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JACEK SMOLICKI

PARA-ARCHIVES

Rethinking Personal Archiving Practices in the Times of Capture Culture

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Constrained, yet less and less concerned with these vast frameworks, the individual detaches himself [sic] from them without being able to escape them and can henceforth only try to outwit them, to pull tricks on them, to rediscover, within an electronicized and computerized megalopolis, the 'art' of the hunters and rural folk of earlier days.

Michel de Certeau, *The Practice of Everyday Life* (1984, xxii - xxiv)

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Malmö and Stockholm, October 2017

PREFACE

This thesis is the result of research combining theoretical and practical means to inquire into modes, both historical and contemporary, of living with personal technologies that allow personal memories to be captured and archived. Two interrelated aims guided the currents of this work. The initial one was to examine personal modes of capturing and archiving everyday life prevalent in today's techno-cultural condition. The other aim was to build on the reflection and critique of these prevailing forms, so as to speculate on and develop other inventive modes of living with capturing and archiving technologies.

My interest in the subject of this thesis stemmed directly from personal recording practices that I have been developing in parallel to my everyday life over the last decade. These practices, which over time I have come to unite under the term *on-going project*, concentrate on the creative use of today's affordable or license-free technologies. These include small size, easily portable cameras, audio recording devices as well as software products and services enabling a record and processing of various fragments of the surrounding world as it unfolds from the perspective of my everyday life. These excerpts consist of, for example, records of quotidian soundscapes, visualizations of geo-positional data of my trajectories through public spaces and evocative collages of newspaper cutouts found in public space and thematically revolving around the technological abundance.

It is during the sustained development of these practices that I have deepened my interest in the wider subject of personal capturing and archiving practices, the way they are being affected by technological and cultural transformations, and also the ways these transformations have historically and currently been negotiated in academia, through artistic interventions and by everyday media practitioners. Effectively, in an attempt to accommodate these different approaches, besides a range of theoretical views and my own personal reflections, in this thesis I include historical and contemporary projects by other artists, cultural producers and amateur media practitioners.

Although during this research period the study of the prevailing modes of living with technologies of capture was taking place in parallel to my on-going project, in this thesis I present them in two separate parts (Parts II and III). Such a way of structuring might seem at odds with the exploratory and experimental premise of this thesis, but I do it primarily for the sake of clarity. Thus, after Part I introduces the subject and positions it in the media and communications field, Part II examines the current

techno-cultural condition. Initially intended to serve as merely a contextual background for the practice-based component, over time this section grew into what can be seen as an equal constituent of the thesis. While continuously playing an important role as a contextual and theoretical backdrop to the practice-based part that follows, Part II also comprises a set of short case studies: a collection of different instances and manifestations of dominant practices, mechanisms and technologies concerned with capturing, mediating and archiving memories in everyday life. This specific foregrounding of selected cases (for example, life-logging and the Facebook timeline) and their critical analysis helps shed light on various modulations that recent technological transformations have instigated in terms of material, temporal, agential, performative and ethical aspects of everyday, personal memory practices. I argue that the everyday life in a technologized society can not be easily separated from pervasively operating mechanisms of capture and archiving and that the boundary between voluntary and involuntary forms of those has become ever more questionable today. The concept of *para-archiving* that concludes this part is my proposition for how this condition can be addressed.

Part III elaborates this concept through a close study of my own practices. Here is also where I deploy and substantiate the auto-ethnographic component of this thesis' methodological assemblage that overall prioritizes practical modes of studying media and technologies. Aware of the multifarious character of my work I divide this empirical part into three consecutive case-studies that trace the evolution of my projects since 2006, also in relation to the broader scope of technological transformations taking place simultaneously.

The first case is the early stage of my personal archiving, keeping a physical notebook. The second case discusses the careful implementation of digital recording technologies into my day-to-day life, resulting in several, creative media practices that constitute the overall framework of the on-going project. I discuss six of them more specifically: *soundtracking, minuting* (focused on sound recording) *misquoting, mapping* (concerned with re-purposing the excess of visual, printed matter), *self-tracking* (utilizing GPS technology) as well as the process of *digitally crafting* a framework that organizes their outcomes. The third case in this empirical part discusses the latest stage of my on-going work. Drawing on media-archaeological methods, I commit myself to constructing *fragmentarium*, a physical, hybrid-media cabinet to house the analog and digital outcomes of my on-going practices. Working on the fragmentarium helps establish the conditions for further reflection on and critique of mainstream memory technologies. This case study extends into a discussion of two ways in which I expose the fragmentarium to other media practitioners. In one instance the cabinet is turned into a dialogical device intended to facilitate conversations with other practitioners on creative modes of personal archiving. In the second it inspires an informal club for engaging in col-

lective listening and sound-recording practices.

This thesis yields three main contributions. The first one is the specific depiction and analysis of the current techno-cultural condition that presents it as populated by voluntarily and involuntarily performed capturing and archiving practices and mechanisms. The second contribution is the experimental methodological approach. It foregrounds the notion of media practice as not merely an object of scrutiny, but more importantly as a reflective, generative and, taking into account today's pervasiveness of media technologies, necessary mode of inquiry into the developments of media technologies. The third contribution is the notion of *para-archiving*, seen simultaneously as both a conceptual tool helping to problematize the dynamics and aesthetics of living with technologies and a creative media practice through which the individual's position in relation to the inescapable context of capturing and archiving technologies, can be negotiated and inventively reconfigured, from within.

PART I

I found myself among some buildings of a complex, architectural infrastructure. It was an installation by one of the most prominent contemporary artists, most probably Olafur Eliasson. He built an entire neighborhood and equipped it with the most advanced surveillance system. A steel net of rails stretched above the entire area. The construction held a range of high tech cameras continuously sliding back and forth along the rails, meticulously surveilling the territory. A characteristic metallic noise made by their movement filled the space. I was not sure if those were merely cameras, or some other sensing devices.
As I later learned, some of them had projectors built into their shells. They would follow a person, then stop right next to her, re-position the lens and project some information onto the ground. It was an instruction, a certain task that the person selected by the device was obliged to perform. Despite this omnipresent surveillance, the atmosphere in the neighborhood was rather positive. People were having fun, playing games or gathering at free concerts organized at places designed especially for such occasions. When I finally decided to leave, a little bike accident took place right in front of me. A women rode her bike into a traffic pole. She did not get injured, but the dog she had with her did. Its head got detached from the rest of the body. Despite this, it remained alive and even happy. I stood there for some time looking at the dog's head, wandering around on its own...

Scribbling / 13.11.2015

1. INTRODUCTION

Dream versus Nightmare

The image inaugurating this part of the thesis is an index card from my personal archive. There will be more of these cards distributed across this text, sometimes more haphazardly, to trigger the reader's curiosity and imagination, though in most cases in close relation to the text and subjects at hand. This particular card comes from *scribbling*. It is one of several para-archiving practices, a term I use to describe my and other practitioners' long-term strategies for creatively incorporating technologies to record and organize various fragments of contemporary everyday life. The prefix *para-* takes on several meanings here. As the etymology indicates, coming from the Greek the term denotes that which happens beside, is amiss and out of place[1]. But para- might also mean a state of being distant from and yet analogous to something or someone (as in para-military). I use the prefix para- primarily to indicate the parallel nature of my practices in relation to other streams of my everyday life, and also as to differentiate them from other, official archiving practices undertaken by for example memory institutions (such as state archives and museums), concerned with the formalization, accumulation, preservation, and administration of historical documents.

In this sense, para-archiving can be seen as a practice performed on a personal level, by an amateur and dilettante interested in documenting and possibly preserving some aspects of the world that he/she is genuinely passionate and curious about in his/her everyday life. Such para-archiving obviously differs from archiving as a profession requiring a specific education, expertise, and adherence to established institutional principles and rules. Besides that para-archiving I have in mind here, taking into consideration its concern with manual, performative and material aspects, can be seen as one that occurs parallel to other kinds of both voluntary and non-voluntary, automated, imperceptible capturing and micro-archiving practices and mechanisms taking place on daily basis, and which, as it will be argued, are inscribed deeply in the workings of today's computational technologies.

1 Literary theorist Gérard Genette, for instance, used the prefix para- in relation to text, arguing for the significance of additional, marginal and liminal elements of a novel (and a physical book) for a deeper comprehension of its core content. Paratexts are such elements within and outside of the book as titles, footnotes, marginal notes, end papers, colophons, all forming the complex mediation between the book, author, publisher, and reader (Genette, 1997)

This card details one of many dreams and nightmares that I have been writing down over the past several years, concerning the relationships between technologies, media, and society. Even though it is highly speculative, to my mind this dream/nightmare constitutes quite a strong mnemonic trace. On the one hand, when given more attention, it sends me back to a particular moment in my research trajectory. On the other, it reflects the aura of our technologically saturated times, an aura affecting even such intimate territories as sleeping, for Jonathan Crary the only remaining refuge from the 24/7 technologies of capture (2013).

Having been committed to recording techniques and personal archiving practices for a relatively long time, I started noticing a strong polarization of attitudes towards the growing abundance of various personal, capturing, and archiving technologies. I have perceived this split in terms of a dream versus a nightmare scenario.

On the one hand, the proliferation of capturing, tracking, and databasing technologies and their increasing entanglement in numerous domains of everyday life is presented as an inherently positive and empowering consequence of the digital revolution. The possibility to monitor, capture, and archive the most detailed aspects of human existence, "from heartbeat to heartbreak"(a slogan of an exhibition on life-logging at the Science Gallery/ Dublin 2015) opens up the perspective of a perfect, infallible memory and the overall betterment of individual and social lives. It leads to "higher productivity, more vitality and longer lifespans, deeper and wider knowledge of our world and ways to accomplish things in it" (Bell and Gemmell, 2009, p.8). On a macro-level, the more personal data is captured and shared, the more precisely and effectively we might address such issues as crime-prevention, terrorism-counteraction, and general security. This techno-enthusiastic perspective is often expressed by those working for technological industries, tech-developers, entrepreneurs, politicians, but also by some researchers affiliated with tech-industries.

On the other hand, the ubiquity of capturing technologies is presented as a prerequisite for data-based economies, neo-liberal markets and their alliances with national security agencies. Personal data acquired via passively operating network devices and capturing practices encountered on a daily basis better enables the control, discipline, and management of societies. Consequently, this promotion of total technological capture and its gradual normalization in the streams of our everyday life leads to the substantial impoverishment of the modes through which individuals and collectives access and experience the world and effectively construct their account of it on a micro-scale. An impenetrable amount of data channelled into diminishing numbers of expansively dominant online enclosures (with Facebook today becoming the internet's corporate avatar) impedes and gradually obliterates chances for "a singular access to the world" (Berardi, 2014) turning us into mere passive witnesses of the ultimate "colonization of real time" (Lovink, 2011, p.11). This negative view often arrives from theorists and humanists, as well as artists and fiction writers.

In retrospect, this abrupt exegesis of our techno-cultural condition as a dream versus nightmare might naturally be approached as merely an overexposed snapshot of what I gleaned through an initial overview of the literature, both academic and nonacademic, including science-fiction, conversations with media practitioners and tech-developers, and by at-

tending conferences and thematic events. The initial questions revolved around these contradictory views: Is any move beyond such a binary simplification of our ways of attending to and problematizing technologies of capture possible? How to avoid a problematic reduction of responses to the techno-cultural condition to either enthusing or lamenting over it?

The Context of Technology and Culture

One way of problematizing the simple rendition of the present techno-culture, in terms of a dream versus nightmare scenario (or alternatively, technophilic and technophobic visions), might be through recognizing the *pharmacological* nature of technology, which is to say, technology's simultaneously poisonous and remedial potentials. The concept of *pharmakon* explored by Jacques Derrida in relation to writing and philosophy, as a substance that possesses both beneficent and maleficent qualities (1981), has been recently elaborated by Bernard Stiegler, whose philosophy of technology will form the first theoretical framework of this thesis.

Stiegler suggests that the nature of technology by and large is inherently pharmacological. The nature of technology is always inherently ambivalent which means that the poisonous and remedial qualities of technologies are never given. (Stiegler, 2010, 2012). The poisonous dimension of a given technical system, which, as he claims, is often recognized first, might become curative "through the process of appropriation by society and the development of new modes of psychic and collective individuation based on this technical system."(in Lemmens, 2011). This simple formulation is an important premise for this thesis. Poisonous and remedial attributes, which can be translated into other pairs of contrasting functions of technologies, such as empowering/disempowering, liberating/disciplining, constructive/destructive, attentive/disruptive, are never predefined, fixed, and mutually exclusive. Instead, their functions are activated and disabled depending on circumstances, contexts, and ways in which people orient themselves toward, appropriate, and entangle the technological into their lives.

Stiegler's elaboration of this pharmacological nature of technology also builds on Gilbert Simondon's observations from several decades earlier, in which he asserts that it is never the machine itself that should be examined and condemned (or praised) as the cause of a given state of affairs, but the way that humanity has understood or misunderstood its role within "the world of meanings," which is to say, culture (Simondon, 1980, p.2). The ongoing tendency, or one might say, historically persistent habit of abstracting a technical device from its entanglement in cultural and social relations instead of recognizing the originary technicity of human culture (Stiegler, 1998) might be seen as the very cause of oversimplified visions in which technology is seen either in terms of its purely utilitarian function, as an instrument to gain and continuously increase control over

aspects of the environment and everyday life, or as a constant threat to humanity and its natural evolution (Simondon, 1980, pp.2-3).

Pharmacological reading of technology allows us to approach every historical period as an arena where technological and cultural processes shape, co-constitute and affect each other. Every moment in the history of human evolution can be studied in terms of the temporary stabilization of an ongoing process of this techno-cultural becoming. Negotiations and interactions between the technical and the cultural, or, to use a better term, their *intra-actions* (Barad, 2007), to emphasize their inherent entanglement (as opposed to seeing their relation as the result of an encounter between two seemingly autonomous realms), establish certain techno-cultural temporalities and milieux. In these milieux technical objects form various systems and networks that establish a horizon of possibilities for cultures and societies at a given moment. However, these systems (the internet, mobile media networks, search engines, social media platforms, GPS networks) need not exhaust all the possibilities.

There is always room for negotiation, manoeuvre, adjustment, and re-configuration. Seeing technologies as a field of tensions and actions established by the interplay between the horizon of technical possibilities and possible re-configurations within these limits allows us to establish a bridge with the field of cultural studies, and more specifically, Michel de Certeau, whose revisited concepts of tactics and strategies will make the second theoretical framing for this research.

What Stiegler describes as a pharmacological potential of technology becomes the subject of negotiation in what de Certeau calls *ways of operating (*from French *arts de faire,* which in direct translation means *the art of doing*).[2] This term can be defined as the "internal manipulations of a system" (1984, p.25). If, as said before, every cultural epoch can be characterized by the dominance of technical systems that establish particular regimes, limitations, and norms defining the status of the individual and collective (ibid, p.XXIII), it can also be characterized by various practices that use the ever-existing possibility to shift and re-combine the elements of this system for another, alternative purpose:

> Just as in literature one differentiates 'styles' or ways of writing, one can distinguish 'ways of operating'—ways of walking, reading, producing, speaking, etc. These styles of action intervene in a field which regulates them at a first level (for example, at the level of the factory system), but they introduce into it a way of turning it to their advantage that obeys other rules and constitutes something like a second level interwoven into the first (de Certeau, 1984, p.31).

2 De Certeau's seminal *Practice of Everyday Life* was originally published in French in 1980, under the title *L'invention du quotidien. 1, Arts de Faire.*

While in his description of ways of operating de Certeau does not explicitly speak of technologies (his topic is techniques of sociocultural production), given their proliferation in many domains of everyday contemporary life (including walking, reading, producing, speaking), this phrase certainly lends itself to problematization with regard to technologies. Thus, the way of operating in relation to the technology and technological possibilities of a given moment could be understood as the deployment of a proprietary technical device (information system, service, technical infrastructure) in adherence to some disparate motivation. If the technical device is always inherently constrained by a certain horizon of limitations (or a preference of a default use) that regulates its use (and thus its user) at the first level, the deliberate insertion of a specific intention, alternative horizon and set of rules might be seen as constituting an auxiliary, parallel layer that does not change the system, but enables users to benefit from it in another way, and on another level.

The Context of Art and Aesthetics

Before enrolling for this doctoral research I worked as a media and communications officer for a Stockholm-based intergovernmental organization, while continuing my creative work in my spare time. Thus, my life might be seen to have combined two kinds of discipline: on the one hand, an adherence to a set of urgent tasks and quickly approaching deadlines organizing the daily rhythm of the institution, and on the other, a commitment to the principles guiding my creative work. Occurring in the spaces in between daily work duties, family events and regular travels back home, my artistic work has over the years woven even more tightly into the fabric of everyday life. Never having had ambitions of sustaining myself through art that would closely follow patterns governing the art market, nor aspiring to make work that functions as an impromptu commentary, political declaration, or a quick response to a topical issue, I have perceived temporary rifts in the canvas of the everyday as prime zones for the aesthetic and creative to emerge and be consciously cultivated.

Although I have occasionally engaged in artistic projects that temporarily take priority over everyday life, most of my creative practices in the last decade have evolved within the stream of day-to-day life, on the go, during commutes, walks and moves from one place to another (of which there have been about a dozen over the last ten years, for various reasons). Consequently, my creative work has often concerned collecting, documenting, and cataloguing various aspects of everyday life with recording technologies. The kind of durational aesthetic strategies embedded in everyday life I have also followed with regard to other practitioners whose works evolve through the patterns of daily life, utilize recording technologies in everyday life, or take the quotidian as their subject.

Writing at the dawn of the electric age, Marshall McLuhan stated:

> When new technologies impose themselves on societies long habituated to older technologies, anxieties of all kinds result […]. I believe that artists, in all media, respond soonest to the challenge of new pressures. I would like to suggest that they also show us ways of living with new technology without destroying earlier forms and achievements (1997, p.125).

What I find important in this observation is not necessarily the suggestion that the artist is someone who soonest meets the challenge of new technologies, but perhaps, more importantly, as someone who might have the capacity to respond to technological changes with the ability to situate the present moment in a broader historical and cultural context. Yet in the light of what was said earlier, the depiction of the artist in this quote is problematic. While situating artists at the avant-garde of technological and social change, McLuhan seems to designate them as a distinctive group of people who are skilled and privileged to show "us" (by which, presumably, he means non-artists and regular consumers) how to live with new technologies and deal with their implications. His words belie a troubling sense of the artist as detached from the rest of the society. Against this premise, Zygmunt Bauman, among many others, would argue that artists are inherently implicated in and affected by the dynamics of the social and cultural realms they occupy, and that changes in arts even "lag behind the changes of the mode of life" (Bauman, 2008, p.138).

Through de Certeau, who plays an important role in this thesis, I propose to see (media) arts and art practitioners in a wider sense than McLuhan's. Besides the established artists whose works also appear in this text, my understanding also encompasses non-established, self-trained culture producers, "amateurs," media activists, and practitioners whose ways of incorporating recording technologies do not easily conform to established canons and mainstream consumerist trends, temporary styles, and short-term motivations. Consequently, with regard to McLuhan's assertion, I would suggest that inspiration for how to live with technologies might be sought not (only) among artists, but in a more broadly perceived territory of aesthetic practices.

Somewhat paradoxically, McLuhan's definition of amateurism might be more productive here. He believes amateurism is about "the development of the total awareness of the individual and the critical awareness of the ground rules of society" (McLuhan, 2001, p.92). The anti-hero or counter-bourgeois artist, as Roland Barthes used to define the figure of the amateur (Barthes, 1977, p.52), in contrast to the professional, does not operate in an environment demarcated by the ground rules of a given specialization. In terms of artistic production, these environments could be seen as "art worlds" – elite networks built around institutions, trained

curators, gallerists, and commissioners, whose actions and work establish certain conventions and criteria for the production, consumption and validation of art at the given moment. Thus, in this thesis I seek to blur the boundary between the amateur and professional, and consequently, artistic practice and practice of everyday life. Freed from connotations to institutions, professions, levels of expertise, or societal classes, what unites this wide range of practitioners is their special commitment to working with technology on a daily basis. In other words, it is everyday life, the street, and public space, not in contrast to but next to the ateliers, art studios, and galleries where creativity and artistry might also emerge and be cultivated.

To acknowledge this heterogeneity in place of artistic practice I will be using broader terms, such as aesthetic, creative, and inventive practices. With regard to creativity, by re-installing it at ground level, I also want to detach it from its connotations with "high art,"on one hand and with "the creative industry," or what Sarah Kember and Joanna Zylinska have recently described as the "marketization of creativity" (2012) on the other. Out of these aforementioned terms, inventive practices perhaps resonate best with de Certeau's ways of operating. Read in line with inventory, innovation means re-configuring components of preexisting (technical) systems. As such, invention is less about inaugurating the new, novel and original than re-thinking relations between existing elements of the world to conceive of a new, innovative constellation which, though contained within the horizon of possibilities established by existing technical systems, moves beyond their constraints or recombines these constraints so they become productive towards some other directions, aims and motivations. This way of approaching everyday invention will become more apparent in the second theoretical framework of this thesis aiming at a clearer articulation of the concept of para-archiving. There, in relation to the notions of tactics and strategies, several examples of media practices will be discussed in which such a reconfiguration of the way one attends to capturing technologies addresses alternative, individuated purposes such as constructing a subjective record of the time. Such rethought notions of creativity and inventiveness in the context of para-archiving will be also carried on in Part III dedicated to my own practices.

Over the last four years, I have had the privilege of working on a doctoral thesis which, from the beginning, I intended to correspond with my on-going, creative work. I often pondered how to bring it into the research context. This is partly due the fact that, in the field of media and communications, basing a study on one's own art and aesthetic work has not been established as a mode of (doctoral) research. The simple reason for this might be the relatively short time since such concepts as practice-based or artistic research have emerged as methodological approaches within an academic context (Biggs and Karlsson, 2010). When they did emerge, it was primarily within environments that had already dealt with

subjects directly related to creativity, innovation, and technology (Candy, 2006). Thus, it was an important question and a strenuous challenge during the course of this research to introduce creative practices as a mode of researching, or, to put it better, to bring research (and research thinking) into creative practices that have already been part of my everyday life. My attempt to address this challenge from a methodological perspective has been through several perspectives united in the interest in media practice (and media as practice), as discussed historically within the field of media and communication studies, and outside, with the recent material turn that endorses an empirical approach to studying media technologies, including through one's aesthetic practices.

This media practice approach will be discussed and elaborated in several place in this thesis (more specifically in next chapter, partly in the second theoretical framework, methodological extension and lastly practice-based part). What spans this media practice approach is an interest in the notion of agency in practicing media and engaging with technologies. In this sense I understand agency here as a broad term denoting a dynamic act or "enactment" (Barad, 2003) in which a negotiation of one's position in relation to the techno-cultural condition of a given moment takes place. The two contexts introduced earlier make it quite evident that the agency here is to be seen as emerging and being composed in an irreducible relation to the dynamic interaction of cultural and technological contexts that one is always part of.

Cultural studies have typically focused on (human) agency defining it as a sense of a certain independence in making choices (Baker, 2007). The term implies a degree of freedom in shaping one's relation towards different external forces that attempt to organize private and social life. It is also explained as the individual's capacity to define one's identity and its representation (Weedon, 2004). Stemming from the recognition of the material turn in social science, Social Technology Studies (STS) balances this human-centric perspective on agency by pointing that for instance organizations, institutions, technologies, designed objects all constitute various material affordances and constraints (Gibson, 1977) that subsequently turn them into equally valid agents in influencing shaping and affecting networks of relations and dependencies in the world (Latour, 1999; Law, 2004; Majchrzak and Markus, 2013).

In this thesis the notion of agency in practicing media (and the relation between the human and technological) is not to be resolved, but rather attended to as an entry point towards discussions on such aspects of living with technologies as inventiveness, aesthetics, performativity, materiality, recurrent in this thesis in different moments and with different intensity, particularly in Part II and III. I am also echoing here Paul-Peter Verbeek's post-phenomenological understanding of agency in the context of a highly technologized reality (inspired partly by Michel Foucault) in which agency is a practice of "consciously giving shape to one's

way of using technology and the ways one's existence is impacted by technology" (Verbeek, 2011, p.135), in this thesis, technologies concerned with capturing and archiving in particular.

The Context of Life and Archiving

Set within Media and Communications programme of the School of Arts and Communication at Malmö University, this research has also been embedded in the framework of the Living Archives research project. Commenced in 2013, financed by the Swedish Research Council and led by Professor Susan Kozel, the full title of the project has been *Living Archives: Enhancing the Role of the Public Archive by Performing Memory, Open Data Access, and Participatory Design*. The project's aims have revolved around such subjects as the exploration of how open cultural data can become meaningful to specific communities of practitioners, the design of activities for exploring, prototyping, and testing relevant possibilities for future digital archives, and engaging in performative approaches to emphasize the embodied and personal qualities of archiving as a living practice.[3] Largely due to the diverse expertise of researchers affiliated with the project, Living Archives branched out into a dozen or so simultaneous projects, including rewriting the history of immigrant women in Malmö, exploring the advantages and constraints of augmented reality (AR), or prototyping co-archiving practices for democratizing access to and participation in archives. Alongside occasional assistance within other projects (concerning themes and matters of interest spanning several of the above projects, such as AR technologies, open data, or performativity), my main contribution to the project was this study and its focus on present modes of personal archiving as they unfold from the perspective of someone who, besides researching, also actively engages in constructing them.

While, at first glance, this theme might seem incompatible with the general premise of the Living Archives project (primarily concerned with public archives, as the title suggests), it nevertheless addresses the project's overall concern with and critical attention to the ongoing technological transformations that inevitably affect any kind of present archiving practice, regardless of its status as personal or public (which as such become sweeping categories precisely due to these vast technological modifications in recent years).

Archives have lately become an important subject to media studies, especially those branches concerned with materiality of media technologies, such as media archaeology and genealogy (Ernst, 2013; Huhtamo and Parikka; 2011; Emerson, 2014; Parikka, 2015). For these approaches, the materiality and procedurality of the archive have become both a subject of critical inquiry and a methodological and conceptual instrument

3 http://livingarchives.mah.se

enabling them to delve through and interrogate multiple layers of historically amassed, technological matter in search of linkages and productive associations between the past and current media as to contest the idea of their smoothly linear evolution (Zielinski, 2006). Drawing on Michel Foucault, media archaeologists attend to the archive as a site for conducting the archaeology of knowledge, and more specifically, the ways it is inextricably connected with (and affected by) the working of technical objects and systems pervading at a given moment (1969, 1974). Thus, if for Foucault the archive is first ''the law of what can be said, the system that governs the appearance of statements as unique events (1974, p.131), for media archaeology the archive is first and foremost a configuration of technical and material elements that condition the way that things can be said. Thus the digital, multimedia archive organizes the said (or yet-to-be-said) unlike the analog. The former evades the confines of chronology and semantics as the primary criteria for organizing, mediating, and accessing information, instead producing discrete, particular, and micro-temporary experiences of time that strongly defy any fixed order.

In Wolfgang Ernst's words, the contemporary archive "transforms into a mathematically defined space" where "narrative is replaced by calculation" (2013, pp.134-135). Opposing the stability, fixed order, and permanence characterizing the nineteenth-century positivist archives (Spieker, 2008), the digital archive foregrounds contingency, performativity, reconfigurability, modularity. The same qualities, adopted as research methods, enable a plurality of avenues for rewiring history of media technological inventions for memory and storage, for instance, by relating digital reconfigurability to rhetorical mechanisms of medieval practices of *ars memoriae* (Ernst, 2013, p.85), tracing topological resemblances between digital storage and seventeenth-century combinatorial art facilitated by inventions like Kirchner's *Arca Musarithmica* (an inventory of musical patterns for generating ever-new compositions), or even by comparing digital databases to campfires "used (like command-line middle-ware) by the younger members of the community to access the information stored in the minds of the elders" (Sol, 1998, no pagination).

This somewhat radical shift to the technical, mechanical, and procedural side of the archive has simultaneously raised critical responses (Parikka in Ernst, 2013; Parikka, 2013). Also, the overemphasis on the internal mechanisms of media devices created a risk of abstracting archival technologies from their political, economic, cultural, and ethical relations, and, in light of the problematics of this thesis in particular, implications for day-to-day life. Thus, as much as this thesis is concerned with the materiality of contemporary technological devices and systems for capturing and archiving, my intention is to remain aware of their dependence on and participation in shaping economic, cultural, social, ethical and everyday life contexts. I also echo Ernst's suggestion that the intention of studies concerned with media materiality, such as media archaeology, is

not to reduce culture to technology but "to reveal the technoepistemological momentum in culture itself." (Ernst, 2013, pp.72-73). In other words, the goal is to indicate technology's (and by implication, digital archives') increasing intensity and inseparability from the very fabric of the culture (the way we produce, consume, represent and participate in it), and secondly, to remind us of the irreducible material dimension of technologies and its persisting presence in contemporary network technologies, despite their seemingly ephemeral and invisible nature.

As I suggest in this thesis technically every form of interaction with digital and network media technology constitutes an archival trace of some form (Jussi Parikka, for example, describes life with pervasive technologies as inherently micro-archiving [in Ernst, 2013]). While this condition is explored more in-depth in the second part of this thesis, my major contribution is a pro-active response to it. This response is articulated through the concept of para-archiving, with which I began this introduction. While the term can be seen as a construct, to a large extent inspired by a blend of Stiegler's philosophy of technology and de Certeau's interest in the evasiveness of the everyday as a terrain rich in what Ben Highmore call "para-archives" (de Certeau, 1984; Highmore, 2006), it also draws on a sister term, *counter-archive*, coined by film and media scholar Paula Amad (2012).

With this term, Amad points quite specifically at an array of qualities that the newly arrived medium of film-making brought about at the dawn of the twentieth century subsequently contesting many orthodox assumptions with which memory institutions and archives had been typically associated (accuracy, involuntary accumulation, objectivity, and retroactiveness, to name a few).

Among the qualities that Amad brings to the fore that is important to this thesis is the generative quality of the archive. If, traditionally, archives were repositories to be penetrated retroactively to find truths about the past, "sediments of time itself" (Spieker, 2008, p.8), new media of the time, such as photography or film, opened up possibilities for generating new archival records and archival aesthetics, somewhat redefining archiving as not past- but future-oriented practice; not passive, but generative, or even immoderately excessive. Amad turned to the long-term project of French banker and philanthropist Albert Khan and his *Archives de la planète*.[4] Although not entirely freed from imperialist connotations, Khan's project was problematized by Amad as among the most important modern experiments in appropriating the media of the time for single-mindedly "constructing and manipulating history" (ibid., p.158), assembling, what she calls "archives volontaire," which is to say, voluntary, subjective accounts from the perspective of daily life. Khan's project, as

4 *Archives de la planète* was Albert Khan's attempt to construct an extensive photo-cinematographic archive depicting everyday life of diverse local communities and the gradual disappearance of local traditions across the globe.

Amad argued, posed an indirect threat to the dominant, centralized and state controlled practices of archiving. In the hands of an individual, the camera denounced the "positivist utopia of order, synthesis, and totality," replacing these categories with "disorder, fragmentation, and contingency" (Amad, 2010, p.21).

If counter-archiving as problematized by Amad appears to be juxtaposed with dominant practices of archiving at the moment, the para-archiving I propose in this thesis happens in parallel with other kinds of archiving, and thus has no intention to counter-act and overrule them. If the term counter-archive implies a sense of empowerment that stems from it being set somewhat against dominant forces, tropes and interests, I propose to see the empowering quality of para-archiving in it happening despite, aside from or in a soft insubordination to dominant norms, measures, and patterns. Nevertheless, what I intend to retain from Amad's concept (and carry on while discussing para-archiving) is mostly a plurality of ways for apprehending the notion of archive and archiving, where, besides seeing them as a burden of the past, techno-political apparatuses that closely regulate what and how we say and remember (Foucault, 1972; Derrida, 1998) can, at the same time, be seen as vital, empowering practices initiated and performed single-mindedly through a creative, insubordinate, amateur and disparate use of available technologies, technical components and mechanisms of said apparatuses.

