# Chapter 1: Framework: theory and working concepts

All historiographical research is articulated over a socioeconomic, political, and cultural place of production. It implies an area of elaboration that peculiar determinations circumscribe: a liberal profession, a position as an observer or a professor, a group of learned people, and so forth. It is therefore ruled by constraints, bound to privileges, and rooted in a particular situation. It is in terms of this place that its methods are established, its topography of interests can be specified, its dossiers and its interrogation of documents are organized.

Michel de Certau, The Writing of History, 1988.

## From where I stand: a space and a time

To introduce the context in which this research emerges, I would like to make a brief note about what I understand by the process of *writing of history,* and how important the circumstances in which this work is done are. Those circumstances shape the way a research is done. They may enable and/or limit every aspect of the work, independent of the historians’ will or awareness. From this point of view, one’s *milieu* is never neutral, in fact, it has strong agency on the researcher’s capabilities and choices. This perspective points to a social construction of knowledge in which history, as an institution of knowledge, takes part being a product of the present – it’s time of production – and not the past (Pelletier 2018, 04). Michel de Certau looms in the background of my discussion throughout the thesis, but I engage more frontally with his work in this opening section:

Before knowing what history says of a society, we have to analyse how history functions within it. The historiographical institution is inscribed within a complex that permits only one kind of production for it and prohibits others. Such is the double function of the place. It makes possible certain researches through the fact of common conjunctures and problematics. But it makes others impossible; it excludes from discourse, what is its basis at a given moment; it plays the role of a censor with respect to current – social, economic, political – postulates of analysis. This combination of permission and interdiction is doubtless the blind spot of historical research, and also the reason why it is incompatible with *n’importe quoi*, just anything. It is equally within this combination that work destined to modify it plays its role. (Certeau 1988, 68)

Social and historical context will determine resources available, and the choice of the methods and tools, the subjects and the audiences of the study, and even the style in which the research outcome is written. “Historiography (that is, ‘history’ and ‘writing’) bears within its own name the paradox – “almost an oxymoron”, writes Certeau, “of a relation established between two antinomic terms, between the real and discourse” (idem, xxvii). To French Philosopher Paul Ricœur, Certeau is a master of rigor, to whom the very research of the place production of history and the act of situating its writing is what amplifies the territory of history by acknowledging other ways to do history (Ricœur 2007, 215). In *L’Écriture de l’Histoire* (Editions Gallimard, 1975)[[1]](#footnote-1), Michel de Certeau explores the alliance between *writing* and *history* based on the relation that discourse keeps with the real, its perennial object. Certeau’s attention to the “social place”of “historiographical operation”, and the extent to which the real interferes in its “fabrication”, is very endeared to this thesis. His book dates back to the 1970’s, decade also marked by the appearance of Jacques LeGoff and Pierre Nora’s *Faire de l'histoire: Nouveaux problèmes, nouvelles approches, nouveaux objets* (Editions Gallimard, 1974), in which, among the “new problems”, there was already a piece by Certeau dealing with the historiographical operation, that later on reappeared as opening chapter in *L’Écriture de l’Histoire.*

Problematising the historiographical operation in itself was one of the reasons why the French philosopher Paul Ricœur elected Certeau as one of his *maître de rigueur* next to Michel Foucault and Norbert Elias. In Ricœur’s appreciation, the three have earned such a title for having, each one in its own way, radicalised the demand for rigor by the discourse of professional historians, which made them rebellious to the model proposed at the time by the French *Annales* school (Ricœur 2007, 210). The somewhat inedit attention and problematization of the writing in itself, as a complex production process, shifted the core of the criticism from the documental and explication/comprehension phases to the historical representation – the inverted image of the practice, where, according to Certeau, the fabrication materialises itself.

Following his archaeology, in a backsliding of what had already been written, Foucault would try to find the rules in the discursive and non-discursive practices that lead to historiographical discourse as an event (Foucault 1986) – the “unspoken that allows and enables what was said” (Albuquerque Júnior 2013, 145)[[2]](#footnote-2). Beyond historiographical discourses, Elias summons up the critics to explore the regularity of social formation that served as “soil and humus” (Elias 1994) to the discourses and events narrated by historians. Amid the two, according to Ricœur, Certeau was the “insider *outsider*” (Ricœur 2007, 210).

Certeau sees the historical practice as a work, an operation that produces meaning about the past – the past as an *Other* and its subjects – and, at the same time, he calls attention to the fact that all historiographical discourses are preceded, enabled and fabricated from a specific social place. This *place* is the historian’s place, it is no neutral place, it implies the compliance of rules and embeds everything the historian does in a discipline, with codes and protocols. All these rules and protocols, that ultimately make the state of the discipline[[3]](#footnote-3), are dated and follow the cultural standards of a certain time.

