the web are combined. Apparently, the “History Web,” the “Web History,” and the “History of the Web” all play differently with the words history and

web, but small changes in word placement result in significant differences in the way the historical study of the web is approached and in the posture that researchers take when looking at the object-web.

In the second section of the chapter, I discuss the reasons why to keep the subfields separated or instead to combine them. The hope is that this theoretical approach may be useful for the WARCnet community to reflect on its work, but more generally for all media and communication scholars who approach the web from a historical perspective, would like to have a clear overview and clear definitions of different sectors, and want to situate themselves in one of the three subfields or to make them interact with one another.

History Web

The first subfield considered is the so-called “History Web.” This term was notably introduced by Cohen and Rosenzweig (2006, p. 13) to indicate the fact that already in the early 2000s the web was becoming a platform to help historians in their day-to-day work. Indeed, contemporary historians began to use the web for their daily research practices very early, sensing its potential in connecting databases, providing access to digitised sources, but also in disseminating history. Over time, archives accessible via the web have been created and they are so powerful and useful to historians precisely because they are online. Among many possible examples, textual databases for newspapers and magazines, such as Factiva and Lexis Nexis, have come to the fore, various textual or audio–visual archives managed by international and national institutions or private individuals have made their catalogs accessible online or at least allow for subject search via the web.

Along a different trajectory, but still in the realm of the “History Web,” there has been a proliferation of websites dealing with history: similarweb.com, for example, indicates that as of April 2023, the most visited websites on history were archive.org (which hosts the Wayback Machine, which will be discussed later in the chapter) worldhistory.org, and biografiasyvidas.com.

The ways in which the web has impacted historical research have produced many contributions and it is almost impossible to do an exhaustive review. Perhaps the most encompassing text on the topic was written by Ian Milligan (2019), but many of the authors who are part of WARCnet and this book have participated over the years with various contributions. A substantial amount of historiographical research and reflection focuses on the web as a source and its consequent archiving: there is research on the ways, problems, and difficulties of archiving the web (see, for example, Ben-David, 2016; Gomes et al., 2021; Schafer & Winters, 2021); on the substantial difference between web archives and traditional paper archives or audio–visual archives (Ankerson, 2012; Musiani et al., 2019); on the methodologies employed for web archiving and web historiography (see the special issue edited by Aasman, de Haan, & Teszelszky, 2019); and on the computational methods that have invested historical research in recent years and that seem destined to change it *in toto* (see, for example, the roundtable Brügger et al., 2019; Blaney et al., 2021). This review is not exhaustive at all, but historians may have a hint on how the web has changed their own discipline in a few decades.

The “History Web” has emerged not only in academia and there are several interesting examples that can be highlighted at different levels. For instance, a multitude of public and private institutions have chosen to digitise their archival collections and make them accessible online, either in part or in their entirety. These available sources can be used by historians,

but also and specifically by the people who approach them maybe with a degree of nostalgia: typically, public service broadcastings around the globe have digitisation projects and have created specific repositories or they use social media to connect with their audiences and to enhance their memories. A transnational example of “History Web” can be considered Europeana, a web portal created by the European Union with digitised cultural heritage collections of more than 3,000 institutions across Europe, such as libraries, archives, museums, and galleries (Petras et al., 2017).¹ The efforts of different European institutions in several countries, the number of digitised sources, and the possibility to search in so many different ways made Europeana a successful example of “History Web” which has become a reference for historical research today.

These archives, at various levels, have digitisation and source preservation programmes for which they generally get national and international funding, while those who do not have such programmes are now perceived as falling behind in preserving and promoting their sources to the historical community. Let’s consider for example the public-funded *Conseil Européen pour la Recherche Nucléaire* (European Organization for Nuclear Research, better known as CERN), the international institution where the web itself was conceived, which has digitised and made accessible some of the sources precisely on the origins of the World Wide Web (WWW). They can be found on the page devoted to the WWW collection² and, among them, the well-known proposal written by Tim Berners Lee in 1989, an object of veneration and source of fetishism at various levels and which can be downloaded as a pdf³ (on the WWW collection preserved at the CERN archive, see Fomasi et al., 2023).

Historiographic work is now substantially based on web resources. If one thinks step by step about typical historiographic research, there is a web component in all stages: one often starts with websites like Google Scholar or Elicit, library or publisher databases to scan or acquire books and articles for literature review; then archivists are typically contacted via email found on reference websites; an archival visit is then planned or if sources are digitised and available one accesses them via the web; sources are then often analysed with digital tools available on the web or web-based; articles or books are published which in turn enter databases and are searchable, and they are given prominence on personal social media by historians themselves or by publishers or, again, in web-hosted newsletters. The job of historians would be very different without the WWW.