Here one might also say that Amad's notion of a single-minded counter-archiving opens towards a broader sense and meaning of the term "personal," beyond signifying merely the status of a practice or an artefact that is owned by an individual. Thus, the personal, as in Amad's counter-archiving and other long-term projects to be discussed in this thesis, can be set in relation with the broader notion of subjectivity and the formation of subjecthood through a particular way of "folding" and "internalizing" outside forces (Deleuze, 1991) as well as exteriorizing them into para-archival expressions that are at the same time personal and public. This understanding of the personal (archiving) might also help us divert from inevitable connotations of the term with the internal, self-oriented, intimate, or private, aspects of everyday life discussed presently as challenged, if not radically contested, by the implications of constantly on, network media technologies (Stalla-Bourdillon, et al., 2014). While this challenge, on the one hand, calls for a radical response to protect these qualities, a question arises whether this condition may simultaneously be approached as an invitation to apprehend the notion of the personal differently, not as implying a move inward (protection from the outside and the public), but also (and in today's media technological landscape, perhaps inevitably) an attentive, reflective, and critical exteriorization of one's subjecthood into para-archival traces.

Concerns, Questions and Aims

As an ontological frame for this research to unfold I propose a particular worldview which defines our technologically-saturated moment in terms of *capture culture*. Briefly, as this worldview will have its own chapter, capture culture is a contemporary techno-cultural context where technologies through which people voluntarily capture and archive various aspects of their life also capture and archive these lives involuntarily, against or despite their will. Over recent years, this condition has become deeply woven in the fabric of everyday life. Numerous technologies of capture (smartphones, apps, social media services, wearable devices)—*mnemotechnologies* or memory technologies, as I will join Bernard Stiegler in calling them (2010) – have become infused into people's lives to the extent that a separation is no longer truly possible. Unquestionably, this condition raises a number of concerns. The major ones that this thesis attempts to foreground, especially in its initial parts, concern the significant technological reconfiguration of agency, materiality, temporality, as well as historical awareness in constructing and mediating personal accounts of the world. Consequently, the questions that will be addressed, especially in this part of the thesis devoted to the context, are:

> To what degree do these mnemotechnologies affect the dynamics and aesthetics of experiencing and recording everyday life? How do mnemotechnologies reconfigure the role and meaning of personal capturing and archiving practices?

Several authors have recently posited that the expansion of automated, ubiquitous personal technologies presently requires the development of other, alternative modes, concepts, and motivations for living with them. Eivind Røssaak of the National Library of Norway suggested that some indications for such alternative modes of recording the experience of everyday life might be sought among creative and artistic practices (Røssaak, 2011, 2015). A reason for this is their often different incentives as compared to the commercial motifs dominating today's condition of capture culture. In her recent work on ubiquitous systems of technological surveillance, Lily Diaz (2016, p.64) also turns to artistic exploration and creative technological appropriation as a zone where ideas for alternative forms of observing and capturing everyday life can be configured from within the constraints of the same systems. Echoing these suggestions and broadening the field of inquiry to include a more widely understood field of aesthetic practice (as explained above), I propose the following main research questions. They will be explored in the practical part of this thesis, in particular:

> What insights can historical and contemporary aesthetic practices involving technologies of capture provide to inspire other modes of personal archiving than those offered by the mnemotechnologies currently prevailing in capture culture?
>
> What observations can be acquired by committing to personal archiving practices that might address and challenge modes of living with technologies prevalent in capture culture?
>
> In the context of capture culture, what tactics or strategies might be conceptualized and implemented into the everyday use of technologies to enable the emergence of inventive modes of personal archiving beyond the ones offered by dominant mnemotechnologies?

The following structure of the dissertation will shed more light on how these questions are to be addressed.

Overview of the Thesis

In this introduction I have briefly outlined the main themes, concerns, and aims of the dissertation. In the following chapter my intent is to situate the research in relation to past and current debates in Media and Communication Studies involving media practices. The media practice approach, as I call this positioning, entails, on the one hand, a recognition of historical epistemologies and approaches to media studies centered on media practice, and, on the other, the deliberate intent to enrich how research into media, and specifically media practices, has been conducted. In this part I connect these previous perspectives with a recent discussion on mediation raised by Sarah Kember and Joanna Zylinska (2012). This connection facilitates a broader incorporation of perspectives from the "material turn" that has unfolded in science and technology studies (STS), media archaeology, and media art in its broadest definition (the link to media archaeology and related debates on the post-digital will be thoroughly discussed in the methodological extension of the media practice approach preceding the practice-based part, in the Part III of this thesis)[5]

Overall, the path through which the media practice approach is presented reflects a modulation of the way that media, media practices, and media practitioners have been historically theorized. This shift, drawing on Nick Couldry, can be summarized in terms of balancing the question of *what media do to people* (characterizing debates concerned with media effects) with *what people do with media* (2012). In other words, in the history of media studies one finds a gradual increase of interest in the agency (of

5 The material turn registers the vast material, political, social, and cultural implications of the pervasiveness of digital technologies on all our relations across the planet. In media- and technology-related studies as well as media art practices, material turn has inspired a range of critical debates and practical, critical interventions in such domains as digital labour, electronic waste, ecologies of data infrastructures or the technological exploitation of the planet on a mineral and molecular level (Bennett, 2009; Fuller, 2005; Fuchs, 2014; Parikka, 2012, 2015).

individuals and communities) in living with media; a recognition of possibilities for deliberately negotiating the extent to which media instigates effects and the degree of control over how it affects everyday lives. This successive balancing of a media-effect perspective with a media practice approach is applied throughout the thesis. Thus, while Part II of the thesis unfolds at times in closer alliance with a media-effect perspective (albeit one in which the understanding of "media" expands beyond institutions and producers of media texts, to cover media technical infrastructures, devices, services and practices, especially those concerned with everyday capture and archiving), a rethought media practice approach takes the lead in the third part of the study.

Part II begins by introducing the first theoretical framework from outside of media and communications studies: the philosophy of technology. Drawing on Bernard Stiegler, this framework articulates the history of technological transformations as a series of continuous shifts from mnemotechniques to mnemotechnologies (Stiegler, 2011). Signifying a large scale and automated systems for storing, circulating, and processing externalized memory, the term mnemotechnology is adopted in this thesis in relation to the prevailing modes of archiving and processing of personal data in capture culture (social media platforms, life-logging services, and mobile apps, to name a few), in which the boundaries between the voluntary and involuntary capture are contested. Consequently, "mnemotechnique," which describes more individuated, small-scale, manual, and attentive modes of working with externalized memory, is a notion in question in the context of today's media-technological landscape. Having a close connotation with craft, it is also a concept by which practical and conceptual articulations in capture culture are to be sought, regenerated, and explored, both historically and practically, in Part III of the thesis.

This theoretical framework enables a better approach to the discussion and analysis of some effects and implications brought about with the recent transformations of personal capture and archiving technologies. The first theoretical framework is thus followed by an elaboration of the aforementioned world-view described as capture culture. I begin this part with one of several steps back to the past of media developments performed in this thesis. It sends us to the beginning of the last century, when serious concerns arose in response to the proliferation of the first consumer-oriented cameras. Those concerns were raised by the excess of visual images that came from amateur snapshooting, by extension questioning their historical, archival, and personal significance. This archaeological turn to a particular sediment of media-technological developments, practices, and debates in the early twentieth century allows to hone in on transformations that technologies and media technological practices for capturing and archiving everyday life have undergone in recent years. In my critical examination of selected platforms, services, and other contemporary forms of snapshooting (e.g. Facebook's Timeline, or

the life-logging Narrative Clip), the reconfiguration of material, temporal, aesthetic, ethical, and agential aspects of memory practices and personal archiving is particularly foregrounded.

The end of Part II is where the focus on the implications and effects of mnemotechnologies of capture culture is balanced by a turn to description and analysis of various media practices that attempt to inventively and tactically negotiate, reconfigure and resist these effects. This part, which forms a second theoretical framework, continues to weave several threads initiated in preceding parts. Thus, in relation to the media practice approach from Part I, this part introduces debates on tactical media, another perspective in media studies centred upon practice and concerned with issues related to agency in a highly (mnemo-)technologized everyday life. After discussing several inventive modes of resisting the pervasiveness of capturing technologies (for example *sousveillance*) the chapter articulates more clearly the concept of para-archiving. The concept is underpinned by the discussion on tactics and strategies, and especially the way Ben Highmore (2002, 2006) regenerated their meaning in line with de Certeau's original ideas. This re-reading of de Certeau suggests a move beyond the hit-and-run logic of early tactical media practices. It substitutes the short-term interventionist approach and counter-acting with a long-term commitment to configure, other, meaningful relationships with technologies in parallel to the dynamics of capture culture.

Part III starts from a description of a methodological assemblage, an extension of media practice approach intended to serve the practice based study that this part of the thesis primarily focuses on. The assemblage builds on several perspectives in media studies which call for practical engagement with the matter of concern. I build on Kember and Zylinska's call for creative practical interventions as a necessary mode of understanding media today, and thus move further beyond media scholarship as a description and analysis of the effects of media or the agency of media consumers. I also attempt to zoom in on the seemingly antagonistic realms of creative media and media archaeological perspective, arguing that, while departing from a similar set of discontent with the current state of media studies (a teleological and solution-concerned orientation of media technology developments), they both call for practical and material interventions into the current flow of media and technologies. In this sense, they are not only forms of conceptual critique of what is at hand, but also point toward alternative modes of thinking, practicing and engaging in the materiality of media. In short, the most significant aspect in elaborating the media practice approach is a sharper endorsement of practice, not only as a subject of inquiry, but a fully accountable mode of generating views on and orientating oneself in the flow of contemporary media technology, through hands-on, material compositions, interventions, and inventions.

The following sections focus on the description and analysis of my ongoing work to record various subsets of contemporary everyday life. This part, which can be seen as the main case study, traces the development of the project from early notebook-keeping, through a set of ongoing para-archiving practices, to the latest phase, which is the process of constructing of a hybrid media archival cabinet, *fragmentarium*. The first part of this auto-ethnographic analysis concentrates on such aspects of personal archiving as materiality, performativity, and ambiguity. I examine these aspects through my revisiting manual notebooks which gradually gave rise to digital ones. The observations that emerge through this auto-ethnography of and with manual journaling are confronted by reflections arising in relation to contemporary mnemotechnologies. This way of connecting the personal with a larger techno-cultural perspective helps to establish a critical perspective on recent technological tendencies (such as automation, oversimplification of effort, resistivity and difficulty).

In the second part of the practice-based study, while discussing digital techniques that these manual journaling gave rise to, I problematize decisions taken on the way with regard to the choice of technologies and ways of adopting them in a day-to-day life. I describe various shifts regarding the way I attend to these recording techniques as well as the crafting of an ad hoc framework for organizing their outcomes. Materiality and performativity are the focal aspects, although also opening avenues for discussing such aspects of personal archiving as ambiguity, openness or resistivity. In this close analysis my intention is also to indicate the way in which, while working on these digital techniques, I attempted to retain some qualities from the earlier, manual practices.

The third part of this practice-based study follows the process of making the fragmentarium, a hybrid media cabinet, comprised of digital and non-digital traces from my recording practices. This part of practical work is inspired by a method of reverse-remediation which creates a ground for speculating on possibilities for more autonomous and reflective approach to crafting and organizing one's mnemonic legacy in light of the accelerating digitization and technical management of every detail of personal and social life. This exploration begins with another turn towards the past, this time to some pre-digital forms and material practices involved in the organization of personal archives. While producing this hybrid-media cabinet and its digital substructure, I explore the material, temporal and performative aspects with a particular focus on the notion of hybridity. This exploration allows me to establish a closer link between para-archiving and the concept of the post-digital, and subsequently, to problematize this hybrid media approach to personal memory and archiving as a critical and productive mode for establishing a parallel zone for operating in capture culture. It is critical in the sense that it gives us a sharper look at power dynamics, the set of dependencies and relationships characterizing the present techno-cultural condition. It is produc-

tive, as it does not stop at merely renouncing this condition, but points to practical steps for constructing meaningful relations with it.

After describing and analysing my work on the fragmentarium, I introduce two modes of opening it up to others. The first mode is based on travelling with a portable version of fragmentarium to hold conversations with others whose work combines digital and non-digital technologies. Here the fragmentarium shifts from a personal mnemotechnique and solitary, archival working station into a kind of a mobile *provotype*; a cultural probe (Gaver et al., 1999) provoking reflection on alternate modes of personal archives, and post-digital memory practices.

The second mode of opening and communicating the fragmentarium is through the establishment of an informal platform called *fragmentarium club*. This collective initiative builds more precisely on one of my soundscape recording practices which fragmentairum hosts. In this section I discuss fragmentarium club as a collective mode of para-archiving that, while invoking the spirit of amateur recording clubs is also debated as a potential, experiential mode of constructively re-articulating relationships with capturing technologies and approaching the record of everyday life in the context of capture culture.

For my final remarks, besides summarizing my main arguments, I focus on evaluating the practical part, both in terms of my findings and the productivity of the method. I gather some of the ideas and reflections generated on the way proposing them as potential attributes of what I came to call para-archiving.

Stopping in the middle of the sidewalk to write down my dream I was asked by a passerby if I needed any help. Occupied with writing I asked myself whether she was actually offering me to help recall my dream. Did she want to find more vivid details of its slowly dissolving image? Did I look troubled? Did it seem that awkward that I was writing down my dream in the middle of the street? How did she even know that I was doing that? No, thanks, I uttered. People tend to project onto others the intentions that guide their own technological practices and habits. My use of the device at that moment was rather unconventional. Who takes notes of their dreams in the height of morning rush hours? My use of the smartphone was certainly asynchronous with the more commonly accepted modes: I was not checking the news, sending hearts to my loved one or petting the Facebook wall. This friendly passerby assumed that I was lost checking my whereabouts on Google maps. In some way I was lost. Not in the geographical sense, but rather among the increasingly blurry details of the dream I had stopped to write down...

Scribbling / 10.10.15

2. MEDIA PRACTICE APPROACH

The card from my archive that precedes this chapter and establishes a bridge from the previous accounts essentially for a diversity of media practices in a media-technologized society. At that recorded moment I was not communicating with anyone. I was not in a rush, commuting and trying to find my way by consulting a geo-locative app. Instead, I was standing still slowly "scribbling" my thoughts. While taking and cataloging the note I was attending to my phone as a para-archival device. What I mean is that my use of the device at the moment was conditioned by the principles of my project in which I have been regularly reflecting on and documenting various aspects of the contemporary techno-culture and a condition of living in a computerized society. The para-archiving mode means that recording and archiving functionalities of the device become deliberately brought to the fore at the cost of all the other, more commonly known and habitual functions (tele-communicating, checking email, news, verifying geographical accuracy and interacting on social media). Para-archiving is hence a media practice in which capturing and cataloging the captured happens deliberately besides, parallel or next to other habitual uses as well as other modalities of automated tracking and capture inherently embedded in today's network technologies.

Besides my own para-archival motivation, there certainly were other capturing forces and motivations at play. I was using Iphone and Evernote (first being the most popular smartphone in the world and the second being one of the most popular mobile applications for personal note-taking). [6] Both, the operating system of the smart-phone and the application imperceptibly capture and potentially circulate the information according to archival mechanisms, motivations and procedures that differ from the ones motivating my own practice. One could say that inscribed in the working of network technologies as the ones described above are certain ontological principles of which capturing and archiving mechanism constitute today their irremovable dimension (Ernst, 2013; Chun, 2016).

This simple observation above is to demonstrate the complex mesh of archiving practices and agencies that are enabled and performed, consciously, habitually or involuntarily each time we interact with digital, network technologies. With it I also want to point the importance of the

6 According to IHS Markit's Smartphone Shipment Database, which tracks shipment data for more about 350 smartphone models (IANS, 2017).

notion of media practice and suggest its rethinking in the context of current media technological situation. The main aim of this chapter is hence to position this research project in relation to selected perspectives from the field of media and communication studies concerned with media practices and types of relations that are being formed between media and their practitioners. The second goal is to arrive at a practice-oriented approach to media studies which can be subsequently extended and employed as a practice-based methodological framework in the following currents of the thesis. The compilation of debates and perspectives to be presented below reveals diverse positions from which media, their entanglement with humans and implications thereof have historically been and still are being approached. I also discuss various degrees to which these approaches become mobilized in this thesis.

Media Effects and Compulsively Controlled Collectivity

That media cause effects in societies is not a discovery that all of a sudden took people by surprise some time at the beginning of the 20th century. Historically, all kinds of media have been long known to be causing various kinds of reverberations among members of societies and communities. Toby Miller lists at least a dozen of historical examples in which media technologies such as alphabet, ancient theatre, or more modern ones like printed texts, books and novels have been seen as some "barbarian forces" instigating destructive effects among unaware and vulnerable audiences (2009, p.132). In Miller's opinion this regular recurrence of conservative concerns about the effects of media and technologies has been underlain by old anxieties and elitist's leanings to divide people into the cultured and the others or experts and the non-experts (ibid., p.132).

Nevertheless, the media technological inventions such as television and radio, their proliferation and institutionalization leading to an establishment of various mass-broadcast infrastructures, channels, and programs, certainly posed a serious question about the consequences that they instigate among their audiences. Consequently, stemming from the recognition of the growing role that television and radio started playing in everyday lives of millions of people, media effects soon became one of the major research interests within media-concerned studies. The need for theorizing and establishing models for studying potential transformations brought about along with this proliferation of mass media became a focal point of media studies (Schrøder et al., 2003). The main question that prevailed the majority of research on media at the time can be synthesized into simple *what media do to people*. Although there is a certain implicit recognition of a performative side to media, it does not have to do much with the agency of the media as objects, technologies or technical infrastructures, but rather agency of people who happen to control media institutions and distribution of media texts.

In this very question resides what can perhaps be seen as the main foundational (but also problematic, as further developments in media studies have demonstrated) objective to all media effect studies - a certain divide between those who get to produce and control the distribution and reception of media texts and the rest who is left to only consume them and among whom these effects can be subsequently monitored and measured. This observation establishes a certain foundation which throughout next years and decades has become an important point of contestation for several important strands of media-concerned scholarly traditions (for instance Frankfurt School's critical theory, tradition in media studies known as uses and gratification, the British tradition of cultural studies). Although addressing similar issues, they did it in a different way. The difference at stake here resides in the way they recognize and reject the autonomy of media consumer and his/her ability to engage in meaning making practices while attending to media texts arriving from various media institutions (TV, radio, press). For example Max Horkheimer and Theodor W. Adorno, representatives of the Frankfurt School, contested any possibility for an individual appropriation of media (texts) produced by what they called culture industry (Horkheimer and Adorno 1972, 2002). They defined culture industry as a modern condition in which mechanical and ever more automated means of production turn people into passive followers of trends, values and opinions programatically distributed via mass media. Pervading all dimensions of human life, culture industry creates a range of impoverishing effects among people, who deprived of any agency are not much than "helpless victims to what is offered to them" (Horkheimer and Adorno, 2002, p.133-134). Leaving no room for individuality, resistance, spontaneity and authentic culture, culture industry makes "[i]ndividuals shrink to the nodal points of conventional reactions and the modes of operation objectively expected of them"(ibid., p.21).

According to such a picture, what is produced by culture industry and mass media is being consumed by the masses in an identical way as it is expected to be. Thus, mass media appears as possessing a total control over masses, making them subject to purely behavioral actions. Such fully deceived masses do not even attempt to break out from this normative forces as they are, and simply can not be aware of any external alternatives. The whole system and all agents in this process of deceiving masses "from the producer to the women's clubs, take good care that the simple reproduction of this mental state is not nuanced or extended in any way" (Horkheimer and Adorno, 1972, p.154-155). In other words the masses are not aware that they are being deceived into a mechanical reproduction of the dominant order, as in order to posses such an awareness, one would need to encounter other alternative modes of experiencing reality. But the culture industry makes sure to disable any such possibility. Even if people would actively attempt to resist the mainstream mental state

that they are being lured into on every single dimension of their life, this very act of resistance would be immediately swallowed by and become a legitimate part of the system. As the authors had it: "[a]nyone who resists can only survive by fitting in. Once his [sic] particular brand of deviation from the norm has been noted by the industry, he belongs to it as does the land-reformer to capitalism"(ibid., p.133).

This explication of a total impoverishment which is the effect of cultural industry has been echoing in ultra-dystopian diagnoses of our technocultural contemporaneity presented in the introduction to this thesis as a nightmare scenario. In this thesis reverberations of this tradition will be partly heard through Bernard Stiegler, whose diagnosis of modern, technologized society suggests a certain impoverishment of the aesthetics of everyday life caused by passive adaptation to the demands of mnemotechnological industry (2010).

The question is to what extent the pessimistic diagnosis should be applicable to the present context of capture culture? For example Jay Bolter argued that even though the current media landscape differs significantly from the earlier mass media model cultural critics of media continuously take for granted that all media are hegemonic: "they look for examples of new media forms that can be characterized as mass media, because they feel comfortable with the broadcast model in which the control of the media form is centralized" (2003, p.22). The "old" mass media is replaced with the new, "digital mass media" which following this tenet somewhat artificially extends and expands the validity and applicability of old models for media analysis and what it implies, the relevance of the media effect as a determining concern of media research at large. Thus, I suggest that adopting the perspective in its entirety in relation to capture culture would mean leaving the research in a state of a certain paralysis, which is to say a level of merely a scriptural, detached exegesis rendering any empirical engagement and turn to practice inherently flawed.

Selective Orientation and Motivations in Practising Media

The field of cultural studies that emerged in the UK in the 60's and 70's and which took as its important subject of interest the ways that people construct their everyday lives and also appropriate media content to the particularities of their needs. However, before Cultural Studies, an approach in media research known as uses and gratification studies had pointed at a selective orientation characterizing audiences' attendance to media texts, somewhat posing an alternative to the pessimistic reading of media offered by critical theorists.[7] In fact, already in the 40's and 50's

7 Thus, it has to be noted that as opposed to cultural studies, the uses and gratification theory did not delve into the analysis of interpretation and meaning making among media audiences. Core questions were why and how people actively identify specific media to meet their specific needs (Severin and Tankard, 1997)

scholars were pointing at the audiences' voluntary and selective orientation toward media contents (Herzog, 1944; Maslow, 1954). By doing so they questioned the allegedly hegemonic role of media and the very concept of effects that media impose on the society at large. As opposed to being seen as effects of the working of media, attitudes to media are formed in relation to an interplay of numerous circumstances, symbolic realities, presence of others. One can say differently that a reception and perception of media is a result of a dialogical, multi-directional process. The awareness of these constellation of material and symbolic realities that media messages enter as well as the presence of others who influence the way that these messages are read, became a crucial consideration necessary for understanding no longer only effects, but also relationships that people form with media. Consequently, from such an orientation, the mass is no longer any amalgam of "statistical elements" (Horkherimer and Adorno 2002, p.21), but an assemblage of individuals with diverse aspirations and orientations shaped by a variety of motivations and contexts.

This acknowledgement of the audiences' role in negotiating cultural meanings distributed via media was significantly advanced by Stuart Hall who suggested that before instigating any effect, the media content (Hall speaks more specifically about the TV broadcast) has "to pass under discursive rules of language" (Hall, 1993, p.93). What he meant by this is that media text might become subject to filtering and augmentation once it encounters a particular social context, which is to say, values, believes and motivations that pervade in a given time and space.

Hall's proposed three distinctive positions that individuals can obtain in relation to media. The first option is a dominant hegemonic position. It is a situation in which the viewer takes the connoted meaning "full and straight and decodes the message in term of reference code in which it has been encoded" (ibid. 1993, p.101). In such a case, the viewer is "operating inside the dominant code" (ibid., p.101). The second option is a negotiated position. Decoding the message in this modality is based on a mixture of adaptive and oppositional elements which is to say that it acknowledges the dominant meaning, but adopts it to a particular situatedness, or as Hall puts it, "situated logics" (ibid., p.102). The third position is an oppositional stance. In this, one "detotalizes the message in the preferred code in order to retotalize the message within some alternative framework of reference" (ibid., p.103). This means that the receiver of the message is fully aware of the content (which could be for instance a recognition of its manipulative or persuasive underlying, in the context of social media one could think of it being its economic and commercial underlying) and so either rejects it altogether or accepts it but with a deliberate subversion of the meaning that the arriving media text is inscribed with. Hall's pluralization of the modes of interacting with media content questions the view on media as an entirely hegemonic apparatus that instigates only one kind of subordinate reactions. In that sense, Hall partly decomposes

the earlier, fatalistic views on media.

Although related specifically to the medium of television and the broadcast model of media distribution, Hall's ideas seem applicable across many other, also more contemporary media debates.

Consequently one could ask about their productivity in relation to media seen as not text but more broadly as a net of devices, practices, networks and computational process. In this thesis this plurality of positions towards such a broader understanding of the term media will be of particular interest in the discussion on para-archiving at the end of the second part of this thesis. There I will draw on Michel de Certeau whose scholarship, especially in relation to the question of a position of individual in relation to dominant power structure seems to reflect quite strongly Hall's diffraction of the earlier, monolithic approach to studying life with media. Especially Hall's third position seems to be much in synchrony with de Certeau's attendance to everyday life as an arena of cultural inventiveness in attending to various social, technical and cultural frameworks that one voluntarily and involuntary traverses on a daily basis.

Departing from the act of reading, de Certeau describes seemingly manipulated by the logic of capitalism and consumption activities of everyday life (such as navigating through the city, cooking, etc.) as always particularly motivated sites themselves potential of establishing frameworks that can subsequently yield conditions for silent production that resists subordination to the mainstream (1984). In this sense Hall's notion of the alternative framework of reference and motivation can be seen as coherent with de Certeau's already brought up notion of "a second layer" where space for tactics emerges that complements (or provides means to temporarily suspend and reconfigure the effects of) one's irremovable embeddedness in a larger net of socio-material relations. This discussion will be continued in a separate chapter in Part II of this thesis where the notions of tactics and strategies in relation to media practices will be elaborated.

Media Practices

In a critical response to the prevalence of the media effect perspective and the related concept of mediatization entailing a presence of some general logic underlying media infrastructures and instigating certain effects upon people at large, Nick Couldry proposed a strong turn to media practices (Couldry, 2004, 2012). He asserted that it is impossible to measure the effect of media as there is no single, overruling media logic nor a single measurable impact of today's highly diversified and ubiquitous media landscape. Again, if media studies were to be concentrated on the concept of media effects, this would risk to revoke a presumption characteristic to mass media studies that media is inherently superior in relation to their audiences who remain passively exposed to its logic. In an attempt to

destabilize such tendencies, Couldry has again argued for compensating the anticipation of effects with a recognition of media practices to be identified among individuals operating always in specific contexts. Thus, media practice approach, or as Couldry tends to call it "a practice-based approach" starts "not with media texts or media institutions but from media related practice in all its looseness and openness" (Couldry, 2012, p.37). As the main question of such an approach drawing on and iterating uses and gratification research Couldry asks "what are people (individuals, groups, institutions) doing in relation to media across a whole range of situations and contexts?" (ibid., p.37). What makes Couldry's proposition different from the earlier critiques of media effects (as well as uses and gratification, cultural studies) is that it does not only acknowledge the people's capacity to resist media texts and appropriate their effects to their individual purposes, but that media (e.g. social media services and affordances they engender) are constructively woven into a generation of new types of social practices (e.g. presencing, tracking, searching [ibid. p.50]) or particular reconfiguration of existing cultural practices such as personal archiving [ibid., p.51]).

However, a strong social constructionist perspective that transpires in Couldry's discussion on mediation makes him remain relatively distant to questions regarding the material, technological and generative side of media practices taking place outside of proprietary services and frameworks, and which will be of interest here. For instance, while discussing archiving practices, he does that in relation to major social platforms such as Facebook, YouTube or Flickr. As Couldry writes, "archiving, a practice once concerned with accumulation of physical objects, in the era of social platforms engenders a number of other practices such as accessing, searching, or in terms of personal archiving – life-caching and managing one's own data" (ibid., p.52). Even though Couldry attempts to recognize a range of different, minor practices and attitudes to these new, increasingly prevailing forms of personal archiving, he tends to acknowledge them as somewhat stable, one could even say, determining elements of today's media landscape in accordance to which people arrange their daily life practices.

Departing from the concept of media institutions and reaching down toward everyday life practices Couldry implicitly seems to replace these missing institutions with dominant social media infrastructures, which one can argue can as well be seen as media institutions or at least as being strongly conditioned by such. In other words, even though Couldry advocates to seek alternative practices that can further contest the idea of power concentrated in media institutions (and hence ideas of hegemony and media effect), he limits this search to the scope of dominant infrastructures (social media), and effectively, by doing so he establishes a gravitational force within which the discussion on media practices (and so digital archiving) is bound to. One could say that through magnifying

the relevance of various sub-archiving practices emerging within the confines established by big social media players, Couldry's social constructionist perspective makes him overlook other types of archiving practices in which individuals might be intervening not only into the processual (e.g. software), but also material (e.g. hardware) underpinnings of media technologies. This continuous presence of a broader social structure according to which media practices take shape is what Sarah Kember and Joanna Zylinska point at when drawing a distinction between their and Couldry's understanding of media practice and mediation (Kember and Zylinska, 2012). Here as well, I argue, we might address this deficiency by looking further first into Kember and Zylinska's recognition of material turn in media studies (and their welcoming gesture toward aesthetic, creative and performative media practices) as well as media archaeology which addresses the material and empirical turn even more directly.

Mediation and Close Living with Media Technologies

Kember and Zylinska, scholars and media art practitioners identifying with a technoscientist perspective offered a criticism of a constructionist's understanding of media landscape and media practices. Their work aspires to redirect media studies away from its affiliations to social constructionist theory which as they argue is problematic especially taking into consideration the contemporary pervasiveness of media technologies, multitude of media practices and their increasing inseparability from life itself (Kember and Zylinska, 2012). Their critique concludes in a proposition to perceive media in terms of active and vital processes of mediation that break out from the trajectories and grids established by social structures, institutions and media infrastructures. The term mediation (as opposed to media), crucial to their scholarship, is also adopted in the this thesis.

In their joint book *Life After New Media: Mediation as a Vital Process* (2012), Kember and Zylinska elaborate on the term mediation pointing at a set of differences that their understanding is characterized by if compared to former definitions. As they mention, mediation has been typically understood in a Marxist tradition as a reconciliation of two opposing forces within society (e.g. the cultural and material or the superstructure and base) by a mediating object. In this light it appears as an insertion of an element, an agency filling the space between two competing forces, or differently put, two elements of some hierarchical arrangement. Thus, medium is merely a mediating component in a wider process of communication or transmission. As the authors elaborate further, such perceived mediation is very much a construct of the "structuralist thinking" in which some fixed organization of society is recognized and within which some elements of this organization are subsequently discussed as forces of dominance that establish and determine entirety of relations

(Kember and Zylinska, 2012, p.19). In such light mediation transpires as merely "a product" of pre-existing dynamics prompted by these relationships. In other words, the process of mediation is trapped between firmly grounded elements of a bigger structure; it can not take place but as a direct response to these elements. This structure and the hierarchy it brings along, is a prerequisite to an emergence of mediation; it conditions its very occurrence. Consequently, as the authors argue, in that view, "mediation lends itself to the study of 'effects' because it is premised on a set of determining assumptions around subjects, objects and relations between them" (ibid., p.20).

In contrast to that, to Kember and Zylinska, mediation is "the originary process of media emergence with media being seen as (ongoing) stabilizations of the media flow" (ibid., p.21). This means that media do not necessarily establish some large scale fixed relationships, but can as such become subject to temporary and micro-level alterations and stabilizations. Mediation can be seen as an active creation and recombination of relations between always already entangled human and non-human, media technological entities. Mediation is where a sustenance and negotiation of the relationship between them happens. It can become stabilized and form always particular, temporal milieux that are exemplary to these enactments. It is evident that in such a reading the terms media and mediation are long departed from their connotations to institutions, objects and texts, and subsequently lend themselves to be read and articulated better as sites, temporalities, processes and performances. To some extent, up till this moment, their way of perceiving mediation could be seen as corresponding to the perspective on mediation (and media practices) offered earlier by Couldry. Both approach media as something that happens or is enacted through a particularly situated practice.