Following Certeau’s reasoning in the epigraph to this chapter (1988, 58), the *where I stand* question is not a neutral but decisive aspect of this research. It is fundamental, therefore, to describe the research environment in which this study has been carried out: the Luxembourg Centre for Contemporary and Digital History (C²DH), an *interdisciplinary research centre* founded at the University of Luxembourg while this thesis was being developed. The influence of C²DH mindset and research infrastructure is nothing to be disregarded in the elaboration of the present research project. A further relevant reason for the imbricated relation between this research and the C²DH is the fact that in the early months of this PhD[[4]](#footnote-4), the professor for contemporary and digital history from the Institute of History at the University, main supervisor of this project, Andreas Fickers[[5]](#footnote-5), had applied and got appointed to become the director of the new centre to be.

It is undeniable that Fickers assuming the role of C²DH has had an impact in the shaping of the social place – as in Certeau’s formulation “socioeconomic, political, and cultural place of production” – from which I developed this research. While studying the trading zones of digital history and analysing *the centre,* Max Kemman (2019, 84–95) describes Fickers as a *driving force* behind the developments of digital history at the university, and a historian that would play a role of a *digital history broker*. Kemman calls digital history brokers the individuals that in a trading zone exemplified “significant shifts in practices”. Brokers, according to Kemman:

conducted project management; coordinated practices from archival and library domains such as data collection, transformation, and description; learned about the potential and limitations of computational technologies and where to apply these; employed inter-languages to translate between the different collaborating domains; and **finally transformed historical questions into infrastructural problems**. (Kemman 2019, 200, author's highlights)

The final aspect underlined by the author as one of the main shifts for historians is also the most relevant for our study. As infrastructural tensions remain an issue to many digital history projects like this one “digital history brokers might prove central in shaping the practices of future historians through infrastructure” (Kemman 2019, 201). The challenges I faced regarding the need for digital infrastructure will be commented later on [Chapter 2](#_heading=h.3dy6vkm), however it is worth noting from departure the part played by the director of C²DH, pushing digital history into the agenda of the university and consequently making it possible to negotiate the resources for both physical and digital infrastructure for the new centre, was determinant to the development of the digital memory platform built in my case study. If this thesis were to be developed in another research context, the lack of the infrastructure would for sure impact its progress in a different way.

To a certain extent, this research is on its own part of the infrastructuring efforts deployed by the group of digital history brokers at C²DH. If we agree with Kemman (2019) in dialogue with Star and Ruhleder (1996), infrastructure entails a tension between local and global spectrums, and it has a dual, paradoxical nature “it is both engine and barrier for change; both customizable and rigid; both inside and outside organizational practices. It is product and process” (1996, 111). This duality might be present for different contexts where infrastructure becomes a must, but it is also true when it comes to implementation of technologies to historical research, with the unspoken conflict between the digital practitioners and the larger community of practice[[6]](#footnote-6) that remains conservative to the canons of the historical discipline[[7]](#footnote-7).

In the transition we are in, from analogue to digital culture, what we have is, on the one hand, the need for customisation and flexibility – of methods, tools and subject – in local level, and, on the other hand, the need for standardisation and continuity of the emerging approaches in a large-scale. The shift of practices within the C²DH brokers, despite its intimate connection with local needs, can also result in a development of guidelines and exemplary experiences that could be appropriated on a global scale.

By acquiring interactional expertise, digital history brokers are able to develop local approaches to the methodological and epistemological tensions introduced by the interactions between computational practices and historical scholarship. Yet by implementing these approaches in education, and developing guidelines for legitimisation, brokers are at the forefront to integrate local approaches in the global community of practice. (Kemman 2019, 199)

What Kemman is showing, in other words, is that infrastructuring depends on the social-political practices of education and legitimisation. By creating room for experimentation with new methods, as well as teaching and training staff and students to gain autonomy in the handling of the new tools at stake, C²DH and all other digital history brokers actively engaged in Academia are working under and against the “scholarly” pressures of the disciplinary framework of history. This framework suggests that there is a “type of history that predominantly defines the field as to what ‘history really is’, but also because it is the type of history studied on A level and undergraduate courses” (Jenkins 2003, 25).

The *education* and *legitimation* doublet here is critical as it orbits around the most updated, and long disputed, definition of what professional historians are like and what they do when they do history. The efforts of digital history brokers to develop institutional mechanisms in this direction are particularly significant, and they do that, for instance, “integrating digital methods in university curricula, or encouraging their PhD candidates to employ digital methods” (Wenger 1998, 73). While at a global level there is no consensus about what should be the weight of digital methods in university curricula, at a local level C²DH became a key player in the negotiation for introducing digital and public history oriented courses to graduate and undergraduate students. These attitudes toward changes in curricula are at the real base of what professionals of a certain discipline believe is the fundamental set of skills an expert needs. When it comes to my personal experience at the University of Luxembourg, as researcher and lecturer, I stand with the *brokers* and believe that “every historian-to-be should be trained in digital public history” (Lucchesi and Legay 2019, 01).