Web History

The second disciplinary subfield that academically connects history and the web has been defined, as already done in the past, as “Web History” (Brügger, 2010; Rogers, 2017). It mainly focuses on the analysis of past websites at any level, their preservation, and their attribute of source for investigating past history, but also as autonomous and investigable documents with their own historical legitimacy.

There are at least three ways in which “Web History” can be considered. First, past websites are historical sources to study contemporary history: indeed, historians can analyse past events through web pages concerning that event. For example, websites can be used to study migration movements in North Africa in the early 2000s as done by Sophie Gebeil (2019). Another example, in the narrower field of media history, shows that past websites can be historical sources to study specific media sectors: for example, in a book devoted to the multiple relationships between public service broadcasting and the WWW, Burns and Brügger (2021) studied how public service broadcasters described themselves and are in

contact with their audience through their institutional websites. In this sense, the website becomes a powerful self-narrative mechanism, and studying its evolution helps precisely to understand how broadcasters have represented themselves over time.

Websites or social media can thus be useful sources, specifically, for analysing the history of public or private institutions, in their modes of self-representation and in their attempt to identify long or short-run narratives. The past website thus helps to understand what is cut or modified from the institution's memory and what, instead, newly becomes part of the standard narrative over time. It seems to me, however, that the use of websites as a source is still limited among contemporary historians and other scholars, in favour of more classic sources that have been used for decades such as archival documents and audio-visual sources. This may seem odd, as websites are often textual (and of course also visual) and thus are in line with many of the sources most used by historians, but they also have an unstable nature and they have been started to be systematically preserved since relatively few years.

A second mode of historical study of websites that composes "Web History" is more self-referential: websites can themselves be objects of historical analysis. One can, in short, focus on the website not so much for its relevance in narrating a historical event, but as an autonomous and legitimate object of analysis. To draw a parallel with media history, my own field, we are talking about doing history of photography through photographs, the history of cinema through films, history of radio and television as a succession of the most relevant programmes. Among various research on the subject, we can mention the study on the websites of American political campaigns (Foot & Schneider, 2006), or on the websites of crucial media events like the Olympic games from 1996 to 2016 (Brügger, 2022), aiming to integrate the web sphere into the famous 1990s model of Dayan and Katz on media events.

I would expect in the future to have anthologies and canons of websites of the past, in which on par with the history of film or literature we point to websites that have been exemplars, that have become "classic" references for the construction of other websites. Of course, in this sense, the languages and tools for creating websites are also decisive: for example, the standard of the HTML language and all its variants has been accepted for several decades now, likewise, the idea that a link should be underlined and have a different colour, or even WordPress as a website building tool has become the standard tool when one wants to open a website. All of these are historically determined factors and affordances in the ways of imagining, constructing, and enjoying websites that help explain their structure, usability, and even historical dimensions (we immediately recognise a website from the 1990s not only by its use of Comic Sans, but also by its navigation methods, colours, mouse arrow, navigation browsers, and more).

Preserving and making available the sites and web pages of the past is thus a fundamental dimension for "Web History," the third mode I am referring to, which not surprisingly has unified historians, archivists, and preservation specialists into its conferences and methodological discussions. Under this perspective, WARCnet represents a perfect melting pot for "Web History," perhaps one of the places where the hybrid historical-technical nature of this sub-discipline is most evident, where skills straddling the humanities, social sciences, and computer science are needed.

But, as mentioned previously in the case of "History Web," also "Web History" is not only an academic discipline and non-academic actors have contributed greatly to preserving and restoring the past web. The Wayback Machine, for example, is a project launched in 1996 by the nonprofit organisation Internet Archive with the aim of archiving pages and websites at the transnational level and then made available in 2001, when those websites

became freely available to any users (Mohr, 2007). Thanks to the Wayback Machine, in many cases, it is now possible to trace back to web pages that have since been deleted or to earlier versions of current web pages: in short, it is a useful archive for understanding the dynamic, diachronic and constantly moving dimension of a source that varies incessantly as the web is (see, for example, Schafer, 2019).