Few years before Kember and Zylinska, Couldry attempted to challenge the definition of mediation, which according to him has long been standing for "the overall effect of media institutions existing in contemporary societies, the overall difference that media make by being there in our social world" (Couldry, 2008, p.379). He argued that it is not enough to understand mediation in such broad terms, and instead by pointing at the diversity of dynamics that mediation can be characterized by, he advocated for giving these dynamics particular attention in media and communication studies. Rather than looking at mediation as an "implied conversation" constrained by existing media infrastructures, he suggested that "it may be more productive to see mediation as capturing a variety of dynamics within media flows" (Couldry, 2008, p.380). In other words, Couldry proposed to step away from considering the subtleties of mediation as a being strictly compelled to stabilities of a larger media world and its institutions operating above the layer of everyday life. However, Kember and Zylinska point out some inconsistency in Couldry's proposition. Couldry attempts to destabilize the idea of a fixed net of

media entities (institutions) that determine processes of mediation by saying that individuals continuously intervene into its dynamics, introduce "non-linearity", "discontinuity" and "asymmetry" into its flow (Couldry, 2008, p.381). Though while by saying that, his proposition paradoxically protracts the validity of these fixed realms, as they are continuously prerequisite to these said interventions to occur. In other words, Couldry's understanding of mediation while letting us move from directly addressing media effects they produce toward dynamics of media flows across various practices emerging between these stabilities, at the same time, implicitly adheres to their continuous working.

This implicit acceptance of the existence of large scale, stable media landscapes delimits the possibility to perceive mediation as an act generative of alternative micro-media landscapes which do not fully succumb to the grid of the former. Their postulation or "cut", as they are calling their intervention, invites us (media scholars and practitioners) to move beyond the constructionist perspective and see mediation as productive of other kinds of relationships with media technologies or radically alternating, modulating and vitalizing existing stabilities, differentiating them and reconfiguring as to make them serve diverse and situated purposes and motivations. In other words, mediation can be, and as the authors argue in a form of a manifesto, should be approached as a phenomenon released from the strict dependence on fixed constructions typically used in older models of media studies as a backdrop against which the analysis of media flow can be grasped (i.e. a broader "social world", "globalized worlds", "media institutions" etc.).

Archaeology of Media(tions).

At first glance Kember and Zylinska's scholarship appears as impossible to be set aside media archaeology, an important perspective deployed in this thesis. However, what can be seen as a uniting basis for the two is their open discontent with the dominant modes of inquiring into the subject as well as alliance with the latest material turn. As it will also become evident in the third part of this thesis, perhaps the decisive element allowing for setting a bridge between these two perspectives is their call for an interventionist mode on reflecting on and critiquing media.

As Erkki Huhtamo and Jussi Parikka explain in their introduction to what can be seen as a first organized approach to defining media archaeology (2011), this perspective to media studies was prompted by a missing attention to the historical and material context of emerging digital media (2011, p.1-2). Referring to it as a bundle of approaches, *variantology* or *ars combinatoria* (Zielinski, 2006), as opposed to a singular approach or discipline, results from a wide scope of interests, references and scholarly discourses that media archaeology scholars take into consideration (from Benjamin to Foucault, from cultural materialism to neo-nomadism).

Despite this wide array of influences as well as intentions, one certain imperative that unites media archaeologist is their "discontent with the supremacy of the "canonized" narratives of media culture and history' (Parikka & Huhtamo, 2011, p.3, Ernst, 2011, p.240). Thus, at the core of the archaeological objective resides an intention to disrupt prevailing progressivist orthodoxy of media studies by allowing more anarchic and transversal exploration of different territories of media technological developments across time and space. Zielinski describes this ambition in terms of setting forth a "new cartography for media anarchaeology" (2006, p.261). Zielinski's (an)archaeological cartography aspires to contest the idea of a linear progression towards always a more perfected media technological actuality. Such an approach does not only complicate the old/new, analog/digital polarities but also disrupts the dominance of certain media centres according to which the history of media is often being woven (New York, London, Paris). As Zielinski argues, a constructive disruption is possible by the means of "establishing effective connections with the peripheries"yet without attempting to integrate these into the centres. This might eventually lead to help "maintain the worlds of media in a state that is open and transformable" (ibid., p.261). By peripheries he means quite literally geographical territories, cities or towns excluded from the gaze and inquiry of traditional media historiography. But peripheries can be also seen in terms of alternative, non-centric conceptual zones, fluid individual practices and imaginations remaining beyond the centralized and formalized concepts, theories and views. In a similar manner Parikka and Huhtamo maintain that even "dead ends, losers, and inventions that never made it into a material product have important stories to tell" (Parikka & Huhtamo, 2011, p.7).

In this light, media archaeological perspective has no interest in describing media landscapes from above by imposing some overarching narratives and systematizations. It redirects its focus toward local media technical events, appropriations, inventions and speculations that often go against the odds of the real world. Other ramparts that media archaeology attempts to trespass (besides the historiographic causality and progressivist evolution of media) are the divisions into scholarly disciplines. As Huhtamo and Parikka argue, media archaeology "moves fluidly between disciplines, although it does not have a permanent home" (2011, p.3). It avoids stabilization and formalization into an easily applicable set of analytical tools, which as the authors argue allows it to become something of an interdisciplinary perspective on technologies, a "travelling discipline" that "roams across the landscape of the humanities and social sciences and occasionally leaps into the arts" (ibid., p.3). Undoubtedly, such an approach also brings in some risks of atomization, unrigorousness and too broad dispersion of points of interests. Addressing that issue (which for some scholars like Zielinski would not be considered as such) Huhtamo and Parikka posed a question about a possibility to be

more specific about the imperatives and crystallize the variety of media archaeological approaches into methods, "at least in a local and tactical sense" (ibid., p.14).

Summary of the Chapter

Above I presented some of historical and recent debates concerned with media as practice. As presented, the dominance of the interest in what media do to people has become gradually compensated by the attempts to balance this direction. Consequently, what people do with media has become a important focal point in some other traditions of media studies. In terms of the very term media, this entailed a move from defining them as institutions, texts and objects to media as more individuated and situated processes, projects and practices characterized by vital negotiation of the ways they affect everyday, social and personal contexts. The following current of this thesis will draw on these discussed perspectives.

While the approach focused on effects of media (though understood not only as institutions and texts but primarily as technologies, networks of devices, services, mobile applications, mechanisms and practices), appears to be more suitable to studying capture culture, a large-scale phenomenon with implications (or effects) on the fabric of everyday social and personal life, the practice-oriented perspective as understood here, allows to bring attention to the minuscule ways in which these effects and implications become deliberately negotiated, reconfigured or/and resisted. In other words, practice oriented approach as proposed allows to install a particular entry point to understanding media technologies, both historically and contemporarily. Upon crossing it, one encounters a different view, one in which large-scale media effects could be seen as only some among many others. In other words, the media practice perspective enables to see media technologies beyond their capacity to instigate merely large-scale, macro-societal effects. At their cost, or to put it better, in parallel to these macro-effects, the practice-oriented view foregrounds people's motivations, aspirations and goals that operationalize media technologies in a way that these might in return instigate more controllable and intended micro-effects. This sensitivity towards the singular, micro-scale practice, can be said to enable a better chance for identifying historical, amplifying existing and conceptualizing new alternatives to dominant practices pervading capture culture, which are some of the goals of this thesis.

Media archaeology perspective discussed above is applied in two ways in this thesis. Firstly, it is seen as a particular mode of inquiring into the history of media technological developments, a mode that endorses non-linearity, curiosity and creativity in setting relations and associations between the current state of media developments and historical ones. Several examples of media technological inventions practices as

well as debates in the domain of personal recording and archiving from different historical periods will be brought in different moments in this thesis as to stimulate discussion on current technological moment (e.g. wearable camera obscura, Brownie camera as well as pre-digtial archival cabinets). While their material dimension will also be of interest, the main focus however will be assigned to the way these technologies have been deployed, in some cases against or in parallel to their prescribed functions. The focus on practice that this thesis advocates for suggests also a need for a slight diversion in naming the discussed approach to media archaeology (one can ask whether this shift could for instance be expressed through a term archaeology of mediation(s), as proposed in the titling of the previous section). Following the practice-orientation of this thesis, the second way of attending to media archaeology will be through reverse-remediation, a creative practice and one component of a larger practice-based methodology to be elaborated in the later part of this thesis.

The positioning of the research in the context of media practice does not end here. The intention with this section is to point at a certain orientation that will be successively elaborated in the following parts of the thesis. At the end of Part II I will reconnect with some of the observations made here, in particular with the briefly introduced de Certeau. There I will critically discuss and iterate the perspective known as tactical media, which borrowing from de Certeau (1984) positions tactical inventiveness and insubordination at the heart of media technological praxis. The overall media practice approach will be extended into a specific practice-based methodology in Part III as a prelude to a series of discussions and analyses of my para-archiving practices.

PART II

3. FROM MNEMOTECHNIQUES TO MNEMOTECHNOLOGIES AND BACK (THEORETICAL FRAMEWORK I)

Anemnesis and Hypomnesis

In one of his dialogs Plato recalls a meeting and conversation between Phaedrus and Socrates in 360 B.C.E:

> [Teaching people to write] will create forgetfulness in the learner's souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves. The specific which you have discovered is an aid not to memory, but to reminiscence and you give your disciples not truth, but only the semblance of truth; they will be hearers of many things and will have learned nothing; they will appear to be omniscient and will generally know nothing; they will be tiresome company having the show of wisdom without the reality (in Deuze, 2012, p.115).

This short excerpt accounts for an effect that a technology intended for mediation instigated at the time. It is an account of a split resulting from a technical force being imposed upon a relationship between two types of memory: internal and external. Writing jeopardizes human ability to think and remember for and within oneself. In other words, *anamnesis*, Latin for one's capacity to internalize thoughts and impressions and accumulate knowledge (e.g. through dialog and first-hand engagement with the world), is put at risk by *hypomnesis*, technologically rendered and materially externalized thought. After becoming detached from its subject it is reproduced, acquired by others, and circulated beyond one's immediate control. Besides articulating a basic cultural practice, the externalizing of memory, this brief quote is what Bernard Stiegler sees as one of Plato's most problematic legacies. In the centuries to follow, it went on to condition currents of Western philosophy. The contradistinction between the internal, human mnemonic capacity to record and retain knowledge, and hypomnemata, external supplements for capturing, storing, organizing, and distributing memory, has laid the foundation for a general bias toward technology. Stiegler argues that these two memory practices are in fact inseparable, and one cannot exist without the other. It is through the act of hypomnesis that anemnesis becomes not only materially externalized, but actually constituted and brought to one's awareness. Hypomnesis facilitates evolution, individuation, and trans-individuation. This last term was coined by Gilbert Simondon (1989) to describe the human

ability to form enduring communities that actively share common values, beliefs, and symbols. Aggregation, transmission, and development of these qualities occur precisely through processes of externalizing and materializing anamnesis into hypomnemata (Stiegler, 2010, p.67).

The argument for blurring the rigid boundary between anamnesis and hypomnesis aligns with a greater premise of Stiegler's "archaeology of reflexivity," as he calls his own scholarship (Stiegler, 1998, p.140). Stiegler's study of the forms of technological externalization of knowledge and memory might be synthesized into an observation that "the human evolves through externalizing itself in tools, artifacts, language and technical memory banks" (Stiegler, 2010, p.65). Technology cannot be seen as an autonomous addition to human existence. On the contrary, it is always an essential dimension and condition; as there is an inseparable correlation between people and technologies, human and technological evolutions have to be seen as processes that are always intertwined.

Human evolution not only happens on a biological level. It also transcends the latter, "by means other than life"; on a plane of externalized, technical functions. We are born into a world populated by the technologies and techniques of our predecessors and create ones that the coming generations will potentially rely upon. In this light, technology as an externalization of human functions and memory does not interrupt or violate human evolution; it does not arrive suddenly from outside of human evolutionary paths. Instead, it always intrinsically informs human development. Individual and collective practices of constructing knowledge and memory are always technological; they do not exist outside of technology, but are always, to some degree, entangled with it and its history. Stiegler calls this condition "originary technicity" or alternately "originary prostheticity" (1998), where prosthesis does not mean an extension of the human body (a synthetic addition, or replacement of what has been lost) but "the constitution of this body qua 'human',... not a means for the human but its end" (ibid., p.153). If this condition of originary technicity and an inseparable coexistence of anamnesis and hypomnesis are acknowledged, what needs to be foregrounded when critically approaching relationships between the human and technical are various mutations (of a material, political, economical, or cultural nature) that are intrinsically implicated in the formation of these relationships.

Every act of externalizing one's thought and memory instigates a certain milieu characterized by power relations, which in return affect and shape the lives of those implicated in these milieux. Here we find a link with what has been partly indicated in the introductory section, with regard to the pharmacological nature of technology. Drawing again on Stiegler, among the various modes of living and becoming with technologies we can set apart two in particular, *mnemotechniques* and *mnemotechnologies*. It has to be underlined that through conceiving of these concepts, Stiegler does not intend to establish an irreconcilable dichotomy. Rather,

these two notions describe different kinds of complexity characterizing relationships between human mnemonic and cognitive capacities (mneme) and technological prostheses (hypomnemata).

What are then mnemotechniques and how do they differ from mnemotechnologies? Based on my reading of Stiegler, I propose seeing mnemotechniques as intentional practices of externalizing memory and knowledge, where intentionality (connected to the notion of agency and a degree of freedom) signifies the will and intention to act in a specific way, (Verbeek, 2011, p.13). The processual dynamics of mnemotechnical practices are comprehensible and controllable by an individual (or community) directly and voluntarily engaged in these practices. Mnemotechniques evolve in line with specific motivations which guide the creation and organization of the resulting mnemonic traces. Thus, mnemotechniques can be described in terms of craft, which, by Tim Ingold's definition, is a manual practice comprising "observational engagement and perceptual acuity that allow the practitioner to follow what is going on, and in turn to respond to it" (2013, p.4). Mnemotechnique involves a binding connection between one's memory and its externalized form. It results in "an associated mnemonic milieu," where the bond between human subjects (their consciousness), the technologies through which they experience and register the world, and the material records of their experiences tend to hold strong over time. In Stiegler's words, mnemotechniques can be seen as a specific combination of *logos* and *techne*, which is to say, thinking and doing (2011). It is an art of actively (and practically) shaping one's philosophy of life in relation to its always pre-existing technical dimension. This resonates strongly with de Certeau's aforementioned aesthetics of everyday life as ways of operating which, in Stiegler's terms, can be translated into a vital configuration of one's way of technical being, thinking, and doing.

Mnemotechniques can be seen as ways of operationalizing selected technology (language, text, imagery, sound, etc.) to produce a material trace which remains in an integral relationship with the subject (or community), his/her awareness, and beliefs. A simple example of a mnemotechnique on a personal level could be note-taking by hand, or a drawing that results in an artifact, a material trace marked by a distinctive style (simultaneously a signifier of a close link between the technological and the human). Although the primary intention of mnemotechniques is to record and transmit the memory of a given experience, every activity that results in the externalization of knowledge into a (technical) artifact can potentially become a vector of memory, and hence, a non-intentional type of mnemotechnique. The production of a wheel, flint, or pottery is both a materialization of a person's memory and knowledge and an encapsulation of this knowledge and experience into a physical trace or artifact. Consequently, close examination of and reflection upon these material results might reveal the knowledge invested in them, thus enabling their

meaningful adoption and further transmission over time.

In contrast to mnemotechniques, mnemotechnologies, which to indicate their scale Stiegler also denotes in terms of "global mnemotechnics" (2003), are technologies that take control of and automate people's memory practices, implicating them into other relations beyond the integral connection with the subject or community. As examples of such mnemotechnologies, Stiegler primarily mentions older technologies, and in particular mass media, radio, television and mainstream cinematography; in other words, media infrastructures historically identified as sharply divided into phases of production and consumption, and subsequently, a sharp divide of media practitioners into producers and consumers. In his opinion, these mass media and technologies give receivers a series of fabricated and pre-established, mass-scale audio-visual experiences and narratives, effectively paralyzing all opportunity to construct and express individuality within collectives. Stiegler describes the impact of mnemotechnologies in terms of the proletarianization of individual and collective mental power, attention, and sensibility (2016).

Much as how industrial capitalism proletarianized labor and blocked people's capacity to draw meaning and satisfaction from what they make, consumerist capitalism proletarianized people's ability to care about and pay attention to what is meaningful in their lives. In other words, just as the behavior of the worker at the dawn of the nineteenth century was contingent on the service of an industrial machine, the behavior of the contemporary consumer has been "standardised through the formatting and artificial manufacturing of his desires" (Stiegler, 2011a, no pagination). Like industrial capitalism, consumerist capitalism and the working of its mnemotechnologies tend to lock their subjects in what might be described as a hegemony of short-circuits. These short-circuits disrupt from developing any long-term commitment to thinking for oneself, simultaneously making room for "the service economy" that "effectively stunts the development of the individual's life milieu" (ibid., p.83) and thus increase control over it. A clear link can be identified here with the Deleuze's concept of the control society, in which, through the pervasiveness of electronic technologies, "[i]ndividuals have become 'dividuals', and masses, samples, data, markets, or 'banks'" (1992. p.5). The historical process of proletarianization of the workers' psycho-motoric knowledge is now reproduced in processes of the pervasive "digital discretization" of consumers' perception and attention, replacing "access to consistencies" with the "access to infinities"(Stiegler, 2016, p.70), which is to say, an illusory sensation of living in a constant presence without beginning and end.

Adoption and adaptation, terms that recur quite often in Stiegler's work, might be seen as helpful in further clarifying the difference between mnemotechniques and mnemotechnologies. Mnemotechnologies make people adapt, somewhat passively, to their internal rules, programs, and

the sense of temporality they impose as opposed to making themselves adoptable to the needs, priorities, temporalities, and rhythms of the everyday lives they enter, which is what mnemotechniques facilitate. Adoption, Stiegler argues "is the condition of individuation of the pharmacological being – so that the poison can become a remedy" (2016, p.130). The intractable and hegemonic nature of mnemotechnologies that force one to adapt suggests a comparison to Adorno's and Horkheimer's concept of culture industry discussed in the previous chapter. In fact, Stiegler quite explicitly builds on this concept (2011), yet he does not stop at an entirely pessimistic vision. What motivates his diagnosis of contemporaneity in terms of the mnemotechnological production of cultural "malaise" (2010), "short-termism," and "symbolic misery" (2014) is in fact a conviction that this situation can (and must) be critically re-configured through what he calls the "re-enchantment of the world." This means rehabilitating and reclaiming mnemotechnical qualities in our coexistence with technologies, not in the realm of high art, but in how we interact with technologies on a daily basis.[8] This re-enchantment, Stiegler maintains, can be achieved today through the pervasiveness of new media technologies such as the web, network technologies, and communication devices.

Somewhat echoing the early techno-enthusiasm surrounding the emergence of the web, and particularly web 2.0 (for example Gauntlett, 2011), Stiegler perceives democratization of power and opening of participation in media production (which were absent from such previous media milieux as TV and radio) as crucial forces to restore a chance to liberate "hypomnesic memory from its industrial function" (2010, p.85). Such a depiction of the contemporary media landscape is certainly problematic, and can even be seen as dated, considering the range of critiques of digital and network media technologies published in recent years (e.g. van Dijck, 2013), some of which even borrow from Stiegler's discussions (e.g. Lovink, 2011). However, it must be stressed that Stiegler does not attend to these technologies uncritically and without questioning them:

> Originally objectified and exteriorized, memory constantly expands technically as it extends the knowledge of mankind; its power simultaneously escapes our grasp and surpasses us, calling into question our psychical as well as our social organization. This is particularly apparent in the transition from mnemotechniques to mnemotechnologies from individual exteriorizations of memory functions to large-scale technological systems or networks that organize memories (2010, p.67).

Similarly, in his recent texts he extends his critique to include digital

8 Here is where Stiegler visibly departs from Adorno and Horkheimer's differentiation into high and low culture, and the contamination of the former by the latter as a vector of an overall cultural regression. In the context of the Frankfurt School, Stiegler's "re-enchantment of the world" is hence much closer to Walter Benjamin's pro-active attitude to the critique of modernity through a reflective and critical adoption of the new techniques and technologies it engenders.

network technologies, and more specifically, the way they are developed and promoted in line with what he calls the "Californian model of networking" (in Simanowski, 2016). In this thesis, my intention is to extrapolate the concept of mnemotechnology further, onto historical and contemporary devices, systems, and services that exteriorize, aggregate, and circulate personal memories. Thus, to describe the contemporary techno-cultural condition in the following chapter, I use the term mnemotechnology as a critical term, relating it to mainstream network technologies and devices, smartphones, data-aggregation and social media platforms, and in connection with other critical voices emerging in the digital and network culture.[9]

Mnemotechnologies are those that dissociate the mediated memory and know-how skills from an individual. One's memory and knowledge becomes disassembled and subsequently re-assembled in accordance with externally developed mechanisms of "distantly operating service industries" that "network people's personal memories … control them, formalize them, model them, and perhaps destroy them" (Stiegler ,2010, p.68). Consequently, and in contrast to mnemotechniques, mnemotechnologies are conducive to dissociated mnemonic milieux in which memories become increasingly displaced and disjointed, forming imperceptible realms, "black-boxed" enclosures inscribed with terms and conditions, often non-amendable by the subject on whose memory they scavenge. Mnemotechnologies release their users from the effort of actively recording, recalling and putting knowledge into action, effectively turning them into the operators of ready-made systems that input and output, process and deliver knowledge in an increasingly passive way (Lovink, 2011, p.25). As a result of such mnemotechnological procedures, one's self-governed transformation and (trans-)individuation is impeded in favour of transformation conducted in accordance with the principles, expectations, and goals of the market, and corporations in control of these mnemotechnological systems.

From Ars Memoriae to Industria Memoriae

This thesis also posits a tension between mnemotechniques and mnemotechnologies; in other words, a series of transitions between the two, as a basis for a broader reading, writing, and problematizing the history

9 The concept of mnemotechnologies can be also expanded onto technologies indirectly involved in the capture and organization of personal and collective memory, but which nevertheless affect local and trans-generational knowledge and memory techniques. An example of such a mnemotechnology could be a "sterile seed" (also called terminator technology) developed by Deta & Pine Land and distributed by Monstanto. By promoting this easily adaptable transgenic seed, the company expands its control over the global food system through the regulation of their use, patents, and intellectual property rights. As a result, the local farmer no longer cultivates the land with local techniques and trans-generational knowledge, but is employed by and dependent on a global agribusiness (Stiegler, 2016, p.128). This means local memory and mnemotechnical know-how become gradually eradicated, destroyed, and overtaken by an externally engineered mnemotechnology.

of media technologies, media technology practices, and their ongoing transformations. Approaching the history of memory and personal archiving technologies in terms of shifts and "mutations" (Terranova, 2000) of mnemotechniques into mnemotechnologies lets us foreground what Stiegler calls "an impoverishment of the aesthetic" (2004, 2014), which I would denote in slightly less alarmist fashion as an erosion of the significance of the aesthetic in people's everyday interaction and engagement with techne. This critical attention to the transformation of the aesthetic dimension of living with mnemotechnologies may constitute a counterweight to a teleological perspective on technological changes, which sees mainstream media-technological developments as paving the way to an always improving, more advanced state of affairs.

If the destabilization of mnemotechniques by mnemotechnologies is extended over the history of media technologies as such, or, alternatively, if we apprehend history as a series of such destabilizations, Stiegler's philosophy of technology allies with earlier articulations of technological developments.[10] For instance, Fredrich Kittler (1999) presents the history of media technologies in terms of transitions from mnemotechnologies to technologies. Kittler's use of the term "mnemotechnology" corresponds to Stiegler's mnemotechnique (consequently, Stiegler's mnemotechnology, is for Kittler, technology). As one such transitory period, Kittler points to the invention of the gramophone, which created the opportunity to mechanically capture temporal characteristics of speech and verbal enunciation such as rhythm, duration, and other poetic operations that text struggled to communicate. While, for some scholars, this moment signified a symbolic return to qualities of oral cultures jeopardized by the print and visual media era (Ong, 1982), for Kittler it also meant a challenge to the poetic dimension of speech (we observe here the beneficial and poisonous nature of technology). Before mechanized voice-recording capabilities were introduced, poetic devices such as rhymes, rhythms, and, more generally, the craft and organization speech in time were deliberately used as techniques to facilitate memorizing and transmitting knowledge; the introduction of a mechanized technology for capturing aural content endangered this mnemotechnical role of poetic enunciation. The invention of the gramophone, Kittler claimed, enabled the voice to be captured, but gradually let "technology triumph over mnemotechnology"(Kittler, 1999, p.80).

10 Siegfried Giedion's *Mechanization takes command* (1948) provides a detailed study of this gradual contamination of public and private life with mechanized technologies, which is explicated in relation to the expansion of rational and utilitarian progress-oriented thinking geared toward a specific goal and purpose (ibid., p.30). As Giedion suggested, in ancient times technologies were more closely connected to the miraculous, magical, and inventive as opposed to utilitarian and rational incentives. In the sixteenth century, when mechanization entered the guilds, mechanized tools were under individual control and served to maintain the stability of day-to-day local production rather than its acceleration. It is only in the eighteenth and nineteenth centuries that we can observe the unprecedented infiltration of mechanization into "the minutest details of everyday life" (Huhtamo and Parikka, 2011, p.6).

The transformation of memory practices from techniques of poetry, invention, and creativity into mechanized and then industrialized production of knowledge can be identified by moving back to the Renaissance, when techniques known literally as *the art of memory* (from Latin *ars memoriae*) were overshadowed by a mechanical means of processing memory, such as the printing press. Historically, the ancient practice of ars memoriae involved training one's memory, recall, and creative thinking by assigning particular symbols, vivid images (Carruthers, 2008, p.186), imaginary architectural structures, and monuments to one's thoughts[11]. The highly inventive and performative practices of ars memoriae were based on actively tending to memory, spatializing it, and constructing its inventory by breaking it down into discrete expressions and projecting them onto either imagined or real parts of the environment. In medieval times, the principles of the ancient ars memoriae were adopted to monastic traditions of meditation and mindfulness. With the revival of interest in Aristotle's writings, such mnemotechniques re-emerged in the Renaissance as a kind of art of designing idiosyncratic, visual systems, illustrations, or arrangements combining numbers, letters, and astrological symbols, for establishing different relationships to produce new thoughts and meanings. As Mary Carruthers argued (1998, 2008), such an idiosyncratic externalization not only helped one better summon one's memories and impressions (a typical reading of the role of ars memoriae inherited from Frances Yates' seminal study, The Art of Memory [1966]), but also invent and generate new ideas based on recombining and rewiring these memorized impressions.

The regression of such an inventive and aesthetic dimension of mnemotechniques was well illustrated by Yates in describing a meeting between Giulio Camillo and Viglius, two symbolic figures representing the divide between the two distinctive cultures of southern and northern Europe. The former involved actively training one's memory through the regular exercise of the imagination and associative thinking inspired by medieval esoterica and magic. The latter increasingly relied on a rationalization of memory practices facilitated by the proliferation of printing technologies. Camillo was the author of a never-completed, life-long endeavour to construct a memory theater, a complex system of symbolic references "representing all that the mind can conceive and all that is hidden in the soul – all of which could be perceived at one glance by the inspection of images" (Yates, 1966, p.158).

Challenged by the new printing technologies, the performative and inventive technique of the memory theater was doomed to obsolescence. As a result of this confrontation, mnemotechnique was deemed inferior

11 For example a practice known as *loci*, an ancient mnemotechnique in which the subject memorizes the layout of a specific building and assigns thoughts to its different parts. To recall these thoughts, one then "strolls" through the site and re-activates the previously assigned thoughts. The practice is described in detail by Frances Yates (1966).

to the new qualities offered by mnemotechnology: speed and efficiency. Ars memoriae lost its importance and gradually became perceived as an occult and cumbrous art, a minor activity rooted in the irrationality of medieval times and performed by "creatures of instinct," as British inventor Charles Babbage, considered the father of early computing systems, described mankind of the era preceding the expansion of mechanical printing (in Bowker, 2004, p.59). Complex mental operations characterizing mnemotechniques like the emblematic theatre of Camillo, were replaced by complex, yet undeniably more efficient mechanisms of printing technology. The complexity of the printing press was disguised by a set of mechanical operations; the effort once required of a human mind mutated into a much faster, but much less reflective mechanical procedure. Here we again note a manifestation of the twofold nature of technology, always capable of engendering both beneficial and poisonous effects. As Kittler proposed, primarily devised as a "memory assistant," printing press subsequently acquired a role of a "forgetting assistant" (Kittler, 1999) and "the more complicated technology, the simpler, that is the more forgetful we can live" (ibid, p.80).

Re-harnessing Techne

In light of the above discussion we can describe technological transformations as a series of mutations from mnemotechniques – manual modes of recording, externalizing, organizing, and operationalizing memory and knowledge that require effort, care, and attention – to mnemotechnologies, in which mechanization, automation and efficiency have taken command with respect to capturing, ordering, mediating, organizing, processing, and manipulating memories.

However, it seems debatable (if not controversial) that the dynamics of technological developments are so straightforward and unidirectional. I would like to suggest that problematizing technological development in term of shifts from mnemotechniques to mnemotechnologies does not have to entail a radical regression of the aesthetic dimension of life or its unsustainable and irreversible toxification, as might be assumed from the above passages, and certainly from a number of Stiegler's writings. Such a depiction of technological transformations would offer no more than a simplistic reversal of the techno-utopian idea that technologies always progress for the better. Thus, I suggest that mnemotechnologies ought not to be seen as inherently negative and mnemotechniques as always already positive by nature. Both are capable of generating beneficial and poisonous milieux, depending on how their presence is negotiated, mediated, adopted, integrated, and/or resisted in the individual and collective currents and contexts of a day-to-day life.

What we might currently categorize a mnemotechnique might have been seen as a disruptive mnemotechnology at the time of its emergence.

For instance, a printed text or book, once instances of mnemotechnologies, are jeopardized by screen-based, paperless media nowadays, and might be perceived as beneficial mnemotechiques (consider the recent return to manual, pre-digital printing techniques [Ludovico, 2013]). In other words, what one sees in retrospect as possessing a beneficial quality, at the time might have been seen as poisonous. Consequently, the increasing automation of recording devices, as well as proliferating compartmentalization of the web into standardized and thus easily monitorable mnemotechnological enclosures, are making the state of technological development within this domain seem far more compatible with the concept of the mnemotechnique (consider numerous recollections of the early phase of the internet celebrated, in retrospect, as a territory for unrestrained creativity and expression, compared to the following era of the web 2.0). Similarly, the manual ability to operate a camera, or the ability to write and comprehend a code (where both can be seen as more attentive techniques, or, as Stiegler puts it, the "know-how" of living with technologies) have gradually made way for more automated, sometimes over-simplified technological habits (e.g. effortlessly applicable visual filters imitating the results of manual photography, standardized, ready-made templates for organizing one's personal data without the need to engage in programming and coding).

One can say that the simplicity and transparency of technologies are attributes that we recognize and tend to nostalgically long for today because of our experiences with contemporary, black-boxed mnemotechnologies. In other words, it is a range of technological transformations following a given invention that makes a particular, historical device seem somewhat more human-friendly, profound, better suited to human needs, rhythms and everyday life. If so, could it be that by envisioning the potential steps that technological developments might take (such as the ultimate remediation of a camera into an electronic contact lens, automatically capturing and archiving what the biological eye registers), we can already begin to recognize mnemotechnical qualities within our current mnemotechnologies?[12] Consequently, would this mean that a technological device and its use are never inherently mnemotechnical or mnemotechnological, but that these are qualities that arise through a practice situated in a particular historical context? Can it be said that even the most automatic, passive mnemotechnologies, if approached with a certain sensitivity, attention, and motivation can acquire mnemotechnical qualities? Stiegler's conceptualization of media technology transformations provokes an array of such questions. But one question that will be particularly kept in mind to accompany this thesis, and which almost directly aligns with the main research question, is: How can one conceive of contemporary forms of mnemotechniques for constructing personal

12 For example Sony lately patented a concept design for a smart contact lens (Starr, 2016).

archives that take into consideration an inevitable embeddedness in the highly (mnemo-)technologized contemporary world?