The questions of what makes a historian is at the core of longstanding considerations in the philosophy of history and is pertinent to the discussion about practices that permeates this thesis. According to Keith Jenkins, whose work became important in the debate on history and historiography in the last turn of centuries, beyond their personhoods (values, positions, ideological views), professional historians have epistemological presuppositions (or ways of “gaining knowledge”), routines and procedures (methods), and they search for “traces of the past” before they finally get to the write up phase of their research (Jenkins 2003, 25). In the writing exercise the “epistemological, methodological and ideological factors again come into play, interconnecting with everyday practices” (Lucchesi and Legay 2019, 01). The whole process that enables a historian to reproduce the traces of the past in a new category – *transforming past into histo*ry – is the job of a professional historian. Jenkins sees the whole process, analogous to Certeau’s historical operation, as subjected to a series of everyday pressures.

Less obvious than the big constraints stressed by Certeau as elementary of the social place, the pressures enlisted by Jenkins include different levels of constraints, sometimes taken for granted. Among those pressures there are family and friend relationships, with charges such as “Not another weekend working!”, “Can’t you give your work a rest?”; work-place pressures, among others, departmental heads, peers, institutional research policies, teaching commitments etc.; and pressures from the publishers with regard to several factors of his/her work outcome, as wordage, format, market, deadlines, literary styles, referees, re-writing and so on (Jenkins 2003, 27–28). These days, the interferences brought by the digital component are to be deeply considered alongside all the possibilities and limitations that each historian faces according to their personal and institutional circumstances.

During the process of shaping the Memorecord digital memory platform, I experienced issues brought up by these interferences first-hand. These interferences caused detours and failures alongside the project development which I will detail in [Chapter 2](#_Chapter_2:_). Despite the frustrations and delays imposed by the bumpy course of my experiment, in the settings of a hands-on exercise, I could productively engage with them. Indeed, reflecting about the creation of the platform ([Chapter 3](#_Chapter_3:_Analysing)), I notice how identifying these error-prone elements was important for my analysis of the digital methods.

Experimenting, after all, entails taking risks. Failing, in this context, may be a fruitful event. It is dealing with the unknown, by being open to failure and having to improvise solutions or devise protocols that are not in place that we can, as I argue later on in this thesis, benefit from the heuristics inherent to the hands-on approach. I will argue in [Chapter 3](#_Chapter_3:_Analysing) that it is through a hermeneutics of practice that we can critically engage with these (new, digital) elements that wire impact in research and address it in a pragmatic way. The reference to pragmatism and heuristics here may suggest that there would be some general solution drawn from mine or other experiments with digital methods, but in many cases, there are no definite answers; instead, we may find more open questions. But the vagueness that comes along failing seems to have a corrupting effect in academia, as Shawn Graham discussed in his recent *Failing Gloriously and Other Essays (2019).* Sometimes it would seem like we are doing some sort of *research witchcraft* when we try the magic to open the black box of technology. What Graham tells about his *getting stuck* and *debugging cycle* resonates a lot to me:

I try to update my own tutorial. I ask questions on Twitter, on my blog. I email people. Sometimes I know them, sometimes I get to know them. I vent on social media. I draw strength from others who can commiserate. I sit down at the terminal and invoke the magical words that will cause things to happen. Things crash, break. I copy the cryptic error messages, use them as the basis of a new search.

It might look like messing around on the internet, but there’s a cycle of **exploration, documentation, experimentation, consideration of results, documentation, exploration, documentation, experimentation . .** . When it breaks: is it the tech that’s broken? Is it me, something I don’t understand, some kind of scaffolding I’m missing? Hey, it works—if I deliberately try to break it, when does it break? Where? Why? Under what conditions? Human remains are consistently identified by the neural network model provided by Google as “jellyfish.” Why is that? What if we throw out the identifications, grab the next layer down: is this information useful? What can I do with it? Write it down. Blog it. Turn it into an article. Share. Research witchcraft in action. (Graham 2019, 85, the emphasis is mine)

As a PhD candidate that has never been a computer expert, many times I felt a bit lost with questions that often translated into countless open tabs in my Internet browser. During the experiment, many times I found myself looking for answers to which I have not barely formulated the questions. At the end of the experimental journey, what I realised, is that despite or, more exactly because there are open questions, we need to pursue more experiments, document and share the anguish of the failures, document and share our step by step, in a process of turning explicit the implicit aspects of doing research in the digital age. This is what I believe, at the end of the day, may help our community of practice to achieve a better understanding of what we do and how we do. When it comes to digital scholarship, sharing the experimental struggles, instead of presenting everything “as a win” (Graham 2019, 04) and taking research process for granted, would be beneficial to discuss the bottlenecks of digital methods and collectively try to find ways of facing it. Insofar, it seems that academia is still looking at digital work for its results; in other words, evaluating its outputs, while a great deal of critical work in the engagement with the digital appears as marginalia.