There are also initiatives of reenactment or outright restoration of websites, as CERN in Geneva has done, for example, in its restoration project where it has put the first (or one of the first?) web pages back online.⁴ The interest in these kinds of initiatives is also aesthetic in nature as the design of websites has changed and is changing profoundly over time. Keeping this in mind, the Web Design Museum has built a “Web design history timeline” in which it has mapped out the precisely aesthetic evolution of the most relevant websites from 1991 to 2006. According to this institution, the main goal is “to preserve the creative legacy of web designers from the turn of the millennium for future generations, since internet users in 2030 would hardly guess how unique the websites in 2003 were in terms of their design.”⁵ A final example of preservation projects related to “Web History” is promoted by the Computer History Museum, which focuses instead on surfing practices and the usability of websites. How did the experience of surfing the web, according to a well-known metaphor of the 1990s, look like? This Californian museum in Silicon Valley offers some materials and experiences to answer this question.⁶

History of the Web

The third and final subfield dealing with the relationship between the web and history can be defined as “History of the Web.” What I mean here by “History of the Web” has actually already been called in other ways by other scholars: “histories about the web in general” (Brügger, 2010, p. 9), “web as such” (Brügger, 2012, p. 317; Brügger & Milligan, 2019, p. 21), “The web as a whole” (Brügger, 2011, p. 26; Brügger, 2018, p. 35), “Web history in context” (Schafer & Thierry, 2018), and many others. However, I prefer to use the phrase “History of the Web” especially because it seems to me (and to the ear of a non-native speaker like myself) to clearly indicate the central *object of study*: the web, precisely. The “History of the Web” is in fact a subfield that has at the centre of its analysis *the web but websites* and that considers the genitive of the web narrowly. The studies that belong to this field put the web at the centre, not as an aid to historical research, nor as a source, nor in its archival, aesthetic, or graphic dimension, but precisely by making the political, economic, technological, and cultural history *of the web* the centre of interest — with the consequent risk of making a web-centric history of the web, to paraphrase David Morley (2009).

The “History of the Web” considers the web as a medium besides its content dimension: like studying newspapers but articles or journalistic styles, photography without pictures, broadcasting without considering programmes, anchorwomen/men, or TV genres. Rooted in a McLuhanian perspective, the “History of the Web” actually applies to the WWW approach and methods quite common to other media and communication technologies. One thinks of the various histories of social or cultural construction of newspapers, broadcasting, and telecommunications with an STS, ANT, or classical social history approach. There are also various studies with a political economy perspective that aim to identify power structures in media, from Hollywood movie industry to large digital platforms. Or even scholarly contributions close to or in the field of business history that consider the corporate histories

of music or record labels or brands that produce digital devices. There are many other disciplines and forms of histories that could be mentioned, but this is enough to give the idea. In this view, the web becomes a social construction where politics, institutions, corporate dimensions, technology, users, and many other factors have an influence. But the web, in itself, or in the companies and spaces that animate it, can also act as an actant that plays a role in structuring everyday actions, leisure and work time, and socialisation practices.

There are various examples of “History of the Web,” and many of these focus mainly on the beginnings of the history of the web, which is problematic because they study this technology when it was used by a minority of nerds or early adopters — this is a problem typical of many early histories of technology as David Edgerton (2007) mentioned in his brilliant book *The Shock of the Old*.

The first typology of academic research in the subfield “History of the Web” can be retraced in the self-narratives of the founding fathers, who told how the web was born at CERN in Geneva and how it developed in the early years of its introduction. These narratives are varied, even outside the academia with interviews and celebratory events, but they essentially originated in two books authored or co-authored by Tim Berners-Lee and Robert Cailliau (Berners-Lee, 1999; Gillies & Cailliau, 2000).

A second field in which the “History of the Web” has seen various studies flourish are narratives, imaginaries, myths, and discourses around the web over time (see, for example, Bory et al., 2016; Natale & Bory, 2017; Bory, 2020). These studies have often analysed available sources (until recently extremely scarce or inaccessible also due to the 30 years closure of archives) on how the history and evolution of the web has been told. One of the most interesting ways of approaching this dimension is through metaphors: the internet in general and the web in particular have long produced metaphors that have circulated in the social fabric: think of the frontier, the virtual plaza, information gathering by surfing, the global library, the walled gardens to describe the more recent platformisation of the web, and several others (Wyatt, 2021). All these metaphors have, of course, a historical and a cultural dimension: that is, they change meaning either over time, retaining or losing some elements, or they live off national or local peculiarities and imageries. On the topic, I believe there is ample room for various comparative or transnational analyses in the future, as already claimed by Goggin and McLelland (2017).