The above question hints at a demand for alternative strategies for experiencing and accounting for one's life, conducted in an ever-closer relationship with capturing technologies. This question is not entirely new. It has been addressed historically, such as at the dawn of the twentieth century, which will be discussed in the next chapter. In different iterations, this condition has been recently addressed by others who recognized that an increasing amount of our daily interactions with media technologies, with or without our awareness and consent, result in digital traces and, consequently, digital archives. For instance, Marc Deuze has suggested that we no longer live merely with, but increasingly, in media (Deuze, 2012). Parts of our lives migrate, resettle and are exposed in media, where they form realities or identities that can be accessed, shaped, and continuously re-edited. Similarly, Joke Brower and Arjen Mulder provocatively confront us with a vision where "in an information society there is no position outside of the (storing, linking, reprocessing, transforming and complexification of data) flows, an external position from which you can criticize or transcend the flows" (in Deuze ,2012, p.94). As the authors suggest, this new condition of pervasive archiving is necessary for a proper understanding of our society: "We do not live in a society that uses digital archiving, we live in an information society that is a digital archive. Understanding the world means understanding what digital databases can or cannot do" (Brouwer and Mulder, 2003, p.6).

Deuze describes this condition of living in media in relation to Truman Show Delusion (TSD).[13] Briefly, TSD is a situation where a patient believes that he or she is under constant surveillance, and that the entirety of their life is being continuously captured. Suggesting that such a scenario gradually transforms from a mere delusion into an actual situation, Deuze advocates the need to critically embrace this condition by developing what might be called "survival strategies" (ibid., p.220). These strategies call for certain skills, as well as a critical sensitivity toward present-day digital media technologies. In our day, he states, "the only way to live a richly empowered and meaningful life is to embrace (and add to) the inherent multiplicity of the world through the availability of an excess of information about it" (p.202). Drawing on Italo Calvino's "Six Memos for the Next Millennium" (1996), Deuze proposes that it is our responsibility to change and distort the (digital) world by creating meaningful and polyphonic accounts of our lives (Deuze, 2012, p.202), our very own Truman Shows (ibid., p.263).[14] Instead of seeing media technologies as merely "in-

13 It is important to note that the Truman Show Delusion is not officially recognized in the Diagnostic and Statistical Manual of the American Psychiatric Association nor in the International Classification of Diseases (ICD) of the World Health Organisation

14 Calvino's six memos, which were suggestions on how to approach writing in the coming millennium, were: lightness, quickness, exactitude, visibility, multiplicity, and consistency (Calvino, 1996).

fluence machines" that dissolve us into a pool of meaningless data, Deuze suggests that we should start considering media "as part of our lives to that extent that they will make us visible (again)"(ibid. p.264).

As it has been already discussed, despite the large dose of pessimism in his diagnosis of our contemporary world, Stiegler's scholarship is ultimately a call to proactively re-harness the beneficial dimension of techne, or, put differently, a call to recombine mnemotechnologies into mnemotechniques. Somewhat mirroring Heidegger's critique of the growing instrumentalization of technologies toward "calculative thinking" at the cost of "meditative thinking" (Heidegger, 1966), Stiegler calls for the inauguration of "a new attitude" toward life and technology through an inventive detachment of techne from its connotations of the dominant commercial, economic, utilitarian and instrumental ends.[15] His project is driven by the ambition to restore the meaning of techne as an inseparable arena of human everyday existence, creativity, and, even more broadly, as an integral part of a question concerning its essence and aesthetics (2016). To engage in or, at least, to initiate this transformation, in conjunction with other thinkers who have contributed to this thesis (for example: Kember and Zylinska's creative media project), one needs to engage in "philosophy through acting," which is to say, a practical commitment to working with, not against, contemporary technologies. He asserts that "rather than thinking through opposition, it is preferable to proceed through composition" (2013, p.72). Much as Kember and Zylinska call for supplementing the analysis of existing media landscapes with a creation of new ones, Stiegler suggests merging philosophy (the act of philosophizing) with practical engagement with technologies.

While writing about cinematography, he returns to Plato and to the metaphor of the cave. Like the philosopher who, in order to critically apprehend the reality of the cave, needs to temporarily leave it, a viewer of a cinematographic projection needs to "get behind the camera" and renew one's attitude to the medium by questioning and re-generating the desire and motivation behind using it. Of high importance in this renewed attitude is a restoration of attributes found in amateur practices: passion and commitment, attributes not easily reducible to "calculative thinking" and utilitarian use of technologies dominant today.

15 Calculating thinking according to Heidegger, plans, calculates and sets goals which do not exceed the technological possibilities it relies on. It seeks quick answers to questions whose range is dependent on these technological limitations, but of which the one engaged in the calculative thinking is not conscious. While requiring time, commitment and determination, meditative thinking allows one to see beyond these limitations. Technology is no longer merely a useful device in addressing questions, it is also recognized as a force that shackles the subject. Through meditative thinking, Heidegger suggests, "we find ourselves so firmly shackled to these technical devices that we fall into bondage to them" (1966, p.53-54).

4. CAPTURE CULTURE

> When you shoot with your Bolex, you hold it somewhere, not exactly where your brain is, a little bit lower, and not exactly where your heart is-it is slightly higher... And then you wind the spring up, you give it an artificial life – Jonas Mekas

Recording-Capturing-Archiving

I came across the above quote while reading a journal by Lithuanian artist and film-maker Jonas Mekas. Besides making avant-garde movies, for several decades Mekas has been committed to a consistent, daily documentation of his everyday life, for which he has been using his Bolex, a popular 16 mm spring-wound camera. This figurative description of an act of shooting struck me as an example of an active relationship with technology, a special instance of a mnemotechnique as outlined in the previous chapter. Besides manual control, Mekas' relationship with the device involves a reflective negotiation between, on the one hand, one's passion and conviction, and on the other, rational (and relational) thinking and understanding the technology one works with. The way that Mekas describes his use of the camera also connects us to the etymological foundation of the term *recording*. The verb "to record" stems from the Latin *recordi,* which consists of two components: *re-*, to restore, and *cordari*, a heart.[16] In ancient times it was commonly believed that the heart, not the mind, was the seat of memory. Aristotle, for example, considered the heart to be the base of intelligence and the brain a "cooling" device, an instrument that controlled and rationalized the processes of the heart (Gross, 1995). The phrase "learning by heart" is a significant remnant of this belief.[17]

According to this etymological perspective, recording stands for active and thoughtful processes of internalizing, ordering thoughts, remembering, calling them to mind, rethinking and being attentive. Recording is thus a deliberate construction of a mnemonic trace in which one's agency

16 Source: http://www.etymonline.com, accessed: 10.01.15

17 In a more metaphorical sense, one Aesop's fables calls the chest a shelter for human contemplation. Responding to an assignment given to Zeus, Poseidon, and Athena, whose goal was to conceive of a truly good creation, Zeus presents his offer – a human being. The reaction of Momus, the judge, is condemnatory. The reason for this is the lack of a window in the human chest that would give the gods direct insight into the depth of the human conscience. This metaphor of a window has recently been recurring in relation to computer interface. As Galloway reminds us, especially in the context of network technologies, the interface is not merely a surface-like space of appearance for the content (for instance, digital memories), but a threshold (Galloway, 2012), a space with depth.

and intention are the determining forces; the dynamics of recording occurs in integral relation to one's mental and corporeal capacities.

Today the term recording and its meaning are increasingly challenged by another term: capturing. I suggest that the shift from mnemotechniques to mnemotechnologies can alternatively be presented as a mutation from recording to capturing, and hence from recording or record culture to capture culture.

The term "capturing" is increasingly used, not only as an equivalent of taking pictures or snapshots, but also in relation to other kinds of personal data. An increasing number of automated services dedicated to a storage, organization, and sharing of personal memory draw on the term in their advertising schemes. Evernote: "capture what's on your mind"; life-logging wearable camera and app Narrative Clip: "capture authentic photos and videos effortlessly." Some incorporate the term into the very name of the service, such as Capture-app, a photo storage service automating personal photography and video collections, or Kapture, an audio recording wristband enabling the effortless capture of audio snippets from everyday life. As we can clearly see, the term is often followed by an indication of its effortless, automated character, simple use, and general user-friendliness which all make the term mean something much different from recording.

The terms *capture* and *capturing* are etymologically related to the Latin *capio* and *captum*. They mean precisely "to take'" or "to seize." The Online Etymology Dictionary links capture to Latin captura and captus, which translate into "taking captive" – an act of taking control of something.[18] Thus, while on the one hand capturing connotes an act of exercising agency by taking control of something, it also stands for an imposition of some force, and consequently, taking something or someone captive.

Even a glance at the cluster of visual images resulting from a Google search (arguably the most trivial gesture typifying capture culture) reveals a twofold meaning of the term capture (Fig. 4.1). On the one hand, we are presented with images of cameras and people pressing the shutter in the active process of taking a picture. Other pictures show us a confined person or a mouse surrounded by an array of hostile traps, simultaneously luring the potential victim and blocking any possible navigation. One could say that, in a banal way, these contrasting images, crudely juxtaposed by Google algorithms, mirror the constituent dynamics of capture culture; dynamics resulting from the intersecting planes of a possibility for an individuated accounting for everyday life (leading to the voluntary capture and archiving of one's life), but also an inescapable exposure to increasingly automated, forensic media technologies (resulting in the involuntary capture and archiving of personal data).

18 Source: http://www.etymonline.com/ accessed: 12.01.2015

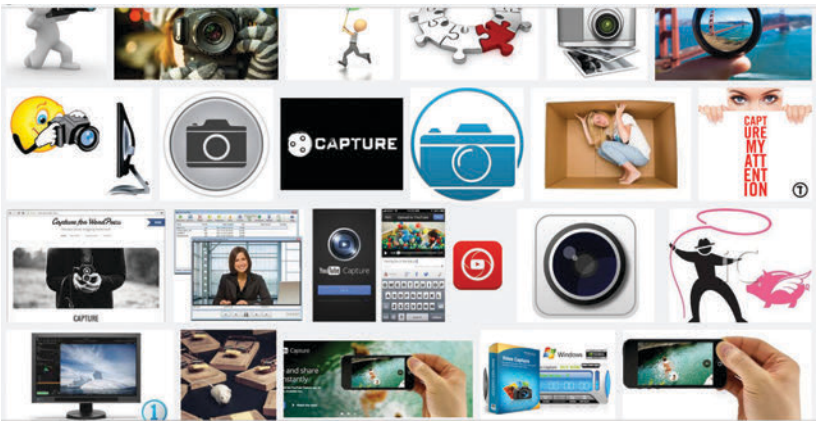

Figure 4.1: Screenshot of the term capture searched in Google browser, taken on 13.02.2016.

The results of this Google search reveal a dominant connotation of the term capture with visual and optic media. However, capturing also refers to imagery on a more abstract level, in its relation to the imagination, as in the phrase "to capture one's imagination." At the official presentation of new Apple products in March 2015, the HBO's CEO Richard Plepler enthusiastically remarked that "we love Apple, and all the extraordinary products that capture the imagination of many people over the world." (ShonMStudio, 2015). Read through an etymology of the term capture presented above, to capture one's imagination – typically, to inspire and stimulate someone's ability to imagine – also evokes a contradiction in this thesis. Understood in this light, one's imagination is no longer subject to inspiration alone, but also to detention. Capturing not only inspires, but also detains attention and imagination, orchestrates it, and delimits the possibility to imagine differently. In other words, one's imagination becomes simultaneously inspired and conspired into perceiving things in a particular way, in accordance to a particular aesthetics and ontological principles governing modes of technologically engaging with the world and everyday life.

After this initial glimpse into the term capture, one might ask how it relates to culture, the second term in the title of this chapter. Culture has typically been defined as a dynamic constellation of conduct, social behavior, practices of everyday life, values, and beliefs that represent a collective (Clifford, 1988, p.12). Media technologies can be seen as important cultural players, in that they actively participate in negotiating and mediating the dynamics within and between these cultural dimensions. A particular interest in one aspect of culture, dominance of one kind of medium over others at a given moment in history, or a significant shift from one mode and regime of communicating to another have inspired some scholars to work with such concepts as literary culture (McLuhan, 1962), oral culture (Ong, 1982), information culture (Lubar, 1999), visual culture

(Dikovitskaya, 2005), digital culture (Gere and Gardiner, 2010), and, recently, algorithmic culture (Seyfert and Roberge, 2016). Less medium-specific concepts pointing at a complex interplay between different media, such as convergence culture (Jenkins, 2006), have also been discussed recently. Jose van Dijck (2013) brings less media than phenomena to the foreground as her major subject of interrogation in today's technologized "culture of connectivity." Similarly, capture culture is not focused on one specific kind of medium, it is a phenomenon characterizing our times – the capturing of everyday life via technological means currently available. A multitude of dimensions of culture, social conventions, values, everyday practices, and rituals, both collective and personal, have been affected by this phenomenon.

Another question that arises concerns the relation between capturing and personal archiving. In the most basic sense, the process of capturing precedes archiving. It is an act of conceiving of a representation of a given moment, event, or situation. At once it internalizes the moment, figuratively speaking, by extracting it from a flow of events not worth capturing, and externalizing it by stabilizing it onto an external, material trace, such as image or numeric data set. This trace might be then categorized, labeled and possibly set in relation to other externalized traces in a database. Today, I argue, capturing and archiving practices happen in an increasingly automated and extemporary fashion. The acts of capturing and archiving are often inseparable (and in some cases, the capturing, and hence, the captured, are predetermined by the mechanisms of archiving).

In taking a picture via one of many popular smartphone applications (such as Instagram), we might primarily intend to capture a moment without considering this act in terms of archiving. Nevertheless, the captured image often becomes part of a larger collection, and since it is labeled and tagged with additional metadata (entered intentionally or inserted automatically by the operating system, software or an application used for capturing), it becomes equipped with some degree of indexical information. This insertion of the indexical information turns the captured into the archived. Wolfgang Ernst, who was mentioned in the introduction, goes even further, arguing that all digital content (digital image, video, sound file) is in itself a kind of (techno-)archive (2013). Since a single digital file consists of a set of alphanumeric characters, every such character, frame or even a pixel can be discretely addressed and recalled, just like a properly indexed document stored in a traditional archive. There are other arguments that enable us to speak of a close relationship between digital capturing and archiving. As it we shall see in examples brought in below, while the results of our intentional acts to capture our everyday lives extend into digital archives compiled beyond people's perception and intention, devices that are not originally designed to capture and archive our daily life activities increasingly do so. Consider smart objects and the Internet of Things, where objects like TV sets, devised to serve

people by performing set functions, might suddenly turn into capturing and archiving agents through being connected to the internet. The ubiquitous capture and archiving of people's everyday lives, which occurs alongside a multitude of vectors and directions, is the overall cost of connectivity, immediacy, and automation, some of the key attributes characterizing mnemotechnologies and the current phase of network computing development.

The goal of this chapter is to present our techno-cultural condition as built of networks of such capturing and archiving mnemotechnological devices and mechanisms that affect currents of people's everyday lives, both imperceptibly and explicitly. Moreover, the chapter questions the personal and broader cultural significance of contemporary personal archives resulting from numerous capturing practices that have become a part of people's everyday lives. The discussions below concern issues such as agency, aesthetics, politics, and materiality, all closely interrelated and mutually dependent. Extending Bernard Stiegler's claims and suggesting that our attention, imagination and motivations for engaging with techne have become simultaneously captivated and taken captive by pervasive mnemotechnologies, this chapter also serves as a context and a point of departure for the following currents of the thesis, where the focus will be on unlocking the said attention and imagination while practically exploring alternative modes of living with technologies in capture culture.

Snapshooting and Its Archival Potential

If, arguably, a few decades ago people would reach for recording technologies such as personal cameras mostly to document moments of special situations, unusual events, or exceptional times in their everyday lives, such as family events, ceremonies, holiday, and so on (van Dijck, 2007), today we increasingly use cameras less in exceptional circumstances than in moments of boredom, in other words – whenever we want. Cameras have become integrated into smart-phones and, as some statistics indicate, for 92% of smartphone users the camera is the most used feature (Zhang, 2015).[19] With the integration of photo-lenses into mobile communication devices, it can be said that the function of an image changed from a carrier of memory to a unit of communication. The pervasiveness, ever-increasing affordability, storage capacity, and growing entanglement of photo-lenses, as well as other kinds of capturing technologies and mechanisms into everyday lives have indiscernibly caused us to swap selectivity for excessiveness and reflectiveness for immediacy in how we document our everyday lives.

19 According to some studies the incorporation of photo cameras into smartphones contributed to a radical decline in the use and purchase of regular cameras (Bouckley, 2016).

The proliferation of photographic images is not new. A similar problem was identified a century ago. After years of being used mostly by small groups of professionals working in photography studios, the early decades of the twentieth century witnessed a great expansion of portable cameras among the wider public and their utilization in everyday life. The following quote comes from a text entitled "The Camera as Historian," and is one of the earliest articulations of these growing concerns:

> One of the outstanding characteristics of our time – as contrasted with the past – is its tendency towards the elimination of waste of power – the economical direction of human activities so as to increase their productivity and effectiveness – the utilization of what have heretofore been regarded as 'waste products.' To the engineer it is abhorrent that any energy be allowed to run to waste.
>
> But in the domain of photography the amount of horse power running to waste is appalling – and all for lack of a little system and co-ordination. Shall this be allowed to continue? Shall the product of countless cameras be in the future, as in the past (and in large measure today) a mass of comparative lumber, losing its interest even for its owners, and of no public usefulness whatever? This is a question of urgency. Every year of inaction means an increase of this wastage (Gower, et al., 1916, p.6).

Although this passage could be easily mistaken for a description of our present moment, it comes from a text published one hundred years ago. "The Camera as Historian" was, as Elisabeth Edwards pointed out, a "vade mecum for photographic survey"(2012, p.26). The book served as a set of guidelines for amateur photographers, so that their random snapshooting of everyday reality, considered by historians of the time as haphazard and undisciplined, could potentially gain greater, symbolic, and archival value. This quote can be approached in at least two ways. On one hand, it conveys a sense of care for raising historical awareness among regular users of capturing technology. The authors tackle the perception of photography as a medium that merely promotes a narcissistic self-evaluation and triviality, and thus has no historical and archival significance. If certain rules and objectives are followed, "the lunacy," as Baudelaire tended to call the practice of photography and its permeation into social and private life, might yield positive effects.[20] On the other hand, the quote also reveals the inspiration of Taylorism, at the time an increasingly popular theory of management applied within industrial production.

Briefly put, Taylorism (named after its inventor, mechanical engineer Frederick Winslow Taylor) aimed to standardize best practices across

20 In 1859, expressing his discontent with the effects that the photographic medium instilled in society right after its occurrence, Charles Baudelaire stated that "from that moment onwards, our loathsome society rushed, like Narcissus, to contemplate its trivial image on a metallic plate. A form of lunacy, an extraordinary fanaticism took hold of these new sun-worshippers." (in Rosenblum, 1989, p.38)

sites of industrial production and manufacture to improve the overall work flow, management, and economic efficiency.[21] "The Camera as Historian" suggests that the tendrils of belief in scientific management at the time also extended to the realms of archiving, cultural production, heritage, and historical imagination. This Taylorism-inspired way of thinking provided a vantage from which the "wasteful" and unrestrained practices of everyday, amateur photography could be turned into an efficiently executed, collective archival project. Just as the practices of workers in factories at the time were subject to optimization and control to advance the efficiency of the production of material goods, practices of amateur photographers became a potential site for an increase of efficiency in what we could call the production of cultural and archival value.

This increase in efficiency was possible if the snap-shooting practices of a growing number of amateur photographers became coordinated and synchronized in response to standardized surveys developed by archival and heritage institutions. These surveys would typically indicate what to pay attention to and how to photograph it. This would ultimately make the analysis and cataloging of the material easier for the institution. One subject of such surveys discussed in "The Camera as a Historian" is the decomposition of nineteenth-century lifestyles, landscapes, and practices affected by industrialization and modernization. There is, however, something paradoxical in the utilization of mass-produced cameras to such ends. While it can be seen as a nostalgic attempt to freeze and catalog specific aspects of the disappearing reality of the nineteenth century, one can also look at this systematic deployment of portable, mass-produced cameras – themselves products of modernization, industrialization and scientific management – as a critical apprehension of the consequences of these very processes. Thus, despite being influenced by the objectives of a superior authority, such focused practices of amateur archiving also emerge as a site for the potential development and alteration of historical awareness and subjectivity. The subject engaged in such a photographic

21 A move from small scale, craft-based manufacture to mechanized and automated mass-production required the development and enforcement of a new set of guidelines and routines for workers. Scientists and engineers were hired to analyze and further improve the factory's general productivity. The set of guidelines would then be implemented by managers. The increase of productivity did not necessarily mean the intensification of labor. The idea of scientific management was based on the idea of radically decreasing the level of physical and mental effort from the individual worker, reducing them to a sequence of simplified, repetitive gestures and procedures. Taylor believed that the incapacity to comprehend the goal of one's work and the bigger process of which one is a unit was a prerequisite for boosting the overall economic efficiency and productivity. Consequently, the implementation of Taylorism meant depriving the worker of knowledge of what he/she was participating in and producing. As mechanical units of a larger, scientifically orchestrated production sequence, individual workers were not supposed to focus on comprehending their work's ultimate goal. Given that the control of production "know-how" was already being jeopardized by increasingly automated means of production, the control over "what" was being produced became the domain of those wielding managerial power over the production sites. This division into managers (those who decide and know what is to be produced) and workers (mechanical executors of orders at the lowest level) has been often discussed as a controversial inheritance of Taylor's concept of scientific management (Drury, 1915; Montgomery 1989).

survey was to become more deeply attuned to the local environment and taking into consideration the relatively long span of the survey, more conscious of the cultural and political changes it undergoes.

From another perspective, this call to discipline amateur photographers as archivists can be seen as a natural response to the crisis that traditional archive and archiving practices (at the time dominated by scriptural accounts) were facing, precisely because of the proliferation of this new medium and the abundance of photographic, and later, filmic representations (Tagg, 2011; Amad, 2010). In order to maintain the status of the archive as a legitimate source of historical knowledge, archivists and historians had no choice but to embrace the multiplicity of viewpoints from which new kinds of visual records could be constructed. The amateur photographer, seen as an untrained witness to the "non-eventness of the everyday"(Highmore, 2002, p.34) was problematized as a new agent entering the archive, and a potential source for rethinking historical imagination and representation.

The Brownie

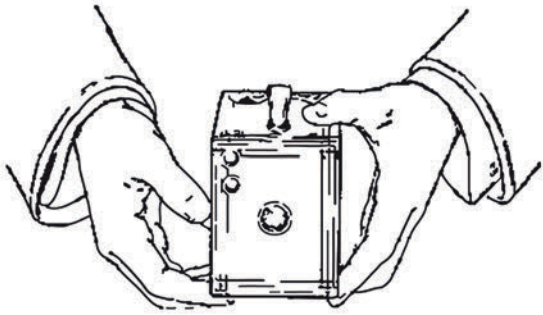

Figure 4.2: The Brownie, model No. 2. The picture comes from a instruction booklet published by Kodak in 1918. Source: archive.org, (licenced under Creative Commons).

In 1888, Kodak released their first hand-held amateur camera, the Kodak#1, a simple box equipped with a 100-exposure roll of film.[22] But it was not until 1901 and the introduction of a subsequent model, popularly known as the Brownie, that amateur photography became a popular and affordable way of documenting everyday life (Fig. 4.2). The Brownie was the first mass produced photo-camera for a wider public, the cost of which was only 1 USD (equivalent to about 50 USD today). Within the

22 When the roll was finished, the entire camera had to be sent back to the producer for processing, hence the slogan – "You Push the Button, We Do the Rest."

first year of its appearance on the market, 100,000 cameras were sold. It is with the emergence of this camera that the term snapshot (previously used solely in relation to firing guns and hunting) was first introduced to describe a photographic style and aesthetics involving spontaneous and quick responses to the moment. This new aesthetic practice of snap-shooting released photography from its dependence on the long and complex professional procedures, often stationary, bulky, and expensive equipment, facilities, and locations it often relied on in professional photographic portrait studios (Collins, n.d.).

Like the early amateur practices of photography in the UK, the practice of snap-shooting soon became subject to critical reflection elsewhere. In a series of articles on amateur photography, Mark Jarzombek recalls Austrian art and architectural critic Joseph August Lux, who was among the first to problematize the emergence of amateur photography, both in terms of the newly emerging snapshot culture and its becoming an irreducible dimension of everyday life in modern times (Jarzombek, 2001, 2004, 2004a).

Lux's position as an aesthetician and critic of modernity is of a peculiar kind. Eschewing a radical stance in relation to the new medium of photography, Lux focused instead on how to constructively adopt it as an increasingly irreducible part of the fabric of everyday life. Unlike many conservative aestheticians who rejected amateur photography altogether, seeing it as a mechanized and trivial practice without any deeper meaning, Lux perceived amateur photographers as "important foot soldiers in the fight against the technocratic mind-set of the modern world" (in Jarzombek, 2004, p.83). Sharpening the attention toward details, ephemeral and momentary, portable cameras in the hands of amateur photographers were capable of productively tackling the dominance of static, "higher vision," "generalized views," and "naturalistic" depictions, a problematic inheritance from realist painting that, as Lux asserted, made professional photographers act like "bad mirrors" failing "to do justice to the object" (ibid., p.86). In amateur practices, Lux saw the potential for an emergence of a new modern aesthetics, freeing photography from rigid conventions established by professional photographers (who were typically bound to state institutions that scientifically recorded historically significant events, buildings, archaeological sites, and projects, [ibid., p.81]), but also an indication of how to creatively address "the inescapable dilemma of an age in which the technological for better and worse had become inextricably embroiled with the sociological"(ibid., p.85).

The simplicity and transparency of the Brownie's construction, as well as the lack of straightforward instructions that would have determined a single default application of the camera, opened up possibilities for foregrounding what Lux called one's "spiritual center" as a way of productively overcoming the negative implications of developing modernity. In other words, the simple construction of this mnemotechnical device and

the simplicity of the operations it required made room for the development of an individuated approach. Jarzombek interprets this as a tactical act of appropriating the device, since the user "steals the enemy's invention for his own purposes," the enemy being the modernist rationalization and standardization of everyday life, and the user's purpose being a set of subjective, spiritual, philosophical values according to which one put the device into use and which effectively contradict these processes. Referring directly to the physical construction of the camera and its single aperture through which the light is focused, Lux maintained that, "so too, the user of the camera needs to have a single "spiritual center" on which to focus critical reflection" (Jarzombek, 2001, p.57). By this spiritual center, Lux meant a larger concept, a long-term project that, if consistently performed, could give rise to a more common, historically significant account of everyday life, besides being one's own instant mode of storytelling.[23] This adoption of technology in adherence to one's spiritual center can be simultaneously understood in terms of a responsible construction of subjecthood and trans-individuation, an act which Verbeek would have us see as a "moral" way of allowing technology "to help to shape the subject" (2011, p.68).

Like many technological devices, in its early days the personal camera was received with a hefty dose of skepticism. Both of the above approaches to amateur photography might be seen as attempts to overcome this skepticism. To some degree, they both postulated moving beyond the view that personal cameras were yet another disruptive product of modernism assaulting people's attention. On the contrary, the camera was presented as a device equipped with an empowering or even subversive quality, predating Susan Sontag's much later description of street photographers as an "armed version of a flâneur" (2001). These qualities might be activated if one resists using the device inattentively or in full conformity with the technical instructions and mainstream aesthetic styles, which Lux saw in certain standards and clichés first established by realist paintings, and later by professional, commissioned photographers (in Jarzombek, 2004). But we can also recognize an important difference between these two articulations of concerns. While historians and archivists advocated the incorporation of amateur photography into the (mass-)production of cultural heritage through a kind of distributed mass-surveyance (note the connotation between surveying and surveilling), more-or-less explicitly in line with at the time popular ideas of managerial efficiency, optimization of individuals, and collective productivity, Lux's postulate seemed to have deliberately evaded this line of thinking.

23 Jarzombek explains Lux's stance toward modernism as an attitude that recognizes some of its benefits but does not oppose the conservative position. In other words, Lux's point is to show how one can learn to benefit from emerging advantages of the two opposing views, which are the modernist's "freedom from dogma" and a certain metaphysical relationship with "the traces of the past" characteristic of the conservative approach.

As opposed to merely following templates and receiving instructions, he advocated developing one's own, internal framework built on one's subjective beliefs and values, what I would call a long-term para-archival mindset which, if adhered to, while helping shape a reflective subjecthood, might secure a historically relevant account of time.

Figure 4.3: *24 HRS in Photos* by Erik Kessels, Courtesy of KesselsKramer Press.

Ubiquity and Excess

We might say that the premonition encapsulated in the cited excerpt from the "The Camera as Historian" has been fulfilled precisely one hundred years later. The image above is of an art work entitled *24 Hours in Photos* by Eric Kessel and displayed in Les Rencontres D'Arles in France, July-September 2013 (Fig. 4.3). This impenetrable pile of images that one encounters upon entering a church hall results from a continuous printing process. The source of this stream of imagery is Flickr, a popular online service and smartphone app for taking, storing, and indexing snapshots. As the artist claims (and the statistics confirm), every twenty-four hours 300,000 new snapshots are uploaded to Flickr, contributing to what the authors of the "The Camera as Historian" would call the "mass of comparative lumber," and we today perhaps denote in terms of Big Data if not "data exhaust" or "data sweat."[24] As regards the quote from "The Camera as Historian," Kessel's installation can be seen to provide contrast in an

24 By the term "data sweat" I mean the refuse and by product of mundane digital interactions; the term has been discussed much more thoroughly by Melissa Gregg (Gregg, 2015). Data sweat is a byproduct of a digitally augmented body, always seen as a somewhat porous entity unable to fully control the streams of data it produces.

arresting montage; on the one hand, it makes us realize the change of the practice of quotidian photography over the last century caused by technological developments . On the other, it suggests that today's concerns (if one agrees that the information and data overload is a concern) are not entirely new.[25] As if moving back in time or mapping the present onto the past, Kessel conjures up the material dimension of the allegedly immaterial practice of digital data production. The project reminds us that, despite a serious reconfiguration of its material substrate (from a paper coated with a light-sensitive formula of chemicals, to time-sensitive, imperceptibly operating networks of transistors and capacitors of "microtemporalities," as Wolfgang Ernst describes the new units that constitute the dynamics of digital culture and memory [2013, p.70]), digital photography, like any other data collection practice, remains a material practice.

In a most direct sense, *24 Hours in Photos* visualizes what survives in various forms, whether or not it is so easily perceptible. If, one hundred years ago, Lux argued that photography would increasingly pervade everyday life to such an extent that it would be hard to distinguish between the social and technological dimensions of our public and private lives, today everyday life is indeed shaped in an inextricable relationship to "ubiquitous photography" (Kember, 2014).

Marc Weiser, the declared father of ubiquitous computing, stated in the late 1990s that instead of inserting ourselves into computers and the virtual realms they offer, computers will gradually become inserted into our everyday lives, to that extent that their presence will no longer be noticeable. "The most profound technologies are those that disappear. They weave themselves into the fabric of everyday life" (1999, no pagination). Concluding his rather techno-enthusiastic vision of the evolution of computing technologies, he also asserted that computational ubiquity will help us "overcome the problem of information overload," because computers will provide the amount of information that precisely corresponds to the scope and specificity of individual needs and habits. Consequently, navigating through a ubiquitously technologized space will be "as refreshing as taking a walk in the woods." What remains relevant in this otherwise contested vision is the observation that people increasingly take the pervasiveness of technologies for granted (Fig. 4.4). The outsourcing of agency to seamlessly operating mnemotechnologies has become a somewhat naturalized phenomenon. Indeed, his definition asserted that technologies "weave themselves," as opposed to being consciously invited into people's everyday lives. However, what presently seems to animate this weaving process is not only technologies' function to serve, but also to be served. Today, computing does not only become ubiquitous in order to provide information for its users, but also,

25 For instance, Linda Stone, a researcher studying the implications of modern network technologies, argues that it is not precisely the overload of information per se, but its overconsumption that should be seen as a major concern of network technologies (Stone, 2010).

or at times one could argue primarily, in order to collect information on them. The metaphor of the woods, where one might retreat to escape the flood of information and enjoy a degree of autonomy and solitude, has over recent years become completely invalid. The woods have become appropriated into highly monitored green zones. They are no longer an autonomous space, but a walled garden, yet another well planned junction of the "smart city" expanding all around.