Until the cycle described by Graham becomes familiar to our peers, we may keep on debating about the definition of digital history or digital public history while the arguments we make on/about/through/within the digital are not incorporated into historiographic conversation. In a recent white paper, the working group Arguing with Digital History, at the Roy Rosenzweig Center for History and New Media (RRCHNM) have discussed this issue. They claim that “Recognizing arguments in forms of digital history including digital collections, datasets, and digital public history would build a bridge bringing historians to digital history.” (Arguing with Digital History working group 2017, 3) The authors note that apart from a few early examples, the cases that use digital technology not only for analysis but for presenting an argument have not become profuse. The example highlighted, which I discuss in greater detail in [Chapter 3](#_Chapter_3:_Analysing), is “The Differences Slavery Made: A Close Analysis of Two American Communities" by Edward Ayers and William Thomas III, published in 2003 in the *American Historical Review*. The lack of more scholarship like that may indicate, to the authors of this white paper, “a widespread sense that digital history has over-promised and under-delivered in terms of its interpretative contribution back to the discipline.” (idem, 02).

By discussing a concrete study case in detail, bringing forward how I commenced my exploration, documenting it and sharing the minutiae of the experiment both with regard to the use of digital tools, as with respect to the social side of the experiment (i.e. the engagement with the community) I want to drag the process from the margins to the centre of digital scholarship. In doing so, I also stress how digital public history can benefit from the digital beyond its use as a simple publication medium. By addressing these issues based on a 360º experiment, calling on different phases of the historical research, this thesis may show the relevance of experimentation within digital and digital public history. This 360º outlook should also help me to demonstrate how arguments can be made on/about/through/within the digital in the various stages of research and not only in the (re)presentation phase. To Alan Galey and Stan Ruecker, for instance, “the creation of an experimental digital prototype [can] be understood as conveying an argument about designing interfaces” (2010, 405). In my research, hands-on experiment and argument are interlaced. Unlike traditional approaches to research topics, most of the (meta)research questions emerged in this thesis, as well as the theoretical assumptions presented throughout the chapters are deep-seated in the experiment. Hence it is different from purely descriptive, exploratory research, but also distinct from the grounded theory approach, which usually has the “generation of theory with explanatory power as a desired outcome” (Birks and Mills 2015, 17). While the formulation of hermeneutics of practice bears a theoretical hook, it originates not only from data generated, collected and/or coded by the researcher, like in standard grounded theory, it is rooted in the mental and bodily hands-on experience. Methodological insights and theory here come from a holistic approach to building rather than from data alone; building as a form of scholarship (Ramsay and Rockwell 2012). For that reason, in [Chapter 2](#_Chapter_2:_) I offer a reflective description of the process of building the platform and the problems encountered, because a simple presentation of methods would not be enough to prepare the reader to the theoretical debate that takes place in [Chapter 3](#_Chapter_3:_Analysing). Likewise, the discussion of data in [Chapter 4](#_Chapter_4:_The) would not do justice to the value of experience to the analysis without referring to the practice ([Chapter 2](#_Chapter_2:_)) and the theory ([Chapter 4](#_Chapter_4:_The)).

Despite the centrality of the experiment in this thesis, before its presentation it is necessary to introduce the environment from which it has emerged. The social place, as discussed by Certeau, is elemental to every research. When it comes to digital undertakings, it is even more imperative to highlight the locatedness of the projects given its dependence on infrastructures, but not only. Isabel Galina, from the Institute for Bibliographic Studies at the National University of Mexico, made an important point about it in her talk during the 2013 conference of the Alliance of Digital Humanities Organizations (ADHO). Talking from a peripheric country amidst the predominant national traditions, especially north-centred, Anglo-Saxon ones, Galina discussed the challenges of building a Global digital humanities community, drawing attention to the barriers raised by languages and the unevenly distributed capacities. Speaking against a paternalistic approach from the model DH centres and arguing about the need of a horizontal, two-ways collaboration, Galina contends:

Methods that have worked effectively in one cultural setting may fail spectacularly in another (and vice versa) and certain reasoning of how things should work does not apply similarly to other frameworks. Models, surveys, truisms should be placed in context. (Galina 2013)

Bearing this question of location specificity in mind, let’s move to the next section.

### *Luxembourg Centre for Contemporary and Digital History, a laboratory of historical uncertainty*

The holistic approach that inspires my methods is well aligned with the experimental *ethos* thatcharacterises C²DH, where this research is institutionally embedded. The innovative predisposition of this research centre is definitely accounting for my identification with a “doing as thinking” or “building as a way of knowing” perspective (Watrall 2016). Those are guiding perspectives for this thesis that also take in consideration the “sensorial and pragmatic apparatus”, for resorting to Willard McCarthy’s argument about modelling, and this can lead to “a richer, better informed, more powerful heuristic than abstraction” (McCarty 2014a, 23–24). Hack *and* yack come together in a natural juxtaposition in C²DH, rather than a misleading opposition in thinking, as highlighted by Bethanie Nowviskie in discussing the origins of the “more hack, less yack” buzzing slogan among digital humanities practitioners (2014)[[8]](#footnote-8). The centre deliberately makes a plea for playful experimentation in historical research:

“Thinkering” – composed of the verbs “tinkering” and “thinking” – describes the action of playful experimentation with technological and digital tools for the interpretation and presentation of history. Finding new historical insights and innovative forms of narrative are at the centre of the C²DH’s activities. (C²DH website)[[9]](#footnote-9)

Experimentation, in this context, is an invitation to bring historical research beyond, to innovate. And innovation inherently brings risks of failure, as just discussed, a kind of output that is not very usual in Sciences, where risks are mostly avoided as threats that could jeopardize a whole research or seen as a waste of time and resources. For those familiar to the field of history of technology, however, risks and uncertainties are legitimate subjects, which through a meta-reflection could also speak to the methods of research itself. Looking at her/his own methods of research, not necessarily thinking of its output in the market-centric terms of success and failure, a researcher of history of technology could think that risks are worth taking, understanding the intrinsic opportunity for reaching new findings, or, at least, new ways of doing. Fickers, beyond being the founder director of the C²DH is a tireless *randonneur* in the field of history of technology. He is among those who argue for the importance of taking risks. Since the beginning of his mandate, he made it clear that he wants to foster this perspective in the young University of Luxembourg. In the official launching event of the C²DH, Fickers contended:

The C²DH is the result of a process of political and institutional negotiations, and consists of a reflection on the tensions, challenges, opportunities and chances of historical practice, holding in a hybridity between scientific tradition and heuristic trial and error with the news technologies. (Fratti 2017), translated from French by myself)[[10]](#footnote-10)

In this journey towards new heuristics potentialized by new technologies, C²DH is calling out “*la raison critique historique et de la science pour produire de l’incertitude*”, as Fickers argued in the same event. Next to this, the undaunted title of *laboratoire de l’incertitude historique* was attributed to the new centre in one of its inauguration coverage in the Luxembourger national press (Fratti 2017). The C²DH, therefore, seems to embody the idea of experimentation as *Denkstil* and *Bildung,* as discussed by Fickers himself in the German *Technikgeschichte*, following reflections he started together with Annie van den Oever a few years earlier (2015, 10). Thinkering, in this setting, is at a time, a methodological and a questioning approach. Drawing from the field of media archaeology, experimental media archaeology is inspired by one of the old acquaintances of public historians, the historical re-enactment, recognizing the historian’s role as co-constructor of the “epistemic object” (Fickers and van den Oever 2013; Rheinberger 2007). Another *contact zone* (Svensson 2016) among experimental media archaeology and the C²DH’s expertises that is core for my project, namely digital and public history, is the overture to other historical traces and elements that may not lay exclusively in the hegemony that written texts pursue in historiography. A “sensorial appropriation of the past” is called out to inform critical reflection about the “(hidden or non-verbalized) tacit knowledge” relevant to the study of media archaeology, in this case, the engagement with media technologies (Fickers and van den Oever 2013, 02).

Having stated the hands-on importance to historical research, so valued and supported in C²DH, in the next section I provide a few references at play for the digital work and reflections I carry about digital methods later on in this thesis. For this, we rewind a bit back in time to have an overview of how the digital component became a subject to humanities at large, as well as to history.

## Doing history in a Digital Age

Must have been said in the humanities about the digital revolution of the past decades (Ayers 2002; Burton 2002). The so-called *information age* (Castells 2010) became subject of research in many disciplines. The digital advent came to be a matter for meta-reflection in the vast horizon of digital humanities. As the revolution unfolds, from 1980’s to nowadays, research is assuming increasingly complexity to what concern its *digital* component (Berry 2011, 12)[[11]](#footnote-11). History, as an information-based discipline, could not pass through it indifferently. Some years before the advent of the digital, technological changes were under the attention of historians concerned with the dynamics of the hype then defined as quantitative history (Chaunu 1964; Marczewski 1964; Furet 1971). However, it was the further development of digital technology and, remarkably, the growth and popularisation of web services that brought digital history as a distinctive element on the historians’ radar. Moreover, Internet and the digital crossed academic activities at various levels, even the more discrete ones, as noted by the Portuguese historian Daniel Alves:

[with Internet begins] the great digitization projects and online availability of sources, at the same time that new tools that would substantially change the relationship of researchers with the digital world were born or introduced in the academic environment. The word processor, e-mail, databases and systems of geographic information had a very significant increase in the number of users throughout the decade [1990]. (Alves 2016, 93, translated from Portuguese by myself)[[12]](#footnote-12)

The emergence of digital media and its communication on the World Wide Web brought a substantial extent of the information relevant to historians “within the reach of a click” or almost[[13]](#footnote-13). With the digitization processes, all sorts of clues and evidence that help us to narrate facts and make arguments about what happened in the past became available online. Nowadays, digitisation with scanners, photo cameras, etc., is just a relatively small part of the sturdy digital media expansion, not less interesting for historians, which is leading society to a certain form of ubiquitous computing culture (Ekman et al. 2016, 30). Such expansion encompasses not only desktop computers, but mobile devices and their many applications, environmental monitoring systems, media art installations, surveillance technologies and many other pervasive technologies. These developments pretty much situate us in the third wave of information technology (idem, 30).