Just as seen for other media, the business histories of companies that have become central to the web is a third dimension of the “History of the Web” that has produced various studies of companies such as Amazon, Facebook (and later Meta), Google, Alibaba, Wikipedia, and many others. Some of these histories are accurate and based on corporate sources (although they struggle with the atavistic scarcity of internal documents that these companies make available to historians), others are hagiographic and tend to extol the genius of founders, innovators, engineers, etc. These companies have not only an individual dimension but also a collective one as the acronym GAFAM (Google–Amazon–Facebook–Apple–Microsoft) shows (Galloway, 2017): the main goal is emphasising the ability of all these players to concentrate large amounts of capital and expand throughout the world or nearly so, as, in some countries, such as China and Russia, these companies are banned from entering the market. For this chapter, it is interesting to note that such a block of companies is also variously referred to as internet or web companies, web giants, web-based companies, and many other designations containing the term web. In other terms, there is a way to study the “History of the Web” which is starting and focusing on the companies and, more in general, on the corporate perspective.

Especially with a political economy slant, there is an interesting national/local and international/global dialectic that has emerged in the “History of the Web.” On the one hand, there are various national histories of the web, in which peculiar and distinctive aspects for each country have been emphasised, but also the common aspiration of individual countries or individual web cultures to emulate, for example, the United States or to create digital heroes shaped on the American model (Schafer & Thierry, 2016; Goggin & McLelland, 2017). On the other hand, there has been work that has sought to identify a more global and collective spirit about the political consequences of the web: an example for historians of the web is José van Dijck’s (2013) successful book on the culture of connectivity, which aims to advance a “critical history of social media,” according to the subtitle. The same can be told for the histories of platformisation, a macrophenomenon that changed profoundly the social media as we knew them according, for example, to Anne Helmond (2015) in the case of Facebook. Are histories of social media, taken as a macro category or in their evolution as digital platforms, part of the “History of the Web” subfield? I believe so.

A final, typical historiographic strand of the “History of the Web” relates to periodisation. In the case of the web, there are at least two types of periodisation. The first and most popular borrows the nomenclature from software release cycles (web 1.0, 2.0, 3.0, and many others), to indicate how in each “era” a true or alleged radical change of the web would have occurred (see, for example, Vossen & Hagemann, 2007; Barassi & Treré, 2012; Allen, 2008; Kreps & Kimppa, 2015). This periodisation is commonly accepted, so much so that even on Wikipedia there are clear definitions of Web 2.0 (“also known as participative or participatory web and social web refers to websites that emphasise user-generated content, ease of use, participatory culture and interoperability, i.e., compatibility with other products, systems, and devices for end users”) or web 3.0 (“The Semantic Web, sometimes known as Web 3.0 [not to be confused with Web3], is an extension of the World Wide Web through standards set by the World Wide Web Consortium. The goal of the Semantic Web is to make internet data machine-readable”). A second way of periodising the web, destined to grow as the web itself ages, is by decades: Schafer and Thierry (2018), for example, edited a special issue on the 1990s as the turning decade for the internet and the web.

Periodisation is a common practice for historians, but it is not the aim of this chapter to point out its strengths or weaknesses, even if it is interesting to note that even outside the academia there is a veritable craze for making timelines that bring order to the evolution of the web. While it is impossible to enumerate all timelines relating to the history of the web, I will provide some examples in addition to the “Web design history timeline” already mentioned. There are web timelines designed by world-renowned research centres such as the Pew Research Center,⁷ by global magazines such as *The Guardian*,⁸ or by private individuals.⁹ CERN, too, has proposed its own timeline, which can have at least a twofold value: it can indeed be seen as a way to understand how CERN self-reports itself as the protagonist of this story, but it is also a useful source to understand which version of the birth and evolution of the web seeks to be proposed and imposed as “official.”¹⁰ Comparing these timelines and, consequently, the stories they convey and tell could be a beautiful study of conflicting memories and the subjective nature of timelines that often appear neutral.

Reasons *not* to combine the subfields

After attempting to define and analyse the three subfields, some of the main academic work, and even the non-academic popularity of the historicised web, in the final part of this chapter

I focus on the reasons for combining or not combining the three ways of approaching web and history.