Figure 4.4: Next to vending machines with food or cigarettes, today one also encounters those offering cheap, wearable technologies and capturing accessories. This coexistence reflects the increasing entwinement of technologies and technological habits into the fabric of everyday lives. The snapshot comes from interpreting, one of my on-going projects. September 2016, Barcelona.

In discussing ubiquitous photography, Kember argues that once independent and unrestrained practices of everyday photography have gradually been altered by the expansion of network technologies, and online social media services. If, in the past, vernacular photography practices might have been discussed in terms of ideas like bottom-up culture, user-centrism, and autonomy from institutional frameworks, aesthetics, and ideologies (Kember, 2014, p.15), today this picture is contested. To a large extent, amateur photography that takes place via network technologies is bound to and orchestrated by mechanisms of ubiquitous computing,

and as such, by larger data economies and industries. Transformed radically by ubiquitous computing, everyday practices of photographic documentation have become an intrinsic layer of an apparatus of "ambient intelligence" constituted by a network of technological infrastructures, hardware and software monitoring, latently aggregating and processing various kinds of information sent in from personal devices.

Transactionality and Enclosure

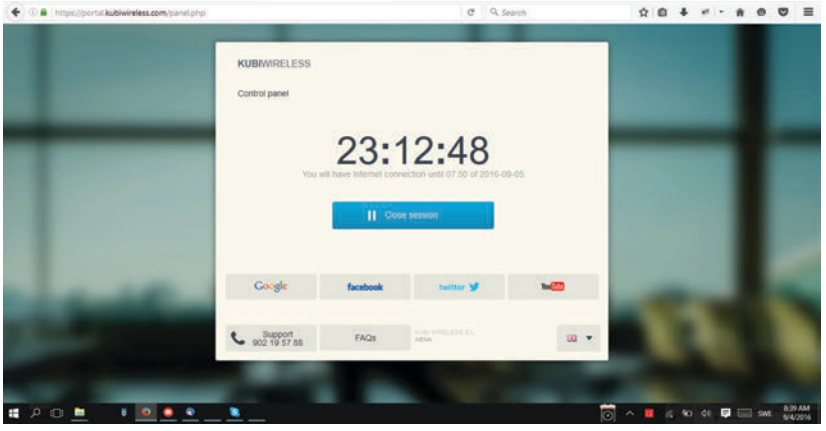

Figure 4.5: A screenshot of a welcome page I took right after logging to a "free" Internet access point at the international airport in Barcelona. The suggestion that the Web is limited to few major enclosures is well demonstrated here. The main routes that one is offered right after signing in lead to major services offered by only a few interlinked corporations.

The context of network technologies and social media services integrated into practices of capturing everyday reality make these practices and their products an inevitable part of a contract with their providers. Despite being marketed as free of charge, a number of network media services involved in capturing everyday life experiences have a transactional quality. This means that, in order to capture data and subsequently gain access to its display (and analysis), the user must accept the possibility of disclosing this data to an unknown gaze. In photography (as with any other kind of data) the subject of this transaction is not necessarily the content, but also, or often primarily, its surroundings, which is to say, its meta-data (location, time, information on people viewing the content, liking it, or being tagged in it).[26] This transaction often happens without full

26 Quoted by Schneier in his book *Data and Goliath*, the former NSA general counsel says: "Metadata absolutely tells you everything about somebody's life. If you have enough metadata you do not really need content." Schneier points out that, while there is an increasingly refined code of legally dealing with aggregating personal data, there are gaps in relation to meta-data aggregation. Seemingly less relevant meta-data can be even more relevant than actual data, and the words of CIA director Michael Hayden that they "kill people based on meta-data" only prove this point (2015, p.23).

consent or with only limited understanding of the potential implications and purposes that might be made of data points surrounding, in this case, the image and people's interactions with it (captioning, commenting, liking, distributing). The principles and complexities of such transactions are often obscured in lengthy terms of agreement that, as some studies show, only about seven percent of users bother to go through (Smithers, 2011). Contesting the idea of vernacular photography as a renewal of archival practice, today's amateur photography practices and digital snapshooting habits are influenced and determined by large tech industries to feed archives with short-term, economical and market value, and not ones with long-term, cultural, and historical significance.

In the past, as with the previously discussed practices of early snap-shooting, the everyday practices of capturing life with cheap, portable cameras were seen as claiming zones of a relative autonomy and holding the potential to constitute alternative aesthetics for experiencing and registering everyday life in modernity. The integration of amateur photography into the mechanisms of the web contests such a view, and, as Kember argues, forces us to rethink contemporary amateur photography (and, more broadly speaking, personal archiving practices in the context of network media) in terms of "a contested ground" (Kember, 2014).

A "feudal land" is web security expert Bruce Schneier's way of framing these new dynamics of capturing personal data in the context of the web 2.0 (Schneier, 2015). He sees big corporations that presently orchestrate the market of network technologies and the dynamics of the web (e.g. Apple, Google, Facebook, Amazon) as being "analogous to the feudal lords" where "we are their vassals, peasants, and—on a bad day—serfs. We are tenant farmers for these companies, working on their land by producing data that they in turn sell for profit" (ibid., p.58). While being officially promoted as open, free of charge, and designed, above all, for the benefit of those directly engaged in them, individual practices of capturing everyday life via third party services such as social media apps need to be seen as repositories providing the market with a free source for their operations.[27]

The "mass of comparative lumber" raising concerns of archivists a hundred years ago is today in the very interest of these mnemotechnological industries. As Lev Manovich argued, social media corporations "have a direct interest in having users pour as much of their lives into these platforms as possible" (Manovich, 2009, p.325). The stimulation of personal data capture can be hence seen as an inherent imperative of

27 This abundant production of personal data can be connected to the idea of free digital labor. Tiziana Terranova describes this phenomenon as a structural component of late capitalism, suggesting that free labor has always been at the core of activities taking place in the web (2000). Consequently the transition from seemingly free internet before the era of the web 2.0 brought about not an invention of free labor, but rather its exploitation by the most powerful players in the tech industry at the time.

mnemotechnologies operating in capture culture.

As Andrejevic argued (2013), today, in the context of big data economy there is "no category or amount of data that is ruled out a priori from the perspective of those who seek to mine it for unknowable and unpredictable patterns" (ibid., p.96). Thus, websites and social media services are being deliberately engineered and designed to influence their users to account for their everyday life as thoroughly as possible, as to increase the chance for a potential profit from the outcomes of the algorithmic operations performed upon them, and to provide enough data points for a precise targeting of the subject, and thus perpetually stimulate data production and consumption.

To paraphrase Vilém Flusser, many web services involved in personal data aggregation, such as social media, turn the activities of their users (or serfs, as Schneier would prefer) into their very "function" (Flusser, 2011, p.10). In other words, while the "seemingly sovereign individuals" (Chun, 2011 in Emerson, 2013) are given a certain range of possibilities to create and interact with their life accounts (the ability to "upload," "map," "zoom out," and "manipulate" their personal data), they simultaneously become a mechanical component of a larger mnemotechnological mechanism "to which framing and underlying (filtering) mechanisms she or he is not privy" (ibid.). In this sense, the transactional character of media is executed in terms of data acquisition (which is to say, the outcome of one's activity), but also in the very life of an individual, his/her involvement in documenting his/her life becomes a constituent module of this on-going, transactional feedback loop. The transactional cycle that benefits the main players in the technological ring is assured through a structural incorporation of hyperlinks that interconnect them, creating a sense that the totality of the web is limited to just these few options provided by the big players. In other words, the web becomes clustered and compartmentalized into enclosures by big corporations that facilitate the traffic between them, and often not much outwards. Anne Helmond has called this phenomenon the "platformization of the web" (Helmond, 2015), arguing that social media services such as Facebook have lately become the dominant infrastructural and economic model of the web, significantly reducing other forms of design for the web, as well as modes of online communication and navigation (Fig. 4.5).

Temporality and Sedimentation. (The Facebook Timeline and Its Deep End).

The compartmentalization of the web is a deliberately calculated entrepreneurial strategy that tech corporations employ. Several years ago Mark Zuckerberg stated that one of his ambitions with Facebook has been to make it work as a passport to the internet (Sengupta, 2012). According to SimilarWeb Ltd., a US-based digital market intelligence company,

as of February 2017 Facebook was the second most often visited online service, after Google (SimilarWeb, n.d.). A large portion of those who use Facebook turn to it as their main source of news, and for almost 50% of young Facebook users in the US a visit to the service is their first activity upon waking up. The Facebook app is the most often downloaded smartphone application. For a range of other online services, (e.g. Spotify), it has become the norm to let users sign in to their online service or app through their Facebook profile, a feature known as Single Sign On (SSO). Extrapolating from Zuckerberg's words, Facebook has become not only a major enabler of access to the internet, but also the major programmer of how people socialize with each other, communicate, and consume the news in capture culture. Even more importantly, since the introduction of timeline, one might see Facebook as a passport to participating in the most prevalent form of capturing, mediating, and archiving personal life accounts.

Despite how Zuckerberg perceives it, this passport is not merely an artifact that gives its owner the magic possibility to cross boundaries freely and navigate between different countries. It is not a neutral interface. While legitimizing some forms of mobilities, it disables others (Keshavarz, 2016). If (as Zuckerberg wants) we were to see Facebook in terms of a passport to the internet, providing people with access to a mainstream mode of constructing and sharing life synopses, we also have to see it as disabling other forms and possibilities for doing so. In other words, while providing a sense of freedom in terms of navigation, Facebook locks the subject into a specific techno-economic regime of navigation through mediated memories. There is a contract and transaction written into every passport. In return for the right to freely cross borders, the authority has right to control this mobility, while acquiring insight into the subject's personal information. From this perspective, every passport may be seen as a physical interface or an extension of a larger digital database accessible only to immigration officers and state authorities. In this database, the passport expands into a deeper history of departures and arrivals. Its different nodes are open for insight and penetration. Something similar can be said about Facebook. Behind the surface of the Facebook timeline on which one successively documents his/her life and shares memories in a seemingly controllable way, there is a whole, inaccessible archival depth that remains beyond individual control. This depth is not limited to the boundaries of Facebook databases. It spans much larger territories of the online world.

In December 2011, Facebook changed its layout from a less structured database of updates and notifications to the aforementioned timeline, which is a chronologically evolving collection of images and textual information about a person's everyday life. While older versions of Facebook were mostly news feeds, quick updates, and acknowledgments by friends, timeline added the feel of compiling a personal archive, or a chronicle of one's life (van Dijck, 2013). The introduction of timeline

also marks a moment when memory, emotion, and nostalgia became part of the Facebook experience and an integral component of their business strategy, expanding its function way beyond a mere communication service and news feed. As van Dijck points out, the timeline structure encouraged users to post pictures from "the pre-Facebook days of their youth – a baby picture, family snapshots, school classes, old friends, college years, wedding pictures, honeymoon – and thus experience content in terms of their life's story" (ibid., p.55). While revamping the service's architecture, Facebook also started updating its privacy policy. From then on, all content uploaded on the timeline was, by default, set as public with optional privacy. Only a month after the timeline was introduced, Facebook began extensive collaboration with external companies, whose advertisements started cluttering users' profiles.

The introduction of the timeline can be seen as pivotal for Facebook on its way to unprecedented commercial gains and dominance on the data market. While the timeline offered the user a chance to neatly organize his/her flow of data and decide on its openness and disclosure, it simultaneously established a more efficient infrastructure for covert data aggregation and storage. As van Dijck highlights, the uniformed and streamlined design ultimately benefited advertisers and other third parties. They could now more efficiently extract content from the users' data sets, which became far more commensurate and comparable than they were before the timeline was introduced (2013). In other words, while the front end of Facebook captivated its users with its visually attractive and relatively simple and user-friendly structure, enabling them to construct what seemed to them an associated mnemonic milieu, an imperceptible, dissociated mnemonic milieu was simultaneously being formed on the deep end of the timeline. With the timeline structure, Facebook also started offering its users the chance to copy the profile by downloading a zipped file that would seemingly include all the archived information in one's Facebook profile. As Austrian law student Max Schrems has proved, however, this zipped file is only a fraction of what Facebook really archives. After submitting a request under the European "right to access" law, he made Facebook disclose all the information that the corporation had collected on him. Facebook sent him a CD with a 1,200-page PDF document containing far more substantial data than the generic archive offered for download (which, according to Schrem, amounts to only about 29 percent of the aggregated data). The data that was not included in the Facebook service concerned, for instance, the "like" function, tracking on other webpages, results of face recognition, videos, posts launched on other users' timelines, pages viewed while signed in to Facebook, and previously deleted content, such as tags or comments.[28]

28 The full list of datasets of interest to Facebook can be found here: http://europe-v-facebook.org/EN/Data_Pool/data_pool.html, accessed 29.05.2017

An in-depth study of this hidden archival sedimentation dissociated from the user's perception has recently been pursued by Share Lab, a Serbian data investigation lab exploring various technical aspects of the intersections between technology and society.[29] The graph on the next page depicts only a fraction of their analysis of Facebook data archiving procedures (Fig. 4.6).

According to this visualization the data that Facebook archives comes from four major sources: actions and behaviors, profile and account, digital footprint, and outside of the Facebook domain. Actions and behaviors are to large extent voluntarily performed activities, such as uploading images, or visiting pages by clicking on links embedded or posted by others. While the number of these actions seems quite low, the effect of each is captured and subsequently discretized into between four and six other data sets, which altogether amass up to eighty different categories of information that Facebook' algorithms are thereafter able to harvest, archive, analyze and sell. The second group, profile, and account information mainly consists of voluntarily typed information, usually inserted by the user and which remains relatively static compared to the flux of mediated memories that are the actions and behaviors regularly published and shared on the timeline.

Another source of personal data is the digital footprint, which is information gathered from mobile phones, laptops, and desktop computers from which users access Facebook, and more generally, the web. This is an example of how Facebook can easily move beyond its framework to harvest personal data. This mode of personal data archiving is involuntary compared to the intentionally logged data discussed above. Thus, it is alternately called a "passive digital footprint." It is enabled by trackers such as cookies – small pieces of software sent from a website and stored on the user's computer or mobile device to capture their owner's various actions. Developed in 1994 by Netscape programmers, cookies introduced what I would call a mnemotechnological layer to online surfing which, until then, had been characterized by a lack of pervasive capture and traceability as we know it today (Shah and Kesan, 2004).

> Cookies fundamentally altered the nature of surfing the Web from being a relatively anonymous activity, like wandering the streets of a large city, to the kind of environment where records of one's transactions, movements and even desires could be stored, sorted, mined and sold. (Schwartz, 2001, no pagination).

Trackers gather and send back information such as the identity of a user's computer and his/her movements across the web. One need not even be directly active on Facebook to become the subject of such tracking and archiving procedures. Instead of us visiting the Facebook page, through

29 From the Share Lab's official website: https://labs.rs/en/, accessed: 29.06.2017

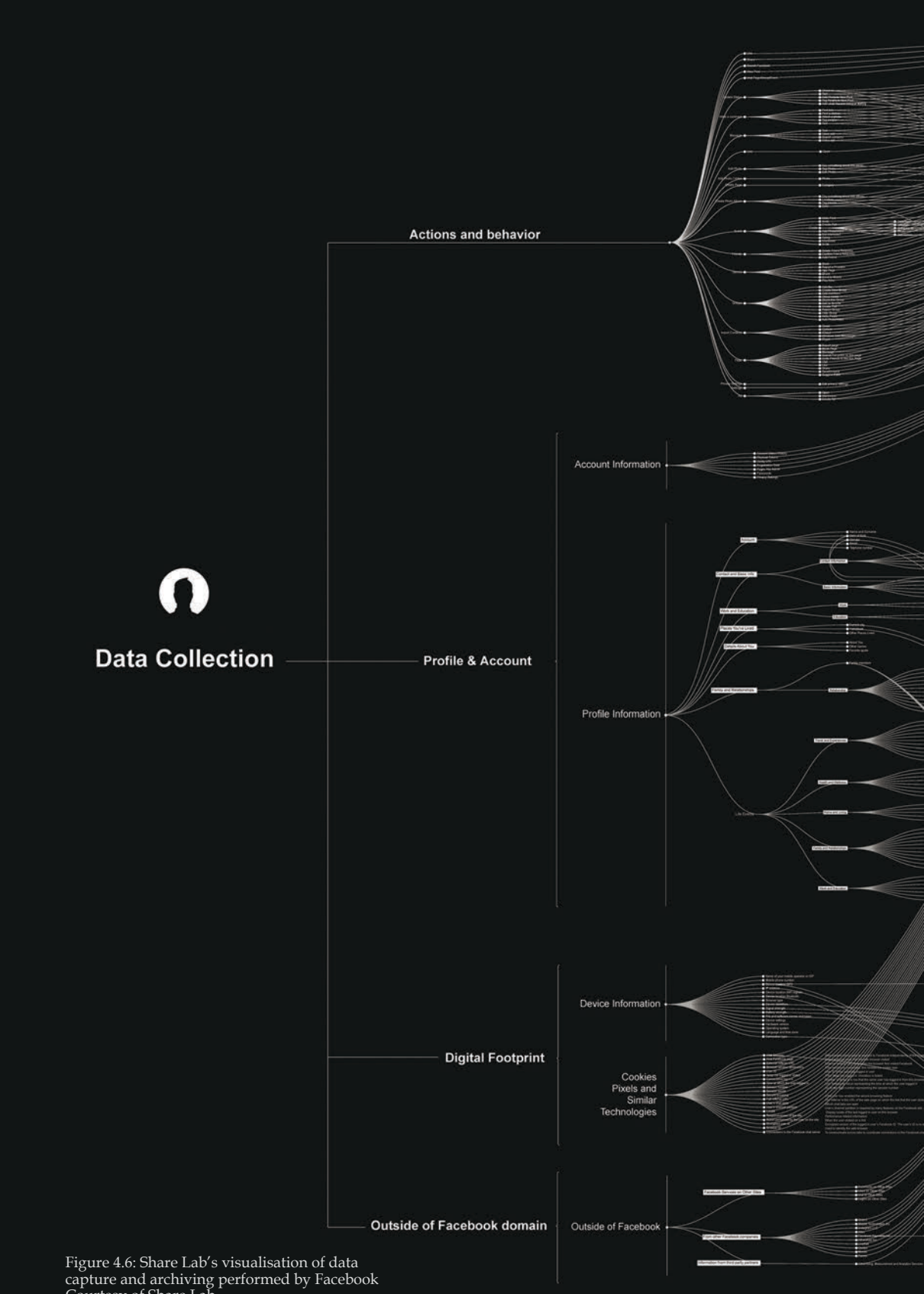

Figure 4.6: Share Lab's visualisation of data capture and archiving performed by Facebook Courtesy of Share Lab.

the pervasive surveilling agents, as we might alternately describe trackers, Facebook can "visit" us whenever we browse through a website that has such trackers embedded in its architecture, including advertisements or social and "like" buttons which, as of March 2015, populated about 13 million pages worldwide (Gibbs, 2015). Facebook trackers collect information on its users whether or not they are logged in. This brings us to the fourth category: data collected from outside of Facebook. Since Facebook owns a range of other online services (e.g., What's up, Instagram, Atlas and Oculus), or is in close partnership with other companies (such as Acxiom, one of the largest players in American database marketing), the data that these services harvest is subsequently channeled into Facebook databases or exchanged for data gathered directly by Facebook (Singer, 2012). Moreover, several years ago Facebook introduced "data cookies," which are installed on the individual's computer browser and remain there for two years after clicking the like button. This allows Facebook to continuously collect data from the browser, expanding their tracking dominion over those who do not use Facebook or opted out long ago.

One of the creators of the above graph, Vladar Joler, explained to me that the visualization has to be seen as the organization's interpretation of how the system might work according to data and information they collect. In our email exchange he explained further that "most of the information that we collected related to storage is based on different publicly available patents and data collected through API. And those patents are from different years and maybe they do not represent exactly how the situation is today, in this moment. Still, that is probably the best we can do to investigate this black box from the outside." In another section of their website concerned with mapping the pervasiveness of Facebook trackers, the group compares the inherent imprecision of their data visualisation and mapping techniques to efforts of early cartographers who:

> [T]ravelled, observed and measured distances without any sophisticated tools and technologies whatsoever. In the same manner we like to think that the map of the Facebook algorithmic Empire we presented here is similar in precision to some ancient maps of the world. But, this can be a really optimistic idea. As opposed to geographical data, that change quite slowly, the shapes of the Facebook Empire change on daily basis. New algorithms and categories are being introduced, the system is tuned regularly, new components are being added. And all of this inside of the black box.

Nowness and Emphemerality

Sarah Kember and Joanna Zylinska describe Facebook as "a modulation of life itself." It is simultaneously "a process and an entity" (2012, p.158), in which the possibility for self-expression, and more importantly to this

thesis, self-archiving, are simultaneously and inseparably calculated and "incorporated in to the apparatus of technocapitalist production" (ibid., p.159). Facebook seems to be built of paradoxes or, differently put, seemingly exclusive attributes, such as process and entity, flow and stability, or, as was partly demonstrated above, two different, yet enmeshed relations between data and temporality: their simultaneous flux and sedimentation. Despite features of the timeline which make interaction on Facebook appear as a construction of a durable personal archive, the overriding feeling upon visiting the platform is that of being captivated (and taken captive) by a continuous "flow through the present" (Bogost, 2010, p.28) or an atmosphere of "rapid change and forgetfulness rather than of remembrance and preservation" (Kaun and Stiernstedt, 2014).

This continuous flow or stream of mediated memories taking place "on the surface" of the platform's architecture keeps luring and inviting the user to submit to this boundless generation of affective responses. Consider the constant reminders to capture and share "what is on your mind" along with your "feelings" and "activities" at the moment. If responded to, every such impulse turned into a trace (image, text, or emoticon), while serving as evidence of one's presence, a particular mark in time, calls for another affective response to ensure one's sustained presence on top of the flow. However, as argued above, the bedrock of this flow of impulses is where simultaneous, steady accumulation, cataloging, archiving, and distribution of the extracted technovalue take place. As Kember and Zylinska assert, in the context of social media, "'life itself' becomes a product, that is constantly remodelled and repackaged via the flickering pulsation and pings of data" (ibid., p.163).

Somewhat tapping into this metaphor of surface and depth, John Scanlan describes contemporary mnemotechnologies in terms of "Surf Life":

> Media technologies that existed once to document and archive the world around us, providing external and physical counterparts to memory, are now designed for different purposes that implicitly recognize the existence of what I refer to as Surf Life. Their intention is to grasp the momentary and immersive, and for reasons that seem to have less to do with posterity – with the archival impulse – than with living in the now (Scanlan, 2013, p.142).

The persistence of instantaneity and nowness as major features of present mnemotechnologies are even more clearly detectable in Snapchat, another popular mnemotechnology recently mutating from primarily communication toward increasingly quasi-archival apparatus. Initiated in 2011, the service has been intended to "empower people to express themselves, live in the moment, learn about the world, and have fun together." The aim of the developers was to differentiate their offer from other players on the social media market and photo capturing services by making the captured and shared content eventually disappear from the receiver's de-

vice, leaving no trace and thus avoiding privacy and data surveillance implications. The person who took and shared the picture could decide on the longevity of the image by changing the settings so it would last between one and ten seconds before fading out. Other social media services and applications for visual capturing, such as Facebook and Instagram, as the Snapchat founders maintained, have made people behave in a scripted, and thus, "inauthentic" way. On these platforms, people always attempt to make and circulate the best image, apply filters to cover their deficiencies, and potentially hide the image from their timeline or "untag" themselves. In contrast, the fleeting and ephemeral quality of Snapshot images has been intended to stimulate an unburdened circulation and consumption of more "authentic" and uninhibited images, where, besides preoccupation with aesthetics and self-representation, concerns related to where the image might end up being stored and to what other, third parties it might get disclosed to are kept to a minimum.

As co-founder Evan Spiegel explains, "Snapchat isn't about capturing the traditional Kodak moment. It's about communicating with the full range of human emotion — not just what appears to be pretty or perfect." In this sense, the image in Snapchat is envisaged as acquiring a role similar to the spoken word, a unit of communication in a spontaneous and unscripted dialog (or chat), which, after being externalized, vanishes from the field of perception, remaining only in the memory of those in the conversation (cf. anemnesis in Plato's dialogs). This ephemerality of snapshots intensified the production of snapshots to an unprecedented scale, incomparable with any other social platform.

Besides to some degree fostering playfulness and bonds between close friends (Piwek and Joinson, 2016), the seemingly endless flow of imagery and the limited life-span of the captured images also encourage more unrestrained and explicit modes of capturing and communicating the captured image, including the practice of "sexting" (Poltash, 2013), some instances of which led to scandals and privacy violation. Even though users believed their photos on Snapchat were not being stored and archived, it was relatively easy to save them, using photo capturing technology, third party applications, or simple screen-shots, for example; from there they were circulated again either within or outside the Snapchat framework. With a few simple manipulations by the user, the non-archival incentive of the service could be practically defeated. It has also been proven that even on a technical level Snapchat images do not fully disappear; instead, they might constitute involuntary archives.

Trent Leavitt from Decipher Forensics (2014) demonstrated that, alongside the disappearance of the captured image from the Snapchat native folders, the operating system of the mobile device on which the application is installed (Android in this case) creates a backup copy of the file along with additional "artifacts" which are remnants of meta-data saved into an xml file. After running a test using AccessData's Forensic Toolkit,

he found out that received snapshots do not "disappear forever," but are in fact saved and appended with a ".nomedia" extension. This added extension disrupts the original extension of the image file (.jpg), preventing it from being identified as such, and consequently, from being displayed in the phone's image gallery. In other words, to render the file invisible to people, the software does not erase, but rephrases and re-labels the file by supplementing it with additional information. Thus, what we and our senses construe as deletion and erasure, the operating system might perceive as a specific mode of archiving, or as Ernst would have it, dynarchiving, in which a collapse of erasing and storing procedures is a prerequisite to any operation concerned with the registration and mediation of digital memory (Ernst, 2013, pp.90-94), and, as seen here, its destruction.

Recently, Snapchat has changed its strategy and started implementing additional features that make its look and function much closer to other mainstream platforms, such as Facebook and Instagram. Like Facebook's timeline, today one can save snapshots as "memories" or "stories" that can be retained for longer periods of time. As the promotional materials for these new features demonstrate, the service is no longer about snapping "ugly," uninhabited images or engaging in spontaneous communication, but rather constructing highly stylized shots and videos that can be additionally manipulated with a range of ready-made filters that come with the application. Lately, as a response to Google Glasses, and in connection to the wider trend of life-logging, the practice of continuous automated capture and archiving of daily activities enabled by ubiquitous and wearable computing (Dodge and Kitchin, 2007), Snapchat released Spectacles, "smart-glasses" with an embedded camera that allows its users to capture and upload ten-second video sequences. It is disputable whether this latest series of strategic moves is a response to the contested ephemerality of Snapchat's content, or a challenge taken up to compete with Facebook and Instagram, currently dominating the market of visual capture and personal digital archiving technologies. In any case, the result appears to be yet another instance of a technological novelty that, in order to remain successful, submits itself to standardization and homogenization in line with the trends and principles established by leading tech corporations, which consequently fosters what Kember and Zylinska have described as a "proliferation of difference-as-sameness" (2012), and Stiegler (more broadly, in relation to the effects of cultural industries) as "hypersynchronization"(2009, p.72).

Algorithmic Cruelty and Bias

As I attempted to demonstrate above, the continuous flow of the momentary, the on-going expression of a seemingly unconstrained emanation of individual agency (whether on Facebook or other similar platforms), is always, to some degree, capturable and consequently archivable, de-

spite one's intentions. This is primarily due to the very constitution of the network, contemporary computing technologies, the web, and overall, their shared reliance on digital memory transmission and storage, but also a prospect of economic benefits. Every interaction through such mnemotechnologies results in some archives, but what falls into these archives can be and is deliberately stimulated and predetermined by those who have control over their architecture. In other words, the cost of operating on the surface of present mnemotechnologies (for example, the Facebook timeline, which seems like a surface only when the depths beneath are realized) is a submission to the capturing and archiving of attentional fluxes (Stiegler, 2016) that takes place not only on top, but also underneath. If this can be seen as a part of a transaction and trade-off that, as some reports demonstrate, users are partly aware off and have gradually accepted as the norm, yet another cost can be seen in the unintended de-contextualization of one's mediated memories and archive.[30]

To exemplify this, we might look at Facebook and its other steps to increase its function and appearance as a life chronicle. Tapping into the common practice of recollecting the events of the year at its close, Facebook engineers developed an app called "the year in review." The app automatically traverses the content of the user's wall to compile a standardized presentation that highlights what seemed the most important moments from the last year of the subject's everyday life. After activating this feature, Eric Meyer, web designer, consultant and writer, was presented with an image of his deceased daughter, who passed away that very year and whose image he posted right after to grieve his loss (Meyer, 2016). The image, just like every other image initiating millions of other people's yearly reviews activated by Facebook, was displayed against a cheerful background and surrounded by a caption saying "It's been a great year! Thanks for being a part of it." Meyer responded to this by writing: "Yes, my year looked like that. True enough. My year looked like the now-absent face of my little girl". He proposed we see this incident as a result of what he calls "inadvertent algorithmic cruelty." Meyer does not directly blame the Facebook programmers for such a shocking montage of his yearly review. He stops at accusing them for being thoughtless. He does accuse the algorithm, however. The assemblage he was proposed as a summary of his mediated memories was, to a large extent, the result of a randomized procedure incapable of making moral and ethical judgments. Where the human aspect fell short, he argued "was in not providing a way to opt out." The Year in Review kept appearing on his Facebook wall with, at times, a swapped background image, yet always retaining the same, celebratory aura. Meyer pointed out that the year in review revealed Facebook's bias toward success stories and life as a stream of

30 For example, results of a report made by Pew Research Center demonstrates that majority of Americans are fine with exposing their privacy online, depending on the deal and benefits they are given in return (Rainie and Duggan, 2016)

happy moments. Referring to the digital media industry at large, he ended his article saying "If I could fix one thing about our industry, it would be that: to increase awareness of and consideration for the failure modes, the edge cases, the worst-case scenarios."

Meyer's mediated memory became captured in two senses: firstly, through the algorithmic procedure mechanically scavenging on the image of his daughter, while extracting all emotional residue it carried. Secondly, he was captured in an inescapable feedback loop, mechanically re-posting this traumatic moment without his consent. This entrapment in a loop was avoidable only to a certain degree – if Meyer opted out from Facebook. Yet even this might have not been enough, as this unfortunate review, as Meyer mentioned, persistently appeared on his daughter's friends' timelines as well. Meyer's case supports the argument that, in order to participate in the production, sharing, and circulation of memories via increasingly standardized and automated mnemotechnologies, one has to consider not only the above-discussed implications of their transactional character (seemingly free space for allegedly unrestrained expression and mediation of personal memories, but in fact at the cost of infiltration and capitalization on this data by third parties), but also the possibility for having these memories (and their emotional aura) occasionally abused, misrepresented, and their meaning significantly and irreversibly twisted. In other words, one's specific motivation for mediating and archiving a particular moment via such mnemotechnological services as Facebook might become completely obliterated, the mediated memory might enter completely unexpected and undesired contexts. In Meyer's case, this cruel juxtaposition was constructively processed and triggered critical reflection which was eventually endorsed by Facebook. This need not be the case for every Facebook user, however.

Below Meyer's article, a range of other Facebook users posted their reflections and often similar experiences with algorithmic cruelty. One example includes an image of a burnt-down house that initiated a review of its owner's "great year." Another person writes about an instance where Facebook's algorithm suggested he befriend his ex-wife's lover.

If, at the beginning, Facebook's wall (and later timeline) might have seemed like a kind of tabula rasa, a space to be populated by an individually constructed chronicle of everyday life, today it has morphed into an advertising wall where the distinction between the agency of the user and an algorithm becomes blurred. As such, it is becoming ever harder to distinguish between a person's genuine impression, expressed through a deliberately composed post, and algorithmically placed advertisement, sponsored content, and articles. Inevitably, stylistically, and aesthetically, they borrow from each other, making the division almost obsolete. Using Stiegler's vocabulary, "retentional" media technologies such as Facebook constitute a space where individual and collective self-expression through mnemonic externalization simultaneously becomes a target and

"a mode of access to the market" for the algorithms (2016, p.69).