All these different forms of human-computer interaction seem to update the idea of information profusion that Roy Rosenzweig had foreseen in his early writings about the Clio’s wired (and wireless) fate. Talking about the age of abundance in the beginning of the 21st Century, Rosenzweig strongly referred to the affluence of digitally born material – those emerged on the web with no printed precedents. As technologies and scales evolve, an increasing number of scholars all over the humanities are using digital-born sources and data in their research (Salganik 2017). Beyond many ephemeral contents, like websites, blogs and other individual contents, this kind of material would also include traditional works like books, journals and films (Rosenzweig 2003). With this multiplicity of material, the Big Data age seems to bring new opportunities for polyphony and polychrony in research (Bowker 2008, 183–84), while introducing a big shift in the way “we think about research” and “profound changes at the levels of epistemology and ethics” (Boyd and Crawford 2012, 665).

For those specifically interested in contemporary history, many other forms of born-digital records would come into the scene – e-mails, electronic government documents, instant messages, and of course, social media channels, which have shortly become a trendy space for political communication (Himelboim et al. 2012; Liu 2017). Moreover, despite being less evident for regular users, the traces of Internet usage (i.e. computer cookies, websites analytics, cloud metrics, GPS locations, etc.) and all the metadata generated by the online traffic are also to be taken in consideration in the new information ecosystem where physical and digital spaces converge (Lacerda and Lima-Marques 2017, 85).

The novel expressions of the information architecture have given way to a more complex scenario that is challenging, but invigorating for research. Andrea Resmini describes the context as a post-digital world:

in which digital and physical blend easily, and the Internet is a piece of a larger mechanism where our activities and our use, consumption and production of information happens across multiple contexts, through multiple devices and, unstable, emergent choreographies. (Resmini 2014, v)

Within the digital history realms, the research situation drawn along these years of digital media development may still remain characterised, to a certain extent, by reluctant binarism among the more skepticals and the more enthusiasts. However, this more simplistic viewpoint seems to have been overcome in the recent years with the growing realisation of the cultural dimension of digital technology and its important role in mediating research (Berry 2011, 12). There are reasons to believe that a broader sensitisation about these dramatic changes are pushing towards a more reflexive moment with a multi-disciplinary framing from which all the humanities can hopefully benefit. Beyond the usual disciplines such as linguistics, library sciences and archivists, others are joining the debate to offer reflection on the current information spaces, adding further nuances to the social, cultural, economic and political textures around the new reality. Design thinking, cognitive science, anthropology, new media studies, ergonomics, human-computer interaction and other disciplines are taking their seats in the room (Lacerda and Lima-Marques 2014, 4).

Back to the specific *métier d’historien*, despite the disciplinary inertia, established routines and weight of institutions once pointed out by François Hartog (2010) as elements of resistance to intellectual revolutions, the historian’s workbench is changing. And this change is not only concerning practitioners of digital history. After long years of apparent isolation, a historiographical conversation is finally kicking off among digital and more traditional historians, the trigger being the argumentative practices of digital history (Arguing with Digital History working group 2017). Traditionally trained to handle primary sources in a very human-doable scale – by means of manual selection, close reading, cataloguing and interpretation subjected to typical printed era serendipity – historians of several domains are now entering into the realms of data. With it, computational analysis of data seems promising, but at the same time, it raises challenges of operationalisation that are very new to non-computer experts. Computational methods also foster different research designs, for instance, allowing the identification of research questions to happen in a more iterative way within the other stages of research, just like I explained above about what I experienced in the development of Memorecord. However, in Memorecord’s case, not only data, but the whole hands-on/tacit and social experience of the digital public history project would reciprocally shape the scope of the study. The different research phases overlap, and in some instances turn back upon themselves. The analysis phase, for example, often feeds back into the original research questions (Nguyen et al. 2019, 2). Moving from a workflow based on a number of documents to one based on data, historians are confronting themselves with an unprecedented amount of information, a perplexing “Himalaya of data” (Lovink and Riemens 2010).