Starting with the reasons why they should not be combined, “History Web,” “Web History,” and “History of the Web” are three different subfields with different research and analytical interests: the theoretical backgrounds are different, as are the methodologies and research questions that aim to investigate different issues that cannot be reconciled. But the difference that seems most significant to me is the fact that they can be categorised into different disciplines or fields. “History Web” is classifiable more in the field of historiography, particularly contemporary historiography, but I would say more generally it can have value in terms of historical research methodology. “Web History” can have a close placement with digital history, but it can also be on the borderline with design or even some hard sciences such as computer science. Among historians employed in this subfield, the interest goes as said not on the web per se, except for websites, but as a source for political, economic, and socio-cultural history. Finally, “History of the Web” can be considered a subfield of media and communication history because historians who practice it have interest in the web as media or as communication technologies. These three fields are then different from each other, each has specific research interests and questions, methodologies, journals, conferences, and even specific academic or technical jobs and positions that are not easily reconciled in most cases. The professional and academic figures afferent to these three subfields are also different: they are historians, media scholars, web archivists, software engineers, data analysts, and many other figures who interact with each other with difficulty because of different backgrounds and mindsets.

Reasons to combine the subfields

However, these three subfields share several common traits, so there are strong arguments in favour of combining them.

A basic commonality, which should not be underestimated, is the interest in the historical dimension of the web. Frequently, digital technologies, including the web, are analysed from sociological, psychological, anthropological, political, and other perspectives, and the long-term dimension is often overlooked: in short, the three subfields mentioned above have in common the centrality of the past and the diachronic dimension, the analysis of changes, and the recognition of continuity.

A second common starting point, or better a mantra, reads as the *web is not the internet* (Brügger, 2013): thus, although these historians are interested in analysing the web from different points of view, the web remains the sole focus of their research.

Although it may seem odd, there is a third similarity: all three subfields are essentially neglected or marginalised in their respective main fields. Web historians are interested in self-reflection on their discipline, in how sources are digitised and then made available through and because of the web. They are mostly methodologists and historiographers, in a discipline like history which has not shown passion to establish and discuss methods specifically. Web historians use sources such as websites, which contemporary historians may find “strange” because they are visual, unstable, and have not been preserved by official institutions or archives for the past few years. They can also look more interested in the preservation of sources than in using them to tell stories (the main business of historians). Historians of the web, like media and communication historians, are neglected or at least considered quite marginal both by media and communication scholars and by contemporary historians as

well — and let me add Historians of the web are still marginal in media and communication history conferences and journals, a kind of neglect at route square.

However, I would like to conclude this contribution by citing at least three examples of possible areas of research that consider history and the web and could benefit from the combination of the three approaches I have identified.

Contemporary historians working on the 1990s (for example, the post-Cold War era, the Yugoslavia war, neoliberalism) can use digitised sources, websites, and interviews with web founders, and discuss the social role of the web in shaping those events and developments. Or, the W3C website (www.w3.org) could be studied as a multiple-layer source, discovering tensions and reasons for the W3C’s formation, power dynamics between European (CERN) and American (MIT) academia, which of course predate the website itself, but the same website can be seen as a place of negotiations among different actors. In other terms, websites can be framed as repositories of political, social, and economic tensions as Andreas Fickers (2012) did in his seminal paper on the radio dial as a mediating interface on different political, cultural, and technical forms of imaginaries. Or, again, one could study the invention of the web at CERN archives, and so joining the subfield of “History of the Web.” But then, to better understand what the collectors of the archive had in mind, questioning the reasons why they decided to print some web pages and preserve them (more in the field of an ironic analogue “Web History”). And, finally, discussing with CERN on re-digitising those websites and putting them on their website as a source for historians in the realm of the “History Web.”

Those are just three random examples where I hope it is clear that it is possible to start from one of the subfields and then expand it toward the others to enrich the main research questions, theoretical background, and sources to be used. Frankly, I think that creating a group of interdisciplinary scholars and combining three subfields into a unique field (called History *and* the Web?) could be a way to de-marginalise the historical study of the web. I am confident that this book will also contribute to this direction, so I hope that scholars and practitioners in all three subfields, as well as others, will read it.

Notes

- 1 Europeana (n.d.). *Europeana*. Web Archive. https://web.archive.org/web/20240000000000*/www.europeana.eu/en.
- 2 CERN Document Server (n.d.). *The World Wide Web (Archives)*. Web Archive. <https://web.archive.org/web/20230322092039/http://cds.cern.ch/collection/The%20World%20Wide%20Web%20%28Archives%29?ln=en>.
- 3 CERN Document Server (2011). *ARCH-WWW-4-010.pdf*. Web Archive. <https://web.archive.org/web/20240211210403/http://cds.cern.ch/record/1405411/files/ARCH-WWW-4-010.pdf>.
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- 10 CERN (n.d.). *Timeline*. Web Archive. <https://web.archive.org/web/20231129212052/https://timeline.web.cern.ch/timeline-header/90>.

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