Privacy and Paranoia

When it comes to third party services for capturing memories, alterations of terms of use can be very rapid. People might go for some services but end up being confined in something that does not resemble what they originally subscribed to. While the increase in efficiency, convenience, functionality, and speed of mnemotechnologies can easily capture one's imagination and attention, the changes at their root level (which include the terms of use and privacy issues) are not so easily detectable.

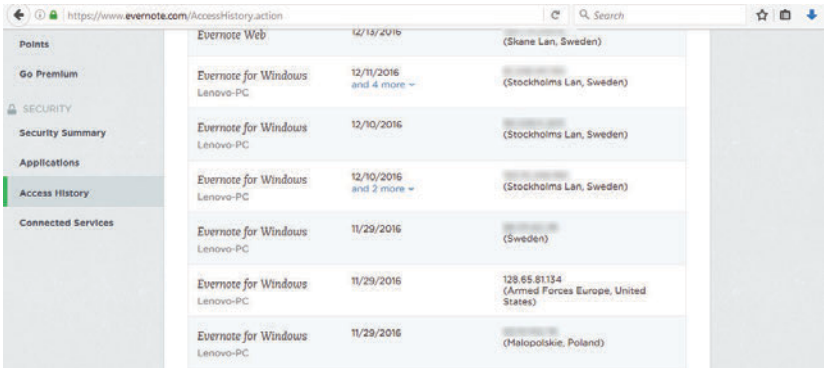

Figure 4.7: A screenshot from the access history on my Evernote account's settings page with a recorded log from a suspicious entity.

Some years ago, while signing up for Evernote, a "freemium" service facilitating a multi-modal record and organization of personal digital notes (including pictures, snippets of audio and video), I believed I was signing up for a small-scale service. It soon grew into a large corporation and is currently run by the former CEO of Google Glass. The alliance with Google also includes prospects of integrating it with the latter's popular data storage service, Google Drive. To register and sign up for the service, one can already use one's Google account. This is another instance of the aforementioned SSO feature, and an example of on-going platformization of the web which van Dijck alternatively calls an "ecosystem of connective media" (2013, p.21). As of today, the service is used by 200 million users globally, and has accumulated around five billion notes.[31] The slogan "Remember everything" displayed on the welcoming page is followed by a brief explanation of the service's function, expressing the ideas of instance and ubiquity, important characteristics of capture culture: "Capture a note once, and it's instantly available on all your devices. Never

31 Statistical data as for February 2017 (Smith, 2017).

worry about where you saved something because it's in Evernote, and Evernote is wherever you are."

Following what can be seen as a typical trend, wherein initially free services evolve after gaining wider popularity, Evernote eventually introduced three plans: free, basic, and premium. Essentially, these plans differ in terms of the storage space and the amount of uploads per month. In December 2016, Evernote announced a change to its policy which allowed their workers be privy to people's notes in order to further improve the service. Eventually, after receiving many complaints, they withdrew the proposal, assuring the public that only the users would have access to their notes. Out of curiosity, while going through my application settings, I decided to check my access history (Fig. 4.7). To my surprise, among the log-ins from my home IP address and places such as the university and library, I found one log-in via the IP assigned to "Armed Forces Europe, United States." The date of the log was on the day I had an international flight between Krakow and Stockholm. That day I did not access my account, but since the app often synchronizes itself automatically, it might have done so via an open IP address at the airport. I am far from suggesting that my account was accessed by the actual US Armed Forces as, first of all, the log would not have appeared accompanied with their name spelled out so literally, and secondly, it would probably not have appeared at all in the access history. Nevertheless, I tried to get in touch with the Evernote's customer service. The only way for me to do so was via a generic query form available on the Evernote website.

One important difference between the free plan and the rest that the corporation introduced was the removal of all possibility to get in touch with customer service directly via email. This can be understood if we take into account the amount of people using the service today. Considering my case, however, I expected to receive a helpful response from a serviceman or woman (as I had earlier). Instead, after receiving an automated reply, I was directed to the FAQ section of their website, or as an alternative, offered to subscribe to the more advanced, paid plan, which would give me direct communication with a human customer service agent.

The Evernote example points toward several characteristics of capture culture we have discussed. One is the instantaneity with which people get used to capturing, accumulating, accessing, and sharing their memories. What facilitates this immediacy is certainly the pervasiveness of computing devices and services, a basic substrate of capture culture. Users can capture their memories on the go, with no special regard for space, conditions, time, and social circumstances. But while the software is "everywhere," constituting a spatio-material hybrid described by Greenfield as "everyware" (Greenfield, 2006), where is the human behind it? As we have just seen, the captured memories might become inserted into the layers of a larger automated technological infrastructure, in which indi-

vidual control over accessibility can become quite tenuous. Alongside the perpetual changes that a software and its terms of use undergo, the value (both the personal and the techno-value orchestrating today's data economies) becomes subject to modulation. How is the personal value modulated? Encountering the suspicious entry in the access history of Evernote made me start noticing value in my own accumulated notes which I had not necessarily recognized before this incident. Whether this suspicious log-in was a trace of a deliberate act of data infiltration, a glitch in the software, or a joke, it revealed something previously imperceptible, or perhaps even ignored: the care for and value of personal memories, observations, and notes against the risk of having them exposed to and instrumentalized by an unintended force. After consulting the case with a few IT experts, I still received no answer as to what exactly had happened. One of them said that there was "no need to panic," confirming my suspicion that, if it was a deliberate act of data infiltration, it would not have been registered in the application's access history.

The example of Evernote can be seen as embodying the larger phenomenon of the convenience-surveillance trade-off, which connects us back to the transactional character of mnemotechnologies in capture culture. In return for having our devices constantly on and connected, wherever we move, we expose what we capture and store to unwanted gazes, categorizations, and hardly traceable circulation. The Internet of Things and interrelated concepts such as "smart homes", "smart cities", etc. are essentially based on the idea of increasing comfort, convenience, and the general quality of human life (Xia et al, 2012). But once connected to the network, all these devices that previously had no, what for lack of a better term I would call mnemonic and archival agency, or in other words, of which mnemonic and archival agency could not have been easily intercepted and manipulated from outside, all of a sudden became vulnerable and porous enough for such manipulations to occur.

For example, in a recent Wikileaks revelation, we learned that third parties can turn Samsung smart TVs into utilities for data capture and surveillance, due to their close integration with the internet. This does not happen through visual or numeric data, but through sound recording. The hack is possible due to the voice recognition feature integrated into the smart TV set and linked to the company's databases. Furthermore, even before these revelations were disclosed, Samsung had warned its customers: "Please be aware that if your spoken words include personal or other sensitive information, this information will be among the data captured and transmitted to a third party through your use of Voice Recognition" (Samsung, n.d.). The voice recognition feature (like the one found on mobile phone devices and applications such as Siri, as well as far-field voice recognition in Echo, the wireless sound system produced by Amazon) was intended to collect data for the analytics, evaluation, and improvement of the product, as well as the advancement of the icreasing-

ly effortless, hand-free communication with the device.[32] Lately, however, the company assures us that the feature has to be deliberately enabled by the user, and subsequently amended their use policy (Financial Post, 2015). Yet according to documents released by Wikileaks, the smart TVs, and in particular the voice recognition feature, have been subject to attack by NSA, acting in collaboration with UK's M15 secret agencies. *Weeping Angel*, as this surveillance program was called in the documents, places the target TV in a so called "Fake Off' mode while using the internet connection, convincing the owner that the TV is off when it is actually continuously on. "In 'Fake Off' mode the TV operates as a bug, recording conversations in the room and sending them over the internet to a covert CIA server."

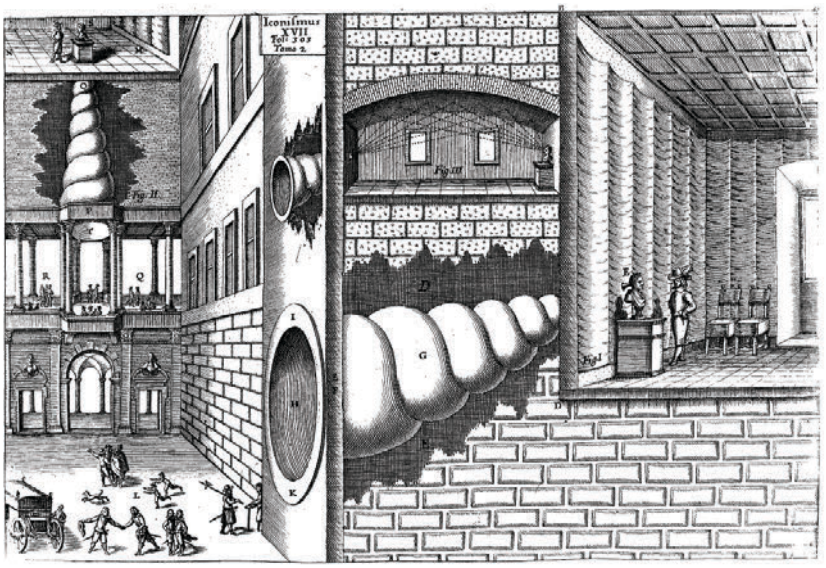

Figure 4.8: Athanasius Kircher, *Musurgia Universalis* (1650). Courtesy of the Department of Special Collections, Stanford University Libraries.

This example inevitably prompts comparison to George Orwell's dystopian scenario of mass surveillance through *telescreens* (1949), devices operating as both TV sets and surveillance cameras, used by Thought Police to control society. Digging deeper into the history of media and acoustic inventions, a similar comparison can be made to Athanasius Kircher's concept from 1650 (Fig. 4.8). *Musurgia Universalis* was a material, sound-surveillance infrastructure connecting public spaces and courtyards with

32 Taking advantage of the continuous sound capture, a court in Arkansas requested Amazon to release their recordings from Echo sound system, as evidence in a case investigating the murder of a man during or after a party where the device was used. While the First Amendment protected the privacy of the subject captured by the device, the recording was eventually obtained after issuing a special warrant (McLaughlin, 2017).

interiors. Every conversation taking place there could be overheard (but potentially also responded to) by putting one's ear (or mouth) against the mouth of a stone sculpture located in one building and connected to the network of spiral tubes stretching through the walls and ceilings of other buildings nearby.

While the juxtaposition of these examples certainly opens up an intriguing avenue for conducting an alternative history of surveillance in which the (pan-)acoustic takes precedence over the (pan-)optical, the reason for mentioning Weeping Angel here is to exemplify (once more) the pervasive, or, to use the sonic nomenclature, the ambient nature of the contemporary capturing and archiving of our everyday lives. The aspect that this throws into relief is the surveillance-convenience trade-off, which can be seen as another important dimension of living with mnemotechnologies in capture culture.

Life-logging, Total Recall and Quantification of Everyday Life

One other practice of capture culture that points at a radical transformation, especially at the material level of memory practices is life-logging. Several years ago, tapping into the growing ubiquity of capturing technologies and the impossibility of avoiding their impact, Microsoft researcher and computer scientist Gordon Bell stated:

> We are headed toward a world where it will require a conscious decision (or a legal requirement) *not* to record [emphasis added] a certain kind of information in a certain time or place – the exact reverse of how things are now (Bell and Gemmell, 2009, p.8).

Bell's techno-enthusiastic response to this situation was to fully embrace technological possibilities of the time and engage in the practice of life-logging. Regarded as a pioneer of life-logging (among others, for example Alberto Frigo and Cathal Gurrin), in 1998 Bell decided to begin the digital capture and archiving of as much information about his everyday life as technologically possible.[33] He saw advancements in digital technologies, storage capacities, and pervasive computing as enablers of a total memory, or as he called it, "e-memory." E-memory was not only a technological supplement, but potentially an evolutionary advancement, and the ultimate replacement of bio-memory. While describing the latter as "subjective, patchy, emotion-tinged, ego-filtered, impressionistic and mutable," in a highly techno-enthusiastic spirit, Bell emphasized the superiority of digital, automated memory as being "objective, dispassionate, prosaic and unforgivingly accurate" (Bell and Gemmell, 2013, p.51). In order to capture one's life accurately, Bell believed that human agency should be

33 For an expanded study of life-logging see Frigo, 2017.

entirely written out of the process, and replaced by passively operating sensors and monitoring devices.

As Rob Kitchin and Martin Dodge suggest in their oft-quoted definition, life-logging is "a form of pervasive computing, consisting of a unified digital record of the totality of an individual's experiences, captured in a multimodal way through digital sensors and stored permanently as a personal multimedia archive" (2007, p.2). What distinguishes life-logging from earlier practices of systematic recording and archiving of everyday life (e.g. writing memoirs, annals, journaling) is its increasingly automated, seemingly immaterial, and non-eroding nature, as well as its wide scope, which ambitiously aspires to cover "a totality of an individual's experiences" (Gurrin et al., 2014, p.3). As opposed to more energy-consuming, selective, and voluntary forms of personal archiving, such as journaling, life-logging deliberately "operates in a passive manner" (ibid., p.5). Thus, initiating or stopping the capture process are seemingly the only active moments in life-logging. What happens in between is a "passive" and "unobtrusive" recording of "facts" around the episodes in our lives, "but not their emotional and qualitative interpretation" (ibid., p.7). If some see the invention of writing and printing as historical moments, establishing new regimes for how people record time and life, Dodge and Kitchin believe that pervasive computing and life-logging might become the next such regime (2007, p.431).

Another contrasting aspect in comparison with analog forms of personal archiving is the principle of storage and retrieval of the archived content. While, in the age of digital memory in which the alphabet is transforming into the alphanumerical code (Ernst, 2013), people no longer only write, but increasingly log their multi-media life-bits, they do not remember (which is to say actively recall and reflect), but employ quantifying procedures and algorithms to retrieve these life-bits, set them in relation and extract meanings out of them. It is in this automated processing of captured memory that Bell's project takes its inspiration from Memex, a proto-hypertextual system (e.g. Nyce and Kahn, 1991; Ellis, 1991; Groza, 2012) designed in 1945 by American inventor and researcher Vannevar Bush Memex (a portmanteau of memory and index) was a hypothetical, electro-mechanized remediation of previous systems for organizing personal archives, such as filing cabinets (Boyd Rayward, 1992, p.99), built with the aim to "turn an information explosion into a knowledge explosion"(Wardrip-Fruin and Montfort, 2003, p.35).[34] Although Bush acknowledged that replicating the skill of selective and creative associations that people establish between various pieces of information might be beyond the capacity of a machine ("For mature thought there is no

34 Vannevar Bush was serving as director of the American Office for Scientific Research, which, after the war became responsible for shaping the program for the US Defense Department's Advanced Research Project Agency, ARPA, renamed to the Defense Advanced Research Projects Agency (DARPA) in 1972.

mechanical substitute" and "the creative thought and essentially repetitive thought are very different things"[Bush, 1945, p.116]), he nevertheless believed that, overall, the complexities of memory processes can be artificially simulated, mechanized, and perfected through the application of increasingly affordable technologies of the time. Bell's MyLifebits project, which the author also refers to as "Real Memex" (Bell and Gemmell 2009), adopts the same assumption as a starting point. What Bush was unable to fully achieve due to the technological constraints at the time, Bell thought could finally be executed on an unprecedented scale thanks to digital technologies of automated record, ready to "capture everything," while "discarding nothing" (ibid., p.46).

While the motivation behind this enthusiastic remediation of Memex was primarily to empower users and improve their lives in terms of their memory practices, soon after its commencement, Bell and Gemmell's project attracted the attention of DARPA. The agency was interested in MyLifeBits as a model for their research project, LifeLog (Bell and Gemmell, 2009, p.74), simultaneously underway and based on the same principle of total technological capture of one's life experience. An official information pamphlet, no longer accessible on the official website, yet available through the Internet Archive's Wayback Machine, explains DARPA's initiative as:

> [A]n ontology-based (sub)system that captures, stores, and makes accessible the flow of one person's experience in and interactions with the world in order to support a broad spectrum of associates/assistants and other system capabilities (Lifelog, 2003).

The description of the project proposal further defines objectives of Lifelog as being able "to trace the 'threads' of an individual's life in terms of events, states, and relationships" and to "take in all of a subject's experience, from phone numbers dialled and e-mail messages viewed to every breath taken, step made and place gone." What was officially presented as an outcome of the project was a set of data for a production of the Artificial Intelligence systems as well as Intelligent Robotic Assistants enhancing decision-making capacities and memory of military commanders. Due to the project's vague handling of privacy issues and adverse publicity, DARPA's work on Lifelog, the all-encompassing cyber diary, was eventually discontinued in 2004.[35]

35 However, one could argue that Lifelog did not entirely vanish, but only mutated into other, more carefully confined mass-surveilling initiatives, such as PRISM. Alongside Lifelog, Information Awareness Office of DARPA worked on Total Information Awareness (TIA). TIA was a project initiated in 2002 in the aftermath of 9/11, and was called Terrorist Information Awareness. The change in the name's wording, from Terrorist to Total, only illustrates the gradual expansion of the coverage of data aggregation practices, from the suspect to all citizens. In other words, it is no longer only suspicious threads that are being monitored, but a totality of data flow. Everyone is a potential suspect. According to DARPA themselves, TIA was in no way connected to Lifelog (see Shachtman,

Along with the proliferation and popularization of wearable and self-tracking technologies, the practice of life-logging left the research labs and become ingrained in the fabric of everyday life. Marked by the launch of Apple watch, the year 2015 was declared to become the year of wearable technologies (Arthur, 2014). An important manifestation of this trend has been Quantified Self (QS) movement. The members of this community, established in 2007 in San Francisco (attracting to a large degree tech-developers, programmers, and life-hackers), promote the use of wearable, self-surveilling technologies for self-optimization purposes. The driving force among QS'ers is a belief that, through closely monitoring one's life activities via sensors and wearable computing, breaking these activities down into sequences of numbers, and subsequently performing a range of algorithmic procedures, one can acquire unique self-knowledge not accessible by any other means. Such digital grammatization and quantification of everyday life certainly works in some particular cases (such as chronic diseases whose trajectories require constant monitoring and analysis). But the risk that the rise of QS brings about is an uncritical belief that, to be truly understood, one's life processes need to be technologically quantified. In other words, what evades technological capture and cannot be digitally stored and measured (and consequently optimized and advanced) is at risk of becoming considered irrelevant. Consequently, those everyday life activities that are quantifiable become essential for QS members in how they approach their understanding of the self, life, and well-being. The understanding of quality of life (or the essence of a good life) becomes much reduced to the mechanics of bio-physiological processes and phenomena whose dynamics lend themselves to mnemotechnological capture, algorithmic processing, and rational explanation through statistics, graphs, and data visualisation techniques. If one was to consider such life-logging in terms of a technologically reconfigured and remediated practice of personal archiving, a major transformation can be noted from a qualitative reflection and attention found in the latter, to a quantitative examination and mastering of one's life. In practices such as QS, the agency of sensors, numbers, and numeric calculation take the role of decisive entities in regulating how people perceive and assign value to their lives and the world around them.

There have been several lines of criticism of the archiving of the totality of an individual life via passively operating tracking devices that are worth to be brought in here. Coming primarily from surveillance studies, memory studies, and media and communication studies, these

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2004) However, the goals of PRISM, a following project of the Information Awareness Office, whose presence and operations were spectacularly disclosed in 2013 by Washington Post journalists and Edward Snowden, can be seen as a possible hybrid of the two. PRISM allowed officials to collect material including search history, email content, file transfers, and live chats from private telecommunciation devices (Greenwald and MacAskill, 2013) and was, just as the Total Information Awareness system, justified by the urgent necessity to improve resources in counteracting terrorism.

diverse criticisms already point at the multiplicity of spheres that the total capture practices affect. One line of critical observations that aligns with how I present technological transformations in the domain of personal archiving at large focuses on the process of the gradual de-autonomization of technologies of capture, and their close incorporation into data economies (and what I have been calling mainstream mnemotechnological systems). Often linked to Foucault's concept of governmentality and discipline, these critiques posit that life-logging practices such as QS are manifestations of the extensive influence of neo-liberal strategies on people's everyday lives (Andrejevic, 2014; Boyd and Crawford, 2012). Extensive self-tracking and compulsive accumulation of digital data is portrayed as a form of discipline which is no longer performed by state institutions, but gets outsourced directly to citizens, where it gradually becomes normalized as a mainstream media practice. In this light, QS is, on the one hand, a self-disciplining (and self-empowering) practice, and on the other, a gamified lifestyle which supplies the state with productive, healthy, relaxed, and technologically up-to-date citizens requiring no special or direct intervention and indoctrination. The effort and resources previously invested in the top-down tracking and archiving of citizens can now be utilized toward socio-technical strategies, assuring the widespread normalization of the rhetoric of self-fulfillment and advancement of one's performance (at work, in bed, gym, etc.) through an effortless appliance of always on, self-archiving technologies. Jon McKenzie describes this as a shift from discipline to "performance societies" (2001), and others describe it quite bluntly as the rise and widespread normalization of "data fetishism" (Dormehl, 2014; Morozov, 2013; Sharon and Zandbergen, 2016).

These critical views have been countered by opinions coming from scholars engaged in a more ethnographic modes of studies. While acknowledging the aforementioned line of critique, drawing on concrete cases they have argued that many life-loggers themselves do not subscribe to the belief that knowledge can derive from the streams of quantified data. Rather, data tracking is only one component of a more complex practice that involves reflexivity and mindfulness (Sharon and Zandbergen, 2016). Meaning does not arrive automatically with the data, but through a processual and reflective engagement with it: "alongside the figure of the quantified self, as the perfected, optimized, calculable and controlling subject and object of self-tracking, emerges a *quantifying self* [original emphasis]. The quantifying self ascribes meaning to self-tracking and the data it generates through a process of continuous negotiation with self-tracking methods and tools" (ibid., p.12). Some scholars have argued that self-tracking practitioners who themselves engage in constructing methods and tools (as opposed to applying ready-made ones) can even be seen as resisting the market and big data economies. Through an ethnographic approach, Dawn Nafus and Jamie Sherman (2014, pp.1784-

1794) proposed seeing some quantified self practices as an alternative, or what they call a type of a "soft resistance" to Big Data practices. Coming from Intel Labs (a sponsor of the QS movement), Nafus and Sherman propose seeing the QS community, or at least a part of it, as a group that resists internalizing predetermined frameworks for personal data collection, and instead constructs their own frameworks that do not obey the norms of the big data business. In their view:

> [Soft resistance] happens when participants assume multiple roles as project designers, data collectors, and critical sense-makers, rapidly assessing and often changing what data they collect and why in response to idiosyncratically shifting sets of priorities and objectives. Such plasticity fragments data sets and disrupts current algorithmic logics, and thus creates both material and social resistance to traditional modes of data aggregation (ibid., p.1784).

Apart from the polarized voices presented above an interesting critique has arrived from media studies, focusing on how technological media developments, including self-surveillance technologies, reproduce the logic of progressivism as a guiding principle in problematizing digital memory and personal archiving. According to Wendy Chun (2008), Memex has become a disproportionally "canonized" model not only for an automated memory supplement, but for digital technology, personal archiving, and the internet in general. Consequently, it has long been contaminating currents of media scholarship in relation to digital computing and memory, both in terms of determining the genealogy of historical media discourse, as well as the development of practical inventions. The perpetual invocation of Memex as a material and conceptual foundation for our contemporary personal computers and digital memory practices not only conserves the progressivist reading of the history of media technologies (by projecting media as continuously transforming toward more seamless, immediate, automated, and invisible aids for the general improvement of our everyday lives), but also tends to conflate the dynamics of (human) memory with that of (technological) storage.[36] Opposing this problematic confluence, Chun regards both media and memory as contingent, ephemeral, degenerative, forgetful, and erasable, never entirely stable or fully reliable (Chun, 2008, p.159).

A similar line of criticism pointing at the radical mutation of the material dimension of memory practices has recently been offered by José van Dijck. Tracing the evolution of personal archives from proverbial, "analog," patchy and selective shoe-boxes to mnemotechnological total environments such as Gordon Bell's remediation of Memex, van Dijck ac-

36 Although Chun does not refer to Henri Bergson, her ideas certainly resonate with his much earlier critique of the tendency to perceive the human mind and archival storage as founded upon the same kinds of operations (see Bergson, 1896 [1991] as well as the discussion in Paula Amad's Counter Archive (2010, p.117).

cuses the latter of a cold reduction of memory practices to merely passive accumulation and recall. In Bell's conceptual model, which she describes as a result of the "googlization" of everyday life, memories are seen as "fixed entities patiently awaiting their retrieval from the shelves of the mental library"(van Dijck, 2005, p.327).

The problematic perception of automated technologies of the self as foremost advanced mnemonic media makes the impermanent qualities of media increasingly rendered as mere deficiencies, and hence targets to be combated. As Chun had it, in the course of media history "questions of forgetting and degradation are turned into problems for media to solve"(Chun, 2008, p.155). The essence of designing and incorporating media technologies is reduced to problem-solving. Bell's "Real Memex," like life-logging as such, builds on the exact same reasoning. By turning to current media developments it seeks an ultimate remedy for the capacity of human memory, which in comparison to technological capacities is typically described as limited and error-prone. "I hate to lose my memories. I want Total Recall," asserts Bell in the introductory lines to his book, warning the reader that, in the near future, "those who shun recording will be less empowered than those who embrace it" (Bell and Gemmell, 2009, p.21). Given the pace of technological advance, those who do not submit themselves to the total recall "revolution" at its initial phase will certainly have difficulties catching up later, or will become completely sidetracked.

The effects of the total recall revolution are anticipated to have an unprecedented impact not only on personal memory, but also on productivity, vitality, longevity, and knowledge production (ibid., p.8). Thus, recording one's life in its totality provides better insight and management of various dimensions of one's personal life, not only at the moment, but over a longer span of time. Life-logging is not only about recalling and mining the past, but also, or perhaps primarily, about (deter)mining one's future, engineering a better life that, at the moment, one longs for. Metaphorically speaking, life-logging is life-longing. In this sense, life-logging connects to the practice of note-taking in logbooks, which originated in the seventeenth century.

Long before being superseded by GPS navigation, digital databases, sensors, and radars, log-books served as a navigational technique for sailors. Log-books detailed the ship's speed estimated against the movement of a wooden log thrown into the water, thus the term logging. The consistent logging of data allowed for a better assessment of a journey's progress towards its destination. In this light, the very term "log" in life-logging points toward this practice's inherent orientation toward progress, and hence the future, making it radically unlike how one traditionally perceives personal archiving. In life-logs, personal data is accumulated not (only) to account for the present, but primarily to enable a certain kind of near future, and hence pre-empt all other, unwanted versions of

it. Traditionally, log-books used to have time-limited value. The log was representative and useful in relation to a particular journey, and once that journey was completed, the log-book would lose its significance and function. In the mid eighteenth century, American astronomer, historian, and oceanographer Matthew Fontaine Maury studied a vast collection of abandoned, seemingly useless old ships' logs. He developed a method for retrieving the most important information from each log-book, for example, the speed and weather conditions. Compiled and unified, these different streams of information were then used for making highly informative maps for navy and merchant ships. These maps and standardized navigation systems, which one could describe in terms of specific mnemotechnologies, were then offered to sailors in return for their completed log-books. As scholars at Share Lab posit:

> This practice of offering a product or service, maps in his case, in exchange for sailing logs, like today's browsing histories, is a fundamental part of the main business model of contemporary information technology giants such as Google or Facebook 150 years later.[37]

Besides Chun's critique on the material and genealogical dimension of digital memory, the dogma of total capture and recall has become criticized in the fields of memory studies, psychology, and cognitive science. Abigail Sellen and Steve Whittaker (2010) have offered a constructive critique of the enthusiastic aura around life-logging, suggesting that, to some degree, life-logging can have a positive impact, as long as insights from psychology of memory are seriously taken into consideration. This provides a balance to the problematic dominance of perspectives on digital personal archiving from techno-enthusiasts, computer scientists, and HCI experts, whose futuristic visions, as already demonstrated via Chun, persistently render technologies as forms of substitution and replacement, and not assistants to human mnemonic capacities and imaginations. They argue for selectivity as opposed to totality, cues, not capture, synergy versus substitution, and respect for the multifaceted complexity of memory as opposed to one technical grid applied to all types of memories and observations. Their critique can be summarized as an expression of skepticism toward the growing automation of memory capture, which risks foregrounding quantitative aspects at the expense of qualitative ones. In this sense, even though pursued along a different vector, their critique follows Chun's in how it argues for recognizing the value of "fallible organic memory" (ibid., p.8).

37 Source: https://labs.rs/en/browsing-histories/, accessed: 29.06.2017

Ethics and Morality in the Passive Capture

To personally verify some assumptions related to total capture and performatively enact the vision I decided to wear one of the life-logging devices for one year, starting January 1st, 2015. However, as a result of losing the device after three months, the project had to be discontinued.

There are a number of visual life-logging devices available on the market (e.g. GoPro, Google Glasses, SenseCam, Autographer, Narrative Clip, and more recently, Snapchat Spectacles). Of these options I chose Narrative Clip, an affordable, wearable camera designed by a Swedish start-up in 2012 and successfully funded through a Kickstarter campaign, initially under the name Memoto. Narrative Clip has been advertised as the world's most wearable camera, and unlike the other devices of its kind, often used in research, ethnographic studies, etc., it is specifically designed for regular consumers and everyday-life contexts. As such, Narrative Clip can be seen as a further remediation of Kodak Brownie camera, 100 years later, in the context of capture culture. The camera takes snapshots automatically, every thirty seconds, without any effort by the user (one can additionally tap the surface of the device in order to deliberately take a snapshot). As the advertising imagery suggests, Narrative Clip is meant to be clipped to a shirt or a hat and worn continuously during the day, holidays, or an expedition (Fig. 4.9). The sequence of snapshots, uploaded onto a cloud service offered with the device, can be viewed via a specially-designed smartphone app.

During the few months of wearing the device, I was fully aware that I might run into various troubling situations. Instead of armoring myself with consent documents, however, I decided to accept this possibility. In fact, one of my goals was to temporarily become a life-logger of the natural flow of daily events (including natural reactions to my wearing a life-logging device), instead of a conductor of a staged and fully-controlled experiment.

After wearing the camera for three months, for about 6-8 hour per day, I ended up with a massive repository of about 80,000 images. All my pictures together required approximately 65GB of space. During this period, I noted down my observations, discussed on a Living Archives research website and in a paper (Smolicki, 2015, 2015a). The observations can be seen to revolve around two major themes. One relates to the arbitrariness and incompatibility of the automated capture with my personal impressions and memory, and the second to ethical concerns around the infringement of privacy and power dynamics in everyday life.

During the first few days, the device's constant presence on my body often made me feel embarrassed. When interacting with people I would position my body so that the face of the person I interacted with would not get captured. Normal situations and interactions with people were often affected and partly choreographed by the device, as I felt obliged

to explain why I was wearing the camera. Consequently, the subject of many conversations was focused on life-logging, total capture, and digital memory. In other words, a typical encounter with a person with whom I spoke about the project was partially a construction of the project itself. Those who noticed the camera before I had a chance to say anything would often believe I was authentically fascinated by the trend. For example, upon seeing me wearing the camera at a random, social event, a colleague of my friend referred to me as "one of them," by which, when I asked her to elaborate, she meant a nerdy follower of the life-logging trend. It was only during the following conversation that my more critical attitude was revealed and led to an interesting conversation.

As for the results of the continuous capture, long and static situations left a stronger mark (Fig. 4.10). Since pictures are taken every thirty seconds, static position shots stand a better chance of being captured than brief, dynamic movements and spontaneous, passing gestures. While my memory would usually retain the latter type of a situation (for instance, rushing to school on a bicycle in the rain, or my body doubling over in laughter) the automated sequence-based method of capturing and structuring the archive privileges and saturates the visibility of static situations. Consequently, the archive presents them as seemingly more important events, at the expense of passing, sudden situations.

Figure 4.9: Narrative Clip, a popular life-logging device, as worn by me as part of the study of automated modes of personal archiving.