In this context, new problems of methodological and theoretical nature arise. For instance, what could be considered a simple question of source criticism regarding analogue sources, can be a novel in the world of digital research and, yet, there are only a few history departments teaching information provenance in the digital age as part of historiography (Weller 2013). More than fifteen years later, we can reasonably agree with Rosenzweig’s view that the digitisation of the world as a broader process, was proposing, and still is, a “fundamental paradigm shift from a culture of scarcity to a culture of abundance” (2003, 739). For this, I situate the writing/building/reasoning process of this thesis in this transition. In this transitional moment, some conceptual questions and issues impacting on historical studies are gradually becoming of interest not only to the self-entitled digital historians, but also to the broader historical discipline. Even with some resistance, our community of practice is realising that this shift is concerning our very own practice, independent of the fact of being a more digital or a more analogue historian. According to Manoel Luiz Salgado Guimarães:

Historiography as a systematic investigation of the conditions of emergence of the different discourses about the past, presupposes as the first condition to recognize the historicity of the very act of writing History itself, recognizing it as inscribed in a time and place. (Guimarães 2003, 23–24)

Writing history in the dawn of Big Data requires a strong philosophical and theoretical reflection, which was not quite a trend in the early days of the digital turn on either sides of the Atlantic (Lucchesi 2014). Despite the epistemological urgency often praised, the actual debate has been, so far, very sporadic (Fickers 2013; 2016). Only recently, some “scholarly primitives” have been distinguished as elements capable of bridging digital history and the practices of the broader discipline, allowing a deeper and more complex shared reflection about what doing history nowadays, with the mediation of digital technology, should look like (Arguing with Digital History working group 2017, 3). My research is embedded in this context. Since the first project outline, following Melvin Kranzberg’s laws of technology, this project took a critical stance towards technology, considering it “neither good nor bad; nor is it neutral” (1986). Along the insights from the hands-on experience, the philosophical and theoretical reflection I propose here is a response to a strong demand in the field of digital history I have identified in previous study[[14]](#footnote-14).

With the above described Digital Age situation being the atmosphere in which we are living while this research project was conceived, this thesis seems, symptomatically, to attend a certain “revisionist call of what human research is all about” (Snickars 2014, 2676). However, I do not choose to follow this revision as a sort of pledge for refoundation of the discipline, as I discuss in [Chapter 3](#_Chapter_3:_Analysing). I rather carried it out as a thorough rethinking of historian’s craft in the light of the interferences brought by the digital component. In this process I invite others to rethink the hermeneutical approach to history as an exercise of hermeneutics of practice. In this direction, I am seeking, as well argued by Gerben Zaasgma, a compromise for historical practice in our present time which is believed to be an effective and true form of hybridity (Zaagsma 2013). With this in mind, this thesis reflects on the requirements – the crucial context evoked and elicited by this hybridity – to work through digital methods and, finally, to interpret digital-born sources. More specifically, an underlying question that looms throughout this work is how the historical critical method we already applied to the analogue can be updated into digital scholarship.

Doing history in a digital age, therefore, entails a profound reconsideration of our relation with the sources, considering the new qualities of what can be a medium and what can be a source. The documental phase (Certeau 1988) of my research work is, hence, under scrutiny in this thesis, as a matter for metareflection. Collection, selection, exploration and interpretation will be subject of reflection in light of our own hands-on experience through the crowdsourcing experiment we set for the particular case study on Italian and Portuguese migration memories in the Grand Duchy of Luxembourg.