Looking at the lifelog being automatically organized by the software that comes with the wearable camera makes me feel as if I were looking not at or into the events of my life as I have experienced them, but into a parallel life happening right alongside. In this sense, one might say that the automated life-logging device has acquired its own agency. If, at the beginning, I would pay special attention to how it was attached to my body and what direction it was pointing (to avoid privacy infringement), over time I became more accustomed to it, and hence less aware of how it was positioned and pointed at the surrounding world. In this sense, the auto-

matically compiled archive represents not the life of its owner, but the life of the device, implicated into the lives of various (often random) people. As it occurs passively, following a strictly executed time-based algorithm, where the role of one's agency and volition is radically desensitized and reduced, the archive aggregated by this life-logging device promises to be objective, accurate, and, as the website suggests, "authentic," in terms of how it represents one's life. This is obviously problematic. It is not objective, just as it is not representative of the subjective experience it promises to capture. It does not secure the ephemerality and value of "moments that matter," but instead constructs traces of these moments.

Here, Derrida's deconstruction of the archive as a neutral instrument for accumulating information can be again recalled as a reminder: "the technical structure of the archiving archive also determines the structure of the archiveable content even in its very coming into existence and in its relationship to the future. The archivization produces as much as it records the event" (1996, p.17). The archivization, in this case, is the result of an operation that fundamentally reduced human agency, and is more the effect of a specific, unnameable bundle of hardware, software, and algorithms (thirty-second-long intervals, the format, size and quality of the image, as well as the structure of the storage and display). There is a sense of dissociation between myself and the captured memory. Many of the digital images do not stimulate, but replace memory recall. The camera's mnemonic trace occasionally coincides with my memories, though it feels like most of the time, while occupying the same space, my memory and the device's seem asynchronous. This passive capture could have had more exploratory and performative potential if it was deliberately developed and presented in terms of being generative, not representative of reality and one's memory. In this sense, the images could function as triggers for imaginative, speculative, playful thinking and acting, as opposed to being seen (as the company would have it) as evidence of the actual and "authentic", simply because it happens passively.

The second, more important set of observations revolved around the ethical aspects of total recall and more specifically the privacy infringement caused by the pervasiveness of personal, wearable technologies of automated capture. Unquestionably, the growing abundance of capturing devices (not only wearable cameras or electronic eye-wear but also smart-phones) infringes and even contests the idea of individual privacy today. While for some this situation is likely to become a call for a serious critical and ethical scrutiny (Ess, 2009; Ghezzi, et al., 2014), for others it inaugurates a new era described for instance in terms of *the age of transparency* or *post-privacy*.[38] In some tech-industry debates, which often extend Gordon Bell's enthusiastic vision of total recall, the ubiquitous and normalized presence of self-tracking technologies comes across as a conduit

38 See for example a talk by Christian Heller at Geneva Lift Conference (Heller, 2010).

not only to individual benefits, but more importantly, greater advances in society.[39]

In his dystopian novel, Dave Eggers presents us with the vision of such an age of transparency orchestrated by the Circle—a Silicon Valley based corporation. As the founders of the Circle believe, privacy paves the way for secrecy, which instigates the most of the problems that humanity has to confront today. Secrecy is an evil to be eliminated, replaced by complete openness, to be achieved through a disciplined and continuous use of self-surveilling technologies, such as automated wearable cameras and life-logging services that the Circle develops. Personal data from these devices and services is captured and subsequently aggregated by TrueYou, a meta-social media platform and what we can call a fulfilment of Zuckerberg's idea of a digital passport uniting the entirety of one's discrete life-bits from daily activities under one automated apparatus of capture. The so-called "democratic distribution" of mass-produced, self-surveilling technologies (under the slogan "sharing is caring") is believed to be the most efficient way of counteracting and ultimately eliminating all kinds of misbehavior that secrecy might be making room for: criminality, corruption, injustice, inequality, racism, child abuse, and poverty. In other words, in order to establish a perfectly functioning, democratic, and unambiguous society, the members of the Circle believe that complete openness is what needs to be a part of every human act in the ever-more tightly interconnected and "coveilling" world. The term *coveillance* was initially coined by Steve Mann as an extension of sousveillance, an act of counter-surveillance which I will discuss in a later part of this thesis. Mann understood coveillance as a positive effect of the democratization of consumer-dedicated photo-capturing technologies. In a coveillant society "actions of all may, in theory, be observable and accountable to all," rendering the authorities behind surveillance mechanisms eventually disempowered (Mann et al., 2003, p.347).

As opposed to the scenarios presented by Bell, Mann, and Eggers, we still live in times when wearing automated cameras or coming across someone who does are exceptions. Nevertheless, I was surprised to find that during my one-hundred-day experiment I encountered no strong objections to my wearing of the device (except on one occasion, to which I will return shortly), especially not in public spaces. This is obviously due to the barely noticeable, compact size of the device, and also the fact that, prior to engaging in social situations, or one-to-one conversations (particularly indoors), I would inform people about the clip. This one strong reaction took place after my presentation of the experiment at the university, during a meeting between faculty members. Due to the limited time, I was unable to present the larger context of my study and hence

39 Consider, for instance, Reg Harnish, Forbes web security consultant, who argues that the idea of privacy should be abandoned altogether and people should accept the condition of openness of their everyday lives for the benefit of society (Harnish, 2017).

some of my issues and intentions were misinterpreted. Although no-one opposed the presence of Narrative Clip directly at the meeting, after it was concluded an email entitled "Surveillance devices in the workplace" was sent out by one of the attendees. In this email, not me personally, but the project (which is to say, me and my wearable device) was accused of not only infringing on my colleagues' privacy, but also of spying on them. My wearing of the camera was seen as adding to the already expanded network of surveillance devices. Acknowledging my awareness of the controversial character of this study, in my response I emphasized the fact that, through my staging of a situation where cameras are not only statically fixed to ceilings (a norm that we no longer question), but become integrated with our bodies, I anticipated possible troubling situations which would raise precisely such concerns around this emerging issue.

Obviously my colleague had a point in saying that people within the scope of the wearable lens involuntarily become the subjects of capture, and that especially within the boundaries of a state institution it could be considered an illegal act unless proper consent and explanation of the purpose of collecting data and its possible uses were provided. My suggestion was that, even if I had proper consent explaining the research aims, with which all potential subjects captured by the device were acquainted (which was obviously impossible), it would defeat one of the crucial purposes of the experiment, which was to critically evaluate the device and practice of life-logging, while treating it (as the proponents of the trend would like us to do) as an increasingly quotidian component of both public and private life. To put it more directly (and bluntly), if my intention had really been to spy on my colleagues, I would have, first of all, used a device whose visibility was completely disguised. Second of all, I would not have informed people with whom I was interacting about the life-logging gadget attached to my shirt, which I did (especially indoors), and which inevitably affected the power dynamics. The larger discussion on the subject that this simple intervention raised including a discussion during a seminar on research ethics was an outcome that, as I have mentioned, I did not envisage as coming to the foreground, but nevertheless anticipated.

While there are no strictly established regulations as to the everyday use of passively capturing wearable devices, the rules that guide the use of normal mass-market cameras are often considered to be applicable to wearables. However, these rules and obedience thereof differ, even to a radical extent, depending on the country and continent.[40] Literature has

40 For example, in the US, where rules regarding the capture of personal data differ significantly from the European ones, the general threshold of acceptance of the automated life-logging gadgets might be lower. I experienced it myself while attending a conference in San Francisco dedicated to wearable and self-tracking technologies (Quantified Self, 2015) and speaking to people who themselves have been using devices such as Narrative Clip on a day to day basis. Similarly, while attend-

recently emerged that discusses the ethical implications of wearable capturing technologies, though not in the context of everyday life but in close relation to specific research projects and contexts (e.g. Shipp et al., 2014, see also: the "right to be forgotten," a concept put forth in EU countries and Argentina to respond to the increasing pervasiveness of capturing technologies [Right to be Forgotten, n.d.]). In such specific contexts, passive capturing devices are seen as means to collect visual data about another person, a research subject whose actions and behavior the one wearing the camera intends to study. Thus, the ethical and technical issues related to the protection of the research data as well as the proper way of formulating the consent are of crucial interest in such cases. In the case of my experiment it was me, or more precisely, a particular entanglement of myself and wearable technology in the context of everyday life, that was considered the primary research subject. At least this is how I had seen it at the beginning. The simplest lesson from this experiment was that what was supposedly accumulating into my "private life-log" was only superficially private. By this I do not mean the fact that the content could have been interrogated by third parties through the back-end of the technical device and the software. What I mean is that the camera, always pointing outwards, covered other people and thus, their lives, inevitably, became the subject of my archive. The passively operating capturing device created an imperceptible field of relations that could not be fully controlled, especially by the subject that found himself/herself involuntarily captured within its scope. The coupling of my body with a passive capturing device, pointing outwards, away from myself and towards the others in my vicinity, although non-intentionally, still introduced an inherently imbalanced field of power dynamics. My presence within this field was privileged at the cost of all the others not aware of constituting the subject of capture.

We are far from the utopian, "coveillance" scenario built upon a common pact where everyone tracks oneself and by implication the others on a daily basis. Consequently, we are far from a scenario in which everyone passively captures one's life (and others') for the greater benefit of society. There will always be discrepancies in power dynamics, whether they are caused by differing motivations, cultural values, interests, aims or simply different level of access to capturing technologies and technical literacy. Consequently, there will always be a variety of reactions to the use of such devices, (at least as long as their presence is detectable). Even if passive capture via individual wearable technologies would be fully permitted on a macro-scale, individuals and communities have no obligation to passively accept the presence of such technologies in their immediate vicinity. One could say that there is and always will be a certain discrep-

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ing an open workshop at Narrative Clip premises in Stockholm in February 2016, I learned that in Japan (one of the biggest markets for Narrative Clip) the passive capture via wearable devices seems to be much more socially accepted than in Europe.

ancy between the legal versus social, cultural, local and individual acceptance that has to be kept in mind by both developers and users. As some argued, despite legal regulations, there is a variety of ways that the term privacy is comprehended (and performed) by individuals which stems from, for example, their diverse cultural backgrounds (cf. discussion on culture-specific meaning of privacy in Ess, 2013, p.109).

Learning from my experiment as well as drawing on a range of cases of individual reactions to wearable technologies of capture taking place in recent years (such as Google glasses), it occurs to me that the tendency to fully automate the capture of one's everyday life and turning the record of one's memory into a passively executed technological capture (withdrawn from the field of perception of the capturing subject and even more from the one who is being captured) poses a risk of disrespecting such individual opinions (cultural) differences and attitudes in relation to this concern. For the potential subject of capture, its automation leaves no room for negotiation and possibility of rejecting (or actively agreeing with) it. For the subject who incorporates the device, this automation, its passive character (and hence a decreased awareness of its working) leave no room for attuning to the specificity of a given social situation. In other words the automated character of the device replaces this specificity with an imposed, pre-defined configuration of relations.

If, generally speaking, ethics are dependent on socially agreed and accepted regulations and laws, they are also the result of an individual's moral judgement of a situation, resulting from his/her experience, sensitivity, awareness of a situation, and decision-making ability. Drawing on Seneca, Foucault describes the formation of an ethical and moral approach to life in terms of a generative absorption and assimilation of other, diverse opinions, observations, and thoughts, as opposed to an uncritical compliance with some universal set of rules:

> [W]hatever we have absorbed should not be allowed to remain unchanged, or it will be no part of us. We must digest it; otherwise it will merely enter the memory and not the reasoning power (Foucault, 1997, p.213).

This articulation resonates strongly with the notion of *phronesis*, which is how Aristotle described practical wisdom. Phronesis is based on a recognition of one's ability to read individual situations correctly by drawing on previous experience and enhancing this reading in light of each particular situation that one confronts in day-to-day life (Hughes, 2001, p.87). Practical wisdom rejects the automatic application of dogma that indicates whether something is good or bad. It is the art of attending to "particulars" as opposed to "universals" (ibid., p.100). Automated and effortless capture, seems to eschew any such consideration. From a technical perspective, a life-logging device approaches the world and each living subject in a homogenized and artificially uniform manner. Such a

device seems to lack the plasticity which would allow it to be consciously adopted to the particulars of one's existence and the existences of others that it inevitably enters and affects.

Writing about designing the morality of technological objects, Peter Paul Verbeek (2011) argues that, if technologies are externalizations of the human conscience, then certain norms and principles of behavior are always implicitly or explicitly materialized in them. That means that technology exerts a certain moral influence on human beings, which is to say, it adjusts their behavior according to pre-programmed guidelines. In the case of automated mnemotechnologies like the discussed life-logging gadget, that norms that are inscribed in their working include immediacy, effortfulness, convenience, in other words, features driving mainstream developments in consumer-dedicated technologies today. If in order to allow for a conscious shaping of one's moral agency a technological device needs to be equipped with a degree of plasticity, inviting the user to consciously make decisions, appropriate and experiment with it and its impact on the self and others (Verbeek, 2011, p.135), it seems that for the fully-automated capture technologies such paths might be significantly impeded.

Due to financial reasons, Narrative Clip production and service have been discontinued as of the fall of 2016. Their official website announced that the user data stored on their servers would no longer be accessible. The company offered a backup tool for users to download their digital archives before the final day of deletion. However, a few months later, the company announced that the service would be maintained. Part of the team decided to seek funding to continue the service. However, this meant that there would be added cost for those who wanted to keep using the service. The whole Narrative Clip story points to a certain instability and uncertainty that characterizes network technologies and mnemotechnological services in capture culture. What is advertised as a permanent memory aid, a digital journal that can be resorted to at any time, from one day to the next is suspended and at risk of total obsolescence or subject to unforeseen regulations.

Discussion and Summary of the Chapter

In this part the intention has been to present and analyze selected aspects of the contemporary techno-cultural condition, described in terms of capture culture. Drawing on the theoretical framework preceding this part, I have presented some of the prevailing infrastructures, services, and devices in terms of mnemotechnologies, which is to say, increasingly automated technical systems that affect how people's everyday life accounts are being constructed, mediated, and circulated, with increasing intensity. One of the main points that this part sought to articulate was that, in the context of ubiquitous mnemotechnological systems, practices

of experiencing, mediating, and accounting for one's everyday life cannot be easily disentangled from computational procedures and mechanisms which, I have argued, are inherently based on digital capture and archiving. In other words, the unprecedented pervasiveness of network technologies in everyday life has made it inseparable from digital capture and archiving. Arguably, if personal archiving practices might have once been seen as solitary and somewhat autonomous kinds of cultural, aesthetic, and historically-conscious activities, today they have to some extent become contaminated and instrumentalized by economic, commercial, and political agendas, as well as a doctrine of nowness, efficiency, and immediacy that drives the development of major tech-industries.

Overall, this part of the thesis can be seen as a selection of exemplary instances in which material, temporal, aesthetic, agential and ethical aspects of present-day mnemotechnologies, or the ways that they have recently been intertwining and transforming, were brought to the fore and critically evaluated.

The example of Facebook's timeline foregrounds the observation that, even if one deliberately curates a life account, there are also passive capturing and archiving procedures occurring simultaneously in what I figuratively describe as the deep end of the timeline. Human practices are affected by the programmed architecture of the service, built upon specific economic and commercial interests. Services such as Facebook do not simply constitute neutral platforms through which such practices are channelled intact. They also significantly modulate, program, and impose specific, mainstream forms of sociability and communication, and by implication, specific forms of personal archiving. If today, as Wendy Chun argued, the user of a given digital service or software is produced and programmed through the very act of using this software (Chun, 2011), the same can be said of an individual media practitioner committed to the use of a mnemotechnological platform such as Facebook, which, consciously or not, turns him/her into a micro-archiving subject and object of another kind of micro-archiving. What this further means is that mnemotechnologies, such as Facebook and the like, have an inherently transactional nature, not only in the economic sense of the term, but in an aesthetic one as well. It is not only externalized and mediated memory that is captured and modulated for the benefit of third parties in the form of a data set. Through the unregulated submission of the currents of one's everyday life to the workings of mnemotechnologies, or as Stiegler would have it, through an irregular and often unquestioned adaptation to their growing demands, one's individuation and trans-individuation, which is to say, the act and art of creatively and consciously crafting one's subjecthood and its record, are subject to modulation in accordance with the principles inscribed in these mainstream mnemotechnologies.

Following the Facebook timeline, the example of Snapchat was brought in to indicate an extensive transformation of the temporal and transitory

dimension and meaning of personal accounts and archives in capture culture. Almost one hundred years ago, Walter Benjamin suggested that modernity has brought about a new type of experience of everyday life. This involved living "through" the events of the everyday, *erlebnis*, which replaced a mode of experiencing everyday life that can be attentively accumulated, critically reflected upon, and transposed into knowledge: *erfahrung* (Benjamin, 1969). In other words, aided by the growing abundance of mechanized technologies, modernity seemed to have shrunk the sensation of time and space, radically contesting the possibility for long-term knowledge accumulation and replacing it with the necessity to deal with and manage a continuous exposition to shocks, or as Claire Colebrook would call it, a glut of instantaneous affects (Colebrook, 2014, p.86) that promises nothing more than a sense of temporary satisfaction, followed by exhaustion. The amplification of this transformation from erfahrung to erlebnis, from caring for and cultivating one's observational skills and opinions toward mechanically managing a multitude of short-term shocks and affects, echoes in the trajectory of contemporary technological developments programmed toward quantity instead of quality. Facebook and Snapchat might be seen as an example of an instant archive with no long-term, cultural, and historical significance beyond the very moment of their production and consumption. Such mnemotechnological archives are more about immediate communication of quantity than long-term transmission of qualitative content. On the surface, they appear to contain pulses of the now, more than impulses for reflection that could be retained and extended over time. However, as I pointed out, even this sense of ephemerality and flow through the present is technologically constructed and, in fact, relies on the underlying mechanisms of capture and archiving. Consequently, in capture culture, what superficially appears to be an instant archive of a limited longevity might be and often is inevitably and imperceptibly amassing into a more stable archive in its technical substratum.

While discussing Evernote and, briefly, technologies like smart TV, I attempted to foreground another important aspect of capture culture that spans across all the above examples: convenience and immediacy, and its flip side, ambient, techno-surveillance. The pervasive presence of and constant accessibility to the network enables technologies to remain active continuously without the user actively paying attention to them. While people make use of their devices and services at will, these very devices can make use of them for purposes they do not intend. In the age of the Internet of Things, smart cities, and smart homes, any device connected to the network can be potentially turned into a capturing and archiving agent. Accepted by some as a modern inevitability, this state of permanent exposure to capture and archiving evokes a range of mixed feelings, including hopelessness and panic. On the one hand, this technologically complex condition is tackled through the development of still

more technical layers of protection, or as Lovink had it, "paranoid security systems" (Lovink, 2011, p.164) which promise to shield one's privacy and provide a sense of relative autonomy and safety. On the other hand, this permanent exposure tends to feed the market of dystopian media productions and popular culture (e.g Black Mirror, The Circle), further perpetuating and reproducing an already inflated feeling of anxiety, and thus a need for more technological protection and, perhaps, an impulse to radically renounce technology.

Thus, as an extension of this convenience/surveillance trade-off and another aspect of capture culture, one might consider a sense of living in or, perhaps, being captured in a constantly reproduced state of technological anxiety and uncertainty. Due to social pressure and the requirements of professional life (Lovink, 2011 p.168) and, as I demonstrated in this part, the pervasive tendrils of mnemotechnological infrastructures like Facebook, subscribing to and opting out of network services, social platforms, and their capturing mechanisms is no longer an option in capture culture. Consequently, as Kember has argued, paranoia "is an understandable but ultimately unhelpful response to our increasingly naturalized, insidious (because user-friendly) technologies of everyday control" (Kember, 2014, p.17). To escape falling into the trap of one radicalism or the other (e.g. singularity/ambiance, liberation/oppression, freedom/determinism), she suggests seeing them as inevitable constituents of relations within which "we may find, if not emancipation, then room for manoeuvre" (ibid. p.17).

Lastly, I looked at the practice of life-logging where apart from the transformation of the material dimension of memory practices that it instigates, I also intended to shed light on the ethical implications of increasingly automated and eased forms of memory capture and personal archiving. In terms of its media-material constitution life-logging can be seen as another instance of remediations that memory and personal archiving practices have been undergoing in capture culture. It enthusiastically embraces the possibilities afforded by ubiquitous computing to technologically capture, digitize, and archive ever-more detailed aspects of human life. As I demonstrated, developments in life-logging tend to follow the teleological rendering of how mainstream media-technologies have been developing over time. The proponents of automated, go-all-digital memory capture perceive human, organic memory as inherently flawed and deficient, and hence in need for being supported and ultimately replaced by more advanced, stable technological solutions. Nonetheless, despite being promoted as stable infrastructures for memory, like any other digital technologies, life-logging devices are subject to technical obsolescence and fallibility that might unintentionally and unexpectedly put one's digitally externalized and mediated memory at risk. Moreover, an increasing reliance on passive forms of capturing and archiving, such as through wearable cameras and self-tracking devices, raises a number

of ethical dilemmas, such as those concerned with privacy infringement and a decrease of moral responsibility and agency in making responsible choices in the currents of one's everyday life with technologies. If, for the life-logger, a wearable, mnemotechnological device is perceived as a fully domesticated companion (to paraphrase Donna Haraway's term), with regard to others whose everyday trajectories this device inevitably enters this same companion turns into a predator.

One obvious question that arises from this presentation and analysis of various aspects of capture culture is how this situation is (or could be) constructively addressed by an individual media practitioner. How can, for instance, involuntary capture and archiving be impeded and the agential dependencies in human-technology relationship more constructively re-negotiated ? As mentioned earlier, the goal of this thesis is not to resolve this issue, but to raise awareness and create a backdrop for developing other, parallel, attentive modes of conceptualizing and performing personal archiving within the context of capture culture, in other words, a backdrop not to be counter-acted, but simply acted with, in parallel.

Nonetheless, in the next chapter I will discuss some forms of counteracting this condition, drawing primarily on performative and creative media practices. Furthermore, as I have already pointed out, there are activist organizations that address involuntary exposure to capture and archiving by attempting to develop various kinds of technical solutions. A tool such as Tor – volunteer-operated servers that allow people to improve their privacy and security on the internet – is among the most popular of these. Some practical advice has recently been proposed by Bruce Schneier (2015), who advocates a political mobilization to clarify the distinction between the right to retain private data and an incentive to share and archive data externally to help improve collective challenges, such as health care. Another example is the activist attitude represented by Max Schrems, who has already been mentioned. After being personally affected by the hidden procedures of Facebook, Schrems opened the Europe vs Facebook foundation, which helps Facebook users issue legal suits. Through class actions the organization demands access to Facebook's deep archives and requests financial retribution for feeding these archives without user awareness.

The last several years witnessed a growing number of such lawsuits issued by organizations from various European countries who recognized Facebook's incompatibility with (or ignorance of) European rights regarding personal data aggregation and access (Europe versus Facebook, n.d.). As a result, there have been several ongoing investigations taking place in France, Netherlands, and Belgium among several other countries. However, taking into consideration the slow pace of such investigations (even more interminable if seen against the ever-accelerating changes in the tech industry), the chances of a resolution in favor of those suing to make Facebook implement radical structural changes to their business

models are rather weak. Nevertheless, these investigations demonstrate a growing awareness of the deep end of the Facebook timeline, and so while they may have had no direct impact, they might inspire reflection and, potentially, a change of daily habits in how individuals use mnemotechnologies and how they distribute their energy and attention while engaging with technologies of capture.

While some channel their efforts into either developing large-scale technical solutions for safer and untraceable navigation through the web, or enforcing changes to rules and terms of use of the dominant personal data aggregating services and platforms, others go deeper. UCLA media and information systems scholar Ramesh Srinivasan (2013), for example, suggests that while debates on media technological developments often focus on the questions of democratization, equal and safe distribution of existing technologies, they simultaneously disguise more important concerns about the ontological principles of these same services. According to Srinivasan, while distributed across the globe, such mnemotechnological services originate in specific contexts (the Western World, Silicon Valley), and are never neutral. They always reproduce and confirm specific ways of accessing knowledge, creating and structuring accounts of the world and one's everyday life. Consequently, he argues, despite claims to the contrary, the growing access to globally unified technologies does not necessarily empower individuals or increase their sense of agency. In fact, quite the opposite effect might be occurring: the eradication of other, diverse, smaller, local "poetics, aesthetics, and cognition in the creation of devices, databases, and infrastructures" (ibid., p.206). While on the surface their use might provide some sense of empowerment and individual agency in constructing, mediating, and archiving one's world-view, it simultaneously reinforces the dominance and reproduction of specific ontological, political, and economical motivations that these mnemotechnologies are always inherently inscribed with.

I started this chapter with the example of the historical debates revolving around the proliferation of the first mass-produced cameras enabling the capturing and archiving of everyday life. As a counterbalance to the polarized attitudes that emerged in response to the growing pervasiveness of cameras, Joseph August Lux proposed a different point of view. In his opinion, the effects of this new technologies could be overcome through developing a "spiritual center" along with a long-term vision by which these technologies could be attentively adopted in the currents of one's everyday life. This long-term vision and historical consciousness were not a large-scale solutions for the problem; they indicated one way through which an individual could address the omnipresence of technologies and their effects ever-more deeply woven into the fabric of life. A century later, Bernard Stiegler suggests that the "spirit is in crisis," and human life is increasingly organized around the pursuit of short-term goals. Mnemotechnologies play a significant role in this process. The way

to address this, again, is not through renouncing or adapting oneself to this condition, but rather through inventing and actively re-configuring one's relationship with technologies. In the following parts of this thesis, I will present my personal approach to creatively integrating technologies of capture and archiving and actively composing a para-archival account in conjunction with the currents of my everyday life. However, before moving on to the practical part, I will present the second theoretical framework, which aims to move beyond seeing personal archiving practices as entirely infected by the workings of mainstream capture-culture mnemotechnologies.

5. FROM COUNTER- TO PARA-ARCHIVING (THEORETICAL FRAMEWORK II)

> Negotiation does not mean renouncing or adapting. It is neither a matter of adapting nor resisting: it is a matter of inventing (Stiegler, 2003, p.72).

The previous chapter served to describe and analyze different instances of the present techno-cultural context, described as capture culture. The analysis was conducted in relation to the theoretical framework focused on technological transformations and implications thereof on personal memory and archiving practices in everyday life. I argued that mnemotechnologies and the practices they engender, as well as mechanisms at their core are inseparable from everyday life in technologized societies today. As indicated in the section concluding that part, while inevitably affecting and modulating material, aesthetic and agential aspects of personal capturing and archiving practices, the proliferation of mnemotechnologies poses questions concerning practical reactions, movements, proactive attitudes, and attempts to alter, augment, resist, or re-configure this condition on a day-to-day basis. In particular, this question points at the notion of agency, or what can be called an archival agency, which is to say a possibility to negotiate one's position within the techno-cultural condition of a given moment, characterized by the ubiquity of capturing and archiving technologies, mechanisms, and practices.

Thus, in relation to the preceding part, this chapter has two aims. The first is to present and articulate some existing creative media practices that critically address our exposure to the capturing and archiving mechanisms of capture culture. As such, in the first part of this chapter I focus on such critical modes of operationalizing technologies of capture as sousveillance and obfuscation, instances of tactical media practices explicitly oriented against the strategic proliferation of technical systems of surveillance, capture, and control (Mann et al., 2003, Brunton and Nissenbaum, 2015). The second and, I believe, primary goal of this chapter is to arrive at a clearer articulation of para-archiving, a mode of living with technologies of capture that can move us beyond the dichotomy of the tactical versus strategic that these former modes build on, as to enable another perspective of attending to the modes of living with technologies of capture.

Consequently, drawing on Ben Highmore's return to de Certeau's seminal discussion on the concepts of tactics and strategies in the practice

of everyday life (de Certeau, 1984, Highmore, 2002), this chapter can be seen as proposing a step beyond the polarized way of problematizing media and cultural practices as either set against the hegemonic forces or compliant with them. In other words, the move implied here is a shift in perception toward those practices that do not explicitly counteract, but evolve alongside or parallel to the proprietary power (and capture) while engaging in inventive, performative and material appropriation and re-configuration of capture and archiving technologies. To substantiate the discussion on para-archiving toward the end of this chapter, I will bring in two examples of photographic practices with para-archival qualities of interest to this thesis. To begin with, however, and to set the flow of this chapter, I propose turning our attention again toward the history of media technologies and inventive practices.

Unhinging God's Eye

Figure 5.1: Sir Robert Hooke's *Picture Box* as depicted in *Philosophical experiments and observations of the late eminent Robert Hooke, and Geom. Prof. Gresh, and other eminent virtuosos in his time* by R. Hooke, and W. Derham, 1657-1735. Published by W. Derham, F.R.S. 1726, London, source: archive.org (under Creative Commons)

On December 19, 1694, British inventor and constructor Sir Robert Hooke submitted a patent proposal for a new kind of optical instrument, named the Picture Box (Fig. 5.1). From a technical perspective, the invention was very primitive: a relatively big, wearable box with a small opening on one

end, a screen for hand-drawing located in the middle of the device, and a hole for the wearer's head and arms on the opposite side. Utilizing principles of camera obscura, this mnemotechnical device allowed the wearer to manually trace an image projected through the pin hole and displayed on the screen. The novelty in this device was obviously not the projection mechanism already known for several centuries at least.[41] It was the capacity to move around with the device, in other words, its portability. For centuries the camera obscura (from the Latin, meaning "a dark chamber") was a static instrument bound to a physical location, such as a room with a hole in one wall, projecting an image from outside onto the opposite wall. In other cases, the camera obscura was installed in a building specially built for use as a monitoring station (today we could call it a surveillance center). Here the pinhole in the roof and a rotating mirror cast a magnified image of the local landscape down onto a flat surface, where it could be examined. Some adaptations of the camera obscura took the form of a tent where the local landscape was projected from outside and painted. Juxtaposed with these examples, it is evident that Hooke's proposal was rather unprecedented. If, on the one hand, the Picture Box prototype eliminated the need to rely on static, physical infrastructures for constructing visual representations of the world, it also indicated the way for the democratization of this process and more individuated, performative, embodied, and inventive approaches to observing and recording the world with a help of a technological device.

In the text submitted with the patent application, Hooke explained his main intention in constructing the Picture Box. Its aim was to encourage individuals to establish closer relationships with their local surroundings. This mnemotechnical instrument provided the chance to create more subjective representations of the world, thus eliminating the need to rely on second-hand images. These second-hand images, as the author argued in the text, "misguide our imagination and lead us into Error by obtruding upon us the Imaginations of a Person, possibly, more ignorant than our selves" (original capitalization, Hooke and Derham, 1726, p.294). Hooke was critical of how visual representations are created and then mechanically copied into books by contracted drawers who often had no relationship to the subject:

> [M]any Relations of foreign Countries do give us Pictures of Towns, Prospects, People, Actions, Plants, Animals, and the like; and those beget in us Ideas of Things, as they are there represented (ibid. p.294).

41 Inventions like the camera obscura (also known as the pinhole camera) can be mapped across many cultures, dating back to several centuries B.C.E. In *The Book of Optics* written at the beginning of the eleventh century, mathematician and inventor Ibn al-Haytham (known in Western literature as Alhazen) introduced the first accurate description of the principles of the camera obscura (El-Bizri, 2005).

The description in Hooke's book invites us to see Picture Box as as a device that critiqued dominant forms of documenting and representing the world, and more broadly speaking, the ways that knowledge of the world was visually (re-)produced, distributed, and imposed upon people at the time.

In his study of the camera obscura, Jonathan Crary emphasized the device's historical association with ideas of perfect, disembodied, objective vision. The camera obscura was believed to give the viewer "a vantage point onto the world analogous to the eye of God" (Crary, 1990, p.48) and thus as "a metaphor for the most rational possibilities of a perceiver within the increasingly dynamic disorder of the world" (ibid., p.53). Due to its stability, autonomy, and transparency, the "authenticity" of the representations yielded by camera obscura was believed to be "beyond doubt"(ibid., p.48). It might be said that the camera obscura re-purposed by Hooke challenged this logic, or even ventured to reverse it. It did so not least by making the very optical mechanism portable (and in doing so, opening the possibility to develop an array of dynamic, subjective perspectives on a given object) but also by widening access to the observing technology, and thus enabling the individual to become a more attentive witness, observer, and recordist of the surrounding world, as opposed to merely a consumer of ready-made representations delivered from distant realms.

The patent was rejected by the authorities and the church (Crary, 1990, p.296); one can only speculate if this was because of the device's autonomous nature, not connected, as we would say today, to any unifying network or technical system, and hence independent of any centralized control. Although it never passed the prototype stage, the Picture Box can be seen as an early example of what we could perhaps presently call an embodied or performative critique of the dominant technology of capture. As Crary has argued, besides being an important apparatus structuring the way the world is represented, the fixed gaze of camera obscura, among other optical devices, should always be perceived as a site of knowledge and power production, and thus an instrument that operates "directly on the body of the individual" (ibid., p.7). The wearable camera obscura complicates the attributes of its static forerunner by reversing the power relationship, or, at least, by granting considerable agency to the individual user and his/her corporeal capacity to operate on the peripheries of the authoritarian gaze.

In this act of unhinging and destabilizing "God's eye," reducing it to an individual level and hence questioning the objectivity of a seemingly disembodied view, one can recognize a link to the principles of a tactical media practice known as *sousveillance* – a form of technological disobedience that emerged three hundred years later.

Sousveillance

Sousveillance, literally meaning observation from below (the French *sous* for below and *veillance* meaning to observe or watch), is a term coined by Steve Mann, Jason Nolan, and Barry Wellman (2003, p.332), media art practitioners and scholars associated with the University of Toronto . The term describes the practice of inverse surveillance, a subversive response to the growing proliferation and ubiquity of surveillance technologies and practices authorities use to monitor, track, capture and store data on ordinary citizens. In its early instances sousveillance involved a radical, political gesture of taking down a surveillance camera, appropriating it as a wearable device and thus drastically reconfiguring the power relationships between the observed and observing.

Figure 5.2: An example of sousveillance. Confronting a monitoring camera with a simple, compact digital camera. The image comes from the "I to Eye" project, which consists in a sequence of about 100 similar depictions I took in 2010 in Jerusalem and presented at the Moscow Young Art Biennale in 2012, among other places. Source: the author's private archive.

Seeking to theoretically ground the practice of sousveillance, Mann positioned it in relation to neo-panopticism, a notion derived from Michel Foucault's seminal discussion on *panopticon* and Gilles Deleuze concept of *control society*. Inspired by Jeremy Bentham's architectural system of observation for prisons, schools, hospitals, and other public institutions, the overriding effect of the panopticon, was:

> [T]o induce in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power. So to arrange things that the surveillance is permanent in its effects, even if it is discontinuous in its actions; that the perfection of power should tend to render its actual exercise unnecessary; that this architectural apparatus should be a machine for creating and sustaining power relations independent of the person who exercise it; in short, that the inmates should be caught up in a power situation of which they are themselves the bearers (Foucault, 1977, p.201).

What makes panopticon effective and powerful is its automation. Once set in motion, the dynamics of this apparatus cannot be reconfigured. Its fixed components only execute the installed program, invoking an association with the contemporary concept of the technological black box, where the input and output are known and evident, but the mechanisms operating in between are disguised and indeterminate (Flusser, 2002, p.63). Within the panopticon, the subjugated citizens never know when exactly they are being monitored, which one of them draws the special attention of the authoritarian gaze at a given time, or even if they are being monitored at all. The input is an insubordinate individual and the output is a disciplined citizen.

Foucault's concept of the disciplinary society implies that it consists in a number of such panopticon-like enclosures, through which people are somewhat programatically and mechanically relegated in a successive manner (e.g. from family to school, from school to army, from army to work, etc). Each of these closures, understood in both a spatial and temporal sense, is inscribed with a set of inherent norms and regulations. But each enclosure has also its clear boundaries, and the subject confined within remains aware of this enclosure's finitude. This model of the disciplinary society has been expanded upon by Deleuze (1992), for whom the notion of panopticism was historically situated, and thus applicable to the study of social norms found specifically in the eighteenth and nineteenth centuries. His response was the concept of the control society, due to the recognition of pervasive technologies, much more resonant with capture culture.

Essentially, the exercise of power in Foucault's model of the disciplinary society took place through the distribution of its members in space and structuring of their time. But there was still space and time between these enclosures that enabled the generation of more autonomous every-

day practices that could elude capture. In contrast, Deleuze argued that in a control society:

> [O]ne is never finished with anything – the corporation, the educational system, the armed services being metastable states coexisting in one and the same modulation, like a universal system of deformation (Deleuze, 1992. p.5).

This new state contested the idea of the individual as much as it reconfigured the understanding of the masses: "we no longer find ourselves dealing with the mass/individual pair. Individuals have become 'dividuals', and masses, samples, data, markets, or 'banks'" (ibid., p.5). This mutation of fixed into liquid surveillance (Lyon, 2010) inspired Mann's debate on neo-panopticism and sousveillance and allowed him to map it further onto the newly emerging concept of a "network society" (Wellman, 1999, 2001; Castells, 2000). It has to be remembered that, at the time, a "network" spanned mostly stationary computers in work places and public institutions. In a network society the key social structures and activities were organized around electronically processed information networks.[42] Mobile network advancements that expanded the impact of network technologies beyond key social structures (the job market, administrative systems, banking) and into multiple other social and private domains were to come in the next several years. Thus, Mann believed that mobilizing computers and constructing wearable data recording and storing instruments autonomous from centralized network systems would facilitate, at least to some degree, the emergence of alternative zones for more autonomous and controllable modes of living with recording technologies. In other words, in the proliferation of sousveillance practices Mann saw the prospect of, if not inverting, then somewhat balancing the asymmetrical power distribution in the way that public space (and everyday life in it) is choreographed and captured. Sousveillance was, as Mann suggests, "an act of liberation," combining aspects of civil-rights activism, performance art, and subversive tactics (Mann et al., 2003, p.347):

> Sousveillance disrupts the power relationship of surveillance when it restores a traditional balance that the institutionalization of Bentham's Panopticon itself disrupted. It is a conceptual model of reflective awareness that seeks to problematize social interactions and factors of contemporary life. It is a model, with its root in previous emancipatory movements, with the goal of social engagement and dialogue (ibid. p.347).

As seen from this quote, one other function of sousveillance is an increase of a reflective awareness of one's position in relation to power structures that the distribution of technical systems of surveillance constitutes. But if on one hand sousveillance was intended to make the individual aware

42 From Harry Kreisler's conversation with Manuel Castells (Kreisler, 2001).

of the power distribution in contemporary life, the ultimate goal was to achieve a state in which sousveillance would become a norm (just as surveillance), or alternatively put, a situation in which the two would blend irreversibly leading to what Mann described as "equiveillance" or a "coveillance society."

A certain lack of critical awareness in Mann's scenario to the concept of coveillance (which was touched upon in the chapter on capture culture) can be explained in that the market for commercial wearable capturing technologies and cloud services as we know them did not exist at the time, and thus their consequences could not have been anticipated. What I mean here is that today sousveillance is an intrinsic element of everyday media-technological landscape and strategies of tech-corporations benefiting from the content from sousveillance practices. In speaking of wearable technologies, Mann made reference to tools constructed independent of large scale tech-corporations and operational on their own terms and at their own sites, outside of the web, access to which, at the time, was highly limited (in this sense this semi-autonomous relation between self-constructed wearable cameras (or re-purposed CCTV cameras) and the network of monitoring devices in public spaces can be compared to the relation between the mobile Picture Box and the static system of camera obscuras) The early sousveillance that Mann had in mind had not much to do with today's media-technological landscape. It could be said that the tactical, disobedient and empowering quality of sousveillance was enabled precisely by the independence from the mechanisms of the dominant frameworks (or a controlled degree of dependence on their strategic operations).

Having emerged from the realm of critical media art practice and becoming the subject of academic discourse, with the proliferating market of cheap, wearable computers (tablets, smartphones, watches), the practice of sousveillance might now be said to have irreversibly saturated the everyday life of societies, at least those with a high degree of technological pervasiveness. Examples discussed in the previous chapter (social media platforms and life-logging services) can be seen as modes of such a commodified sousveillance, in which the subversive and disobedient qualities are significantly tamed. [43]

Consequently, a range of various similar concepts have emerged to describe this new condition of an increasing entanglement of surveillance and sousveillance practices in network society. Extrapolating on Foucalt's articulation of the panoptic regime, Jakob Linaa Jensen, for example, writes about distributed surveillance in terms of omnopticon (2007, p.380). Lilian Mitrou uses a similar term, omniopticon, interchangeably with "participatory panopticon" to describe the overall effect of interac-

43 The practice of life-logging is commonly discussed as stemming from sousveillance (see for instance Sonvilla-Weiss, 2008). An oft-reproduced visual geneaology of lifelogging indicates its origin in Mann's early appropriations of CCTV cameras (see Lifelog, n.d.)

tion in the realm of the web 2.0, where the many watch the many (Mitrou et al., 2014). Echoing Thomas Mathiensen's notion of synopticon (1997), Roy Boyne (2000) writes of a situation where power dynamics is somewhat symmetrically inverted as compared to the original articulation of panopticon. With the emergence of live broadcast technologies and the internet, today it is actually the many who watch the few. The synopticon particularly applies in relation to reality shows, celebrity, and blogging/vlogging cultures. Complicating the view on panopticism even further, and suggesting its exhaustion in the context of the web 2.0, John Gilliom and Torin Monahan have lately argued that:

> Rather than being a prison-like panopticon where trapped people follow the rules because they are afraid someone is watching, with Facebook and similar sites people are probably more afraid that no one is watching, that no one cares what they are up to. So many users discipline themselves in a different way by divulging as much as possible about their lives and thoughts (2012, p.49, cited in Browne, 2015, p.39).

Tactics and Strategies

Next to Foucault's panopticon (and the aforesaid sister notions that have successively built on the panopticon while taking into consideration recent mutations of the media technology landscape), Michel de Certeau's concept of tactics and strategies has also been extensively used in media studies to discuss how people attend to media technologies to negotiate, reconfigure, and manipulate their power. Emerging in the 1990s and the early 2000s, the literature on Tactical Media, a form of media activism and scholarship centering on media practices, media art, and activism, has extensively drawn on how de Certeau (1984) problematized everyday life as a space where individuals develop and deploy tactics as their way of disaligning with various structurally enforced or embedded strategic forces, whether institutional, technical, societal, or political.

De Certeau himself described tactics as "clever tricks, the hunter's cunning, manoeuvres, polymorphic situations, joyful discoveries, poetic as well as warlike" (1984, p.xii). What is crucial in de Certeau's writing on tactics is that they are formed and hence to be sought not (only) in exceptional, critical situations, but primarily in everyday life. The tactical attitude can be expressed in how one approaches such quotidian activities as navigating an urban space, cooking, or speaking. Language practices in particular made de Certeau elaborate on tactics as special ways of manipulating the system of representations (language) so it no longer appears to be merely a normative and hegemonic framework (ibid., p.21). But just as dialects and styles of speaking do not emerge in isolation from the normative forces of the language, so the concept of tactics at large always remains in some relation to strategies. The latter he defined as "a calculus

of force relationships when a subject of will and power (a proprietor, an enterprise, a city, a scientific institution) can be isolated from an environment" (ibid. p.xix). Thus, strategies seem to operate above a given milieu, suspended yet pervasive in their regulatory and governing impact. If the strategy is to be described in terms of a mode of organizing space and everyday life top-down, from a macro-level perspective, tactics might be seen as emerging on a micro- or even molecular-level of everyday life, to re-configure or negotiate the impact of the strategy.

One of the earliest articulations of tactics in the field of media studies resulted in the term "tactical media" being coined around 1997 by David Garcia and Geert Lovink:

> Tactical media are what happens when the cheap 'do it yourself' media, made possible by the revolution in consumer electronics and expanded forms of distribution (from public access cable to the Internet) are exploited by groups and individuals who feel aggrieved by or excluded from the wider culture (Garcia and Lovink,1997, no pagination).

In the same text from 1997, written as a longer manifesto for opening a Tactical Media Network, the authors point at de Certeau as a crucial impulse for their understanding of the tactical use of media technologies. Addressing what makes media tactical, the authors argue that it is a special approach to the use of technologies of representation that are at once "creative" and "rebellious", in that they allow for the development of an aesthetics of everyday life, "an existential aesthetic" that is highly distinctive and disruptive compared to mainstream uses of consumer media technologies.

However, within the years that followed, the notion of tactical media was increasingly contested even by early proponents of the concept (in Kluitenberg, 2011). Similarly, given that, in the context of ubiquitous media, individual practices of observing, accounting for, and archiving one's life have gradually diluted into mnemotechnological mechanisms of capture culture, it might be said that the clear division between tactics and strategies (a prerequisite for tactical media theory and practice) no longer holds as it once did. Garcia, for instance, demonstrated that tactics and strategies are at present inextricably linked as components of the same software architecture (after Felix Stalder's definitions [2012] in Garcia, 2013).

Linking with the previous chapter, the assertion here is that what takes place on a popular media platform's front-end (typically "decentralized, ad hoc, cheap, easy to use, community oriented and transparent" [Stalder, 2012, p.248]) might be technically considered in terms of tactical practices. In contrast, the back-end is "centralized, based on long-term planning, very expensive, difficult-to-run, corporate, and opaque." Therefore, the back end has a strategically devised architecture; it is a digital manifesta-

tion of de Certeau's understanding of strategy. If the personal blog symbolizes one side, the tactical, "the data-center represents the other" (ibid., p.248), which is to say, the strategic, which inevitably conditions the tactical.

Lev Manovich (2009) also demonstrated that the fact that dominant social media frameworks tend to prioritize flexibility might let us speak of a drastic reconfiguration of the tactic-strategy relationship and our understanding of these terms. Again, much in line with the discussion in the previous chapter, in the context of the web 2.0 services "people's cultural tactics were turned into strategies now sold to them" (Manovich, 2009, p.324). He maintains that today:

> Strategies used by social media companies often look more like tactics in the original formulation by de Certeau while tactics look like strategies. Since the companies that create social media platforms make money from having as many users as possible visit them (they do so by serving ads, by selling data about usage to other companies, by selling add-on services, and so on), they have a direct interest in having users pour as much of their lives into these platforms as possible (Manovich, 2009, p.325).

A far more radical and politically informed reading of the term tactical media has been pursued by Rita Raley (2009). She defined it in terms of acts of a "virtuosic performance" that emerged as a response to postindustrial society and neoliberal globalisation (ibid., p.2). By Raley's definition, tactical media encompasses a wide array of radical practices at the intersection of activism and art (for example, collective flash mobs, distributed denial-of-service attacks, clicktivism, which is the signing of online petitions, peer-to-peer network building or life-hacking, such as sharing and disseminating instructions how to hack an Iphone). She sees tactical use of media as interventions into media and technical infrastructures (websites, datasets, databases, servers, etc.) which aim less to change the status quo than to temporarily disrupt it, to highlight and call attention to some controversial mechanisms and practices deliberately withheld from the general public by authorities and financial corporations (e.g. the activities of artistic collectives like Critical Art Ensemble, Carbon Defense League, Bureau of Inverse Technology, or Yes Man, the last of which is known for hi-jacking press conferences). The major characteristic of tactical media, as Raley asserts, is their "ephemerality" and "distinct temporality" (ibid., p.7). Tactical media, she writes:

> [S]ignifies the intervention and disruption of a dominant semiotic regime, the temporary creation of a situation in which signs, messages, and narratives are set into play and critical thinking becomes possible (2009, p.6).

Raley's problematization suggests the tactical use of media technologies is inherently positioned against power structures previously identified as

superior and hegemonic. Thus, taking a position inferior to the strategically produced power structures, tactical media practices are performed in short temporary and circumstantial gaps. "The next five minutes" is, as Raley suggests, the operative field of tactical media (ibid., p.9). This performative, transient, and momentary nature of tactical media practices benefits tactical media practitioners as they themselves have no intention of engaging in systemic change or in leaving a permanent, archival trace of their actions. "The doing, the performance is all," and the only record as Raley suggests, is left in the memory of the audience who happen to witness the tactical intervention (ibid., p.10). This short-term orientation and ephemerality are of importance here, as they suggest a concept of tactical media's integral focus against stability, duration, and permanence, and thus, against the archive.

Counter-acting the Involuntary Archive

If, arguably, sousveillance has originally been conceived as a practice aiming to make oneself visible to the surveilling gaze of the system, but on one's own terms and from the perspective of a singular position in time and space, today, can it be said that in the context of ubiquitous capture, being tactical might mean doing the opposite, which is to say making oneself invisible? Similarly, if the principle of tactical media practice as originally problematized by Lovink and Garcia was to forcibly insert oneself into a wider culture from which one had felt excluded, could it be that today the principle is to deliberately exclude oneself from the dominant frameworks of digital culture through technical manipulations of its very components?

If so, then practices of so called data obfuscation might be approached as an example of such a revised tactical response. These practices aim to regain control over one's personal data, its capture and representation through the endorsement of ambiguity and confusion in one's digital data practices. In their latest book, scholars, artists, and programmers Finn Brunton and Helen Nissenbaum (2015) describe the goal of obfuscation practices as "mitigating and defeating present-day digital surveillance." The goal of obfuscation is to disable or, at least, temporarily deny involuntary observation and capture of personal data. It is performed through "creating many plausible, ambiguous, and misleading signals within which the information we want to conceal can be lost" (ibid., p.7). Assuming that every signal sent and received via network technologies can be spotted, tracked and cataloged, proponents of obfuscation suggest that instead of limiting, one should deliberately add to existing signals. Generating a bundle of random signals amasses a dense and noisy plethora of misleading patterns, among which one's real presence might be temporarily concealed and unidentifiable. Thus, obfuscation is not about the mindful reduction of one's involvement in consuming and circulating

media content; on the contrary, it is about even more intensely engaging in digital data flow. Similarly, it is not about openly confronting and counteracting surveillance in a literal sense, but tactically utilizing and playing with its inevitable mechanisms (ibid., p.55).

Certainly, the principles of obfuscation are not new. Historically, methods of obfuscation have been used in the military or among individuals, to facilitate the circulation of subversive information in highly censored and controlled environments.[44] Consider the practice of steganography, known for more than two thousand years as a method of masking and protecting information by inserting it into another unit of information or another medium (Gupta et al., 2016). As Jussi Parikka suggests, a steganographic message occupies a liminal space, it is "neither a depth nor the plain surface but somewhere in between" (2017, no pagination). Parikka builds a connection between seventeenth-century instruments for secret writing (such as Athanasius Kirchner's *Arca Steganographica*) and contemporary forms of inscribing digital files with content beyond one's perception. Not only hidden messages, personal data, but also malicious bits of code can be steganographically inscribed into a digital file, or as Parikka suggests, into a single pixel of an image which our eyes, preoccupied with the decoding of the semantic layer, are unable to identify.

In the context of digital and network media every user of technologies can technically engage in practices of obfuscation, often described as "the weapons of the weak"(Brunton and Nissenbaum, 2015, p.55). In order to begin obfuscating one's involuntary life-log it suffices to install a special plug-in or an extension of an internet browser (such as Greasemonkey, TrackMeNot, FaceCloak and UnFuck Facebook). But as Brunton and Nissenbaum assert, it must be kept in mind that obfuscation tactics provide no long-term and sustainable solutions against data surveillance and involuntary capture. They do not lead to complete erasure of mediated life patterns or a complete protection of voluntarily constructed archival traces. Rather, obfuscation inserts "sand in the gears" of surveilling mechanisms, "buying time" to enjoy a temporary sense of non-identity, a partial autonomy that might be used to devise further tactics for circumventing the capture. However, Brunton and Nissenbaum point to the expenditure of time and energy on the constant renewal of obfuscating tactics and the continual assurance of their efficiency as shortcomings rendering the prac-

44 For example, during WWII the US Navy deliberately used colonies of shrimp as an acoustic shield to hide from the hydrophone-based, underwater monitoring systems used in Japanese harbours. The snapping signals made by shrimp colonies created sonic disturbances that hid the position of the submarine (Leutwyler , 2000; Riley, 2016). Regarding civil acts of obfuscation, an anecdotal story circulated among my parents' friends describing a playful case of obfuscation technique performed by oppositional students to confuse and irritate communist authorities and secret service in Poland. When, during Martial Law (1981-83), most telephone conversations were tapped and recorded by the security services (typically announced by a loud pre-recorded voice upon dialling the number), a group of students would make numerous calls and inform each other of the need to mobilize and gather at a certain place and time. They would then gather on the roof of the dormitory with bottles of beer and watch the military trucks arriving to find an empty spot (as if it was a performance).

tice extremely precarious.

Obfuscation practices have lately become a popular subject of media-art practices that build on a longer tradition of so called counter-surveillance art (Remes and Skelton, 2010). One often recalled example is Kevin Ludlow's work entitled Bayesian Flooding.[45] For several months, Ludlow has been feeding his Facebook profile with false information about himself. He deliberately pressed the thumbs-up "like" icon under the content he did not like, and uploaded fake updates on his health, location, religious beliefs, and much more. As a result, his online profile became polluted so as to significantly disturb advertising and automated recommendation algorithms, making it harder for Facebook to make sense of, sell, and benefit from the data. As Brunton and Nissenbaum argue, "Bayesian Flooding is not meant to counteract and corrupt the vast scope of data collection and analysis; instead its purpose is to keep data about oneself both within the system and inaccessible" (Brunton and Nissenbaum, 2015, p.39). This double status of being in the system, but on one's own terms, might be seen as characteristic of tactical media, and more generally, a performance of the tactical as proposed by de Certeau (1984).

Tactics of obfuscation do not take place merely in the web and across online communication platforms. Several media-art practitioners have experimented with disrupting the face-tracking software embedded in CCTV surveillance monitoring of urban areas. Early examples included the use of infrared LED diode headgear that aims "to blind" the lenses of monitoring cameras sensitive to infrared light waves.[46] More recent examples of these techniques include devising special wearable instruments, masks, or even haircuts that augment facial geometry and thus mutate the resulting image captured by a surveillance camera, making identification of the target difficult, if at all possible.[47] Given that the mainstream trend in wearable technologies involves perfecting the accuracy and efficiency of tracking and capturing mechanisms, media art interventions attempt to balance the picture by offering what might be described as anti-tracking wearables, However, such artistic quasi-camouflage systems are still more likely to be encountered in art galleries and media festivals than on the street.

Attending the International Symposium of Electronic Arts in Vancouver 2015, I stumbled upon a young man wearing a quite realistically-looking silicon mask (Fig. 5.3). This was Leo Selvaggio, creator of the Personal

45 The title and the concept is inspired by Thomas Bayes and his theory of probability. So called "Bayes rule" is a mathematical formula used for perfecting the estimation of probability of some event to happen given that some additional information has been acquired which helps yield more refined and precise results.

46 Funded via Kickstarter an eyewear gadget called "Reflectacles" can be seen as a recent remediation of that early concept, source: www.reflectacles.com/ accessed: 20.08.2017

47 For example Zach Blas' *Facial Weaponization Tool* (Blas, 2014) or Adam Harvey's *CV Dazzle: Camouflage from Face Detection* (Harvey 2010).

Surveillance Identity Prosthetic. It is a mask with his own face printed on a high-fidelity 3D printer, enabling a photo-realistic rendering of his skin tone, texture, and hair, among other features. He explained his project as a way of counteracting mass surveillance by sacrificing his own personal identity, or in other words multiplying and making his facial features available to anyone interested in disguising his/her presence. Selvaggio saw his own face as an anti-tracking wearable device. After purchasing a hyper-realistic 3D print of his face, the wearer would disorient the face-recognition algorithms of monitoring systems in public spaces.

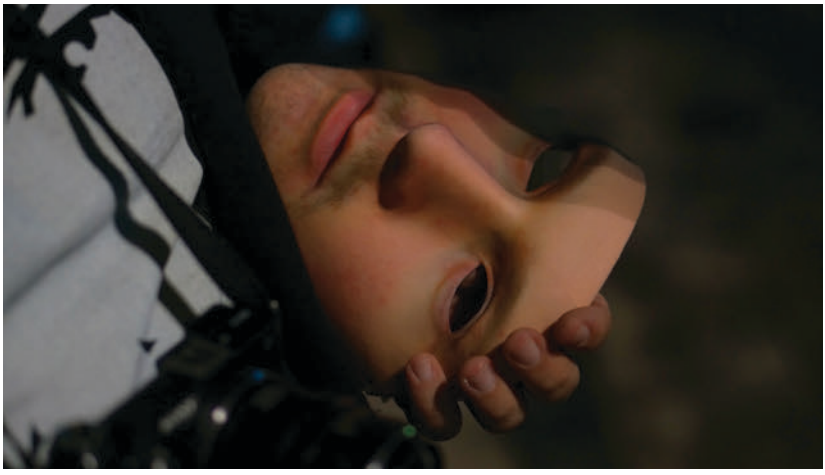


Figure 5.3: Selvaggio's 3D-printed mask of his own face. Photo: J. Smolicki, Vancouver, ISEA 2015

Notwithstanding the imaginative potential of the project, and the fact that, in terms of practically confusing software, the mask is indeed effective, Selvaggio's project draws attention to certain limitations and poses questions about its wider applicability in generic contexts. Firstly, the cost per unit is about 200 USD, and so it can not be considered widely affordable. Secondly, in some countries and neighborhoods wearing a full face mask is strictly forbidden. Selvaggio mentions this briefly on his website and redirects potential customers to another website where more details can be found. Without this awareness, in places with such strict regulations against wearing masks one may actually become an easier target for potential capture and detention instead of decreasing exposure. In other words, instead of obfuscating one's identity, the mask might further jeopardize it. Lastly, Selvaggio's artifact can be seen as an example of a recent trend prevailing among media art practitioners who aspire to be politically and socially active, without moving much beyond the realm of merely theoretical artistic (or technological) speculation.

What is perhaps paradoxical in such counter-surveillance art that deals with themes of obfuscation and identity protection is that, while promot-

ing the erasure of visibility and identity, they simultaneously work toward constructing and solidifying their creators' strong artistic, scholarly, and media image. Instead of becoming anonymous, their media visibility and presence in the discourse only become more vivid. These practices also invoke a sense of a certain paradox if one takes into account today's broader political situation. While, for media-art practitioners who work with techniques of counter-capture, the incentive is to become invisible to the state, the opposite – becoming documented and recognized – is an incentive for a number of migrants and asylum seekers. The achievement of invisibility and absence in the eyes of authorities, portrayed as inherently ill-willed, might be seen as pointing toward the privilege of those who engage in counter-surveillance practices.[48] Often media-art practitioners committed to such practices come from or are settled in economically, geographically, politically, and technologically privileged environments (West-European countries, tech-labs, academia).

Media-art and practices involving obfuscation seem to do little more than primarily raise awareness among those who are already alerted, have access to similar environments, and tend to think along lines prevailing in these environments. Arguably, engaging with counter-surveillance, a popular theme in critical media arts circles, is a practice which only minimally informs and practically affects the reality outside of these circles (while bringing attention and perhaps personal benefit to those operating within these very circles). One can also argue that, although motivated by urgent and important issues, proponents of counter-surveillance practices might unwillingly subscribe to the paranoid aura around contemporary debates on network and digital media. Were this the case, the propagation of such practices as an antidote to the ubiquitous surveillance would paradoxically perpetuate a state of fear and uncertainty which might, in fact, be in the interest of the authorities. As I have argued earlier, in capture culture there is no escape from technological capture, whether it is voluntary or not. Thus, (art) practices seeking to evade the capture and erasure of visibility might be seen as energy-draining. The continual need to upgrade tactics in an attempt to evade capture in the long-term might not bring expected results. While recognizing the potential of such inventive acts for instance in their raising of awareness about the pervasive surveillance, this thesis is however interested in redirecting energy and attention from such a tactical "struggle" for becoming absent (and without a trace of one's itinerary left), to strategically composing modes of what I would call a parallel presence and consequently a parallel record.

48 The all-too-easy transfer of the term struggle to non-political, cultural activities by "well-heeled" Western academics and scholars had been criticized by de Certeau much earlier. For de Certeau, the more profound and currently jeopardized meaning of the term pertained to fights for basic rights by minorities or indigenous people facing particularly hard living conditions, for example (in Highmore, 2002, p.14)

Embracing Big Brother

If the examples of tactical media practices presented above (such as early sousveillance and obfuscation) are explicitly oriented against the strategic capture, surveillance and involuntary archive, here I would like to discuss briefly an example of practice which responds to the current conflation of involuntary and voluntary capture by creatively embracing it, and hence moves beyond the simple tactic/strategy dichotomy. After being linked to terrorist activities post-9/11, stopped, and even detained by security guards at the airport, Hasan Elahi, a Bangladeshi-born American interdisciplinary media artist was required to regularly report his whereabouts and travel itineraries to the FBI. Realizing that despite any effort he would make to resist, his life would still be monitored by the FBI, Elahi decided to deliberately track and digitally archive the most mundane aspects of his everyday life.

Since 2002 he has been capturing every geographical location he visits, every meal he consumes, every public toilet he uses, and every expense he makes, among a great many other things. He shares these data sets directly with FBI officers since, as he ironically states, no technology or agency can track us better than we ourselves can. The website he constructed for this project, entitled *Tracking Transience*, continuously updates its followers on the artist's daily life and present location.

Unlike the previous examples of obfuscation, it seems that Elahi's project does not aim to confuse the addressee by projecting a falsified and twisted identity. Instead Elahi goes as far as modern tracking technology allows to achieve a state of a radical openness. Elahi's tactical use of media technologies can be described alternatively as a form of an overcompliance to the rules and demands of the techno-political system or overidentification with the task that was imposed upon him. The latter has been defined by Daphne Dragona as giving up one's will to resist and instead applying the dominant ideology "even more consistently and scrupulously than the rest of society" (Dragona, 2016). By deliberately exposing every mundane and boring aspect of his life, capturing and mediating its trace to FBI officers (and by doing so, relieving them of their work), Elahi subversively puts under a question mark the very logic and efficacy of extensive data collection and mass surveillance. As he mentions in one of his lectures, in basic economic terms his project can be seen as an unheralded intensification of supply over demand, which drastically deregulates the value of what's demanded (Rocky Mountain College of Art + Design, [RMCAD], 2014). In other words, if you search for something, and I not only release to you, but also to a million other people, the market and symbolic value of what I give away drops down to almost nothing.

Though expecting the sensational, viewers of Elahi's work are confronted with the most boring and prosaic account of everyday life. Para-

doxically, however, this thorough and compulsively constructed display of Elahi's life does not seem to truly account for it. It does not let the viewer in, quite the opposite—it seems to constitute an unbreakable wall. Put differently, it invites the gaze yet does not satisfy it. It rather confuses it. Elahi's use of mnemotechnologies certainly does not aim to serve his own interest in the details of his life. His goal is to satisfy the authority's preoccupation with them. As such, it can be seen as an inventive response to the power distribution in capture culture; on one hand commenting on the contemporary obsession with personal data hoarding facilitated by life-logging gadgets, and on the other, sharply visualizing the possible aspirations of state agencies gathering total information about an individual (such as DARPA's Lifelog project).

In other words, the project can be seen as simultaneously serious and sarcastic a commentary on the military-entertainment complex that underlies today's network technologies (Lovink, 2011), and the inevitable collision of the empowering and disempowering sides of present-day mnemotechnologies. But besides commenting on our times and constructing a particular repertory of mediated memories successively accumulated in parallel to Elahi's everyday life, this on-going project can be seen as one indication for how to inventively reconfigure one's attitude to dominant technologies and subvert, or to some degree counterbalance the unequally distributed power. Instead of attempting "to live against" the dominant techno-political system and its instruments of capture through the taking on a strong counter-surveillance stance, he prefers to conceive of a long-term, creative strategy for "living *with* Big Brother" (Elahi's phrase, emphasis mine); a strategy that somewhat paradoxically merges the principles of obfuscation (which is to say, rendering one's presence opaque) with conventional life-logging (being as accurate as possible in registering and mediating the details of one's life).

Revisiting the Tactics-Strategy Relationship

In the preceding paragraphs I discussed some examples of what, in this chapter's framework, might be described in terms of inventive media practices that tactically address the inescapable embeddedness in capture culture, and more specifically, exposure