1. In this thesis I use the English translation by Tom Conley, edited by the Columbia University Press (1988). [↑](#footnote-ref-1)
2. My translation from Portuguese. Original Portuguese passage: "o não dito que permite e possibilita o que foi dito". [↑](#footnote-ref-2)
3. I work here with the understanding of discipline as a particular branch of knowledge as a historically constructed extraordinary reality, as described by Pierre Bourdieu (Bourdieu 2004, 49), but we do not realise them because we are used to them. Since the concept of discipline may not be a straightforward one, especially considering the different nature of each discipline in relation to another, it may put some difficulties to find a concise definition. For my use of the concept, it is enough to retain the social-historical dimension pointed by the French sociologist and refer to a rather general, but eloquent outline by the Nordic philosopher of Education Torill Strand: “A discipline, is inscribed in, and upheld by, the national and international networks of research, university departments, research institutes and scientific journals that produces, certifies, rewards, and upholds that which he calls the discipline’s capital. And a discipline is characterized by a particular, unique academic and social style” (2007, 272). [↑](#footnote-ref-3)
4. The research proposal that generated this project was submitted to the [National Research Fund, Luxembourg](http://www.fnr.lu) on March 2015 under the title “Shaping a digital memory platform on migration narratives: A public history project on Italian and Portuguese migration memories in Luxembourg”, as listed on: <https://www.fnr.lu/projects/shaping-a-digital-memory-platform-on-migration-narratives-a-public-history-project-on-italian-and-portuguese-migration-memories-in-luxembourg-2/>, Accessed July 01, 2019. Back then, as a professor from the Institute for History, Fickers was affiliated to the Faculty of Language and Literature, Humanities, Arts and Education, under the research unit *Identités. Politiques, Sociétés, Espaces* (IPSE). By the end of June, 2015 the research proposal submitted to FNR was positively evaluated and I were able to start the PhD as of 01September, 2015. [↑](#footnote-ref-4)
5. His profile is available on <https://www.c2dh.uni.lu/people/andreas-fickers>. Accessed July 01, 2019. [↑](#footnote-ref-5)
6. “Community of practice” is the framework mobilised by Kemman in the study above mentioned. I consider community of practice a valuable instrumentation for the study on trading zones and find it useful to be employed in other contexts throughout the thesis, especially in chapters [2](#_Chapter_2:_) and [3](#_Chapter_3:_Analysing) when referring to collaboration. According to Etienne Wenger (Wenger 1998, 73 as in Kemman 2019, 08) these communities presupposes: “mutual engagement (involving regular interaction); joint negotiated enterprise (mutual goal and accountability); shared repertoire of negotiable resources (such as jargon and practices).” [↑](#footnote-ref-6)
7. History as a discipline, that differs from history as the sequence of events happened in the past, has its foundation in the 19th Century, following the modern tendency to challenge the philosophical approach to history and the emphasis on the importance of empirical evidence (Eskildsen 2008, 431). This shift has been reinforced and further elaborated, notably, by the German historian, Leopold von Ranke, and the archival turn proposed by his work. Ranke’s ideal reconstruction of the unique periods of the past, *as they actually were,* left a hard-wearing contribution to the historical discipline, especially concerning the historiographical approach of historicism (Barros 2012, 401). [↑](#footnote-ref-7)
8. The author has made clear that in its first appearance during a THATCamp *un-conference*, in 2008, the term was never meant to establish a pejorative regard towards yacking. In the context of the original exchange in which the RRCHNM’s software developer, Dave Lester, said the phrase, it was rather in a connotation of less talk, more grok, emphasising the greater chance for engagement and understanding of a THATCamp. Nevertheless, as much as the opposition between doing and thinking might not have been in the roots of the phrase, I believe that the same later appropriation of the expression that persist even more than a decade to discuss the relationship between theorists and builders may not only be due to a simplistic understanding of the slogan, ignoring its specific history and resonances as pointed by Nowviskie. It may suggest that there is a perception that digital humanities are still too product oriented and that, somehow, the thinking behind the building is not getting as much attention as it deserves. [↑](#footnote-ref-8)
9. The C²DH website features a dedicated tab for all publications and events under the “thinkering” tag, where this definition is highlighted on the top: <https://web.archive.org/web/20190218133558/https://www.c2dh.uni.lu/thinkering> [↑](#footnote-ref-9)
10. Original passage in French: “Le C²DH est le résultat d’un processus de négociations politiques et institutionnelles, et consiste en une réflexion sur les tensions, les défis, les opportunités et les chances de la pratique historique, tenant en une hybridité entre tradition scientifique et tâtonnements heuristiques avec les nouvelles technologies.” [↑](#footnote-ref-10)
11. The specialised vocabulary used in general to refer to the huge concept constellation of the *digital*, including expressions such as *digital revolution* – or *digital turn* – and *information age* – or *information era*, or yet *information society* – is expansive, presenting a wide range of idioms. We also accuse an inadvertent interchangeability of some expressions as *digital age* and *online age*. For this thesis, the expressive abundance of these terminologies is very relevant as it testimonies the booming state of the debate around the *digital* component, as pointed by David Berry in his *computational turn* (2011), situating his reflections on third wave of digital humanities at the very *computationality* of it. I will be introducing my views on what I consider the core concepts for the present work along this chapter, although, I know that I won’t be able to cover all the variety of the changing, lively glossary around the *digital* as subject, as well as being able to offer a universal vocabulary with definitions fully shared by other authors. [↑](#footnote-ref-11)
12. Original passage in Portuguese: “Começaram, então, os grandes projetos de digitalização e disponibilização online de fontes, ao mesmo tempo em que nasciam ou eram introduzidas no meio acadêmico novas ferramentas que mudariam de forma substancial a relação dos investigadores com o mundo digital. O processador de texto, o e-mail , as bases de dados e os sistemas de informação geográfica tiveram um crescimento no número de usuários muito significativo ao longo de toda a década.” [↑](#footnote-ref-12)
13. A further discussion will be done about this easy-peasy kind of slogan, commonly used to refer for the wonders of the digital, as some prompt solutions that, supposedly, have the potential to solve a various range of problems with one click. I will discuss it in detail along the digital interface and tool criticisms discussion, to be done later on in [Chapter 3](#_Chapter_3:_Analysing), in dialogue with concepts such as user illusion (Kay 1984) and technological solutionism (Morozov 2013). [↑](#footnote-ref-13)
14. Lucchesi’s Master thesis research, pursuit at the Comparative History Program at the Federal University of Rio de Janeiro (Brazil) was a comparison about the first years of digital history developments in the 21st Century looking at two spaces of practice, the American one, led in the United States by the first founded digital history research centres in the world, and the Italian one, characterized, as an appositive, by a radical absence of institutionalised projects or programs. See Lucchesi, 2014. [↑](#footnote-ref-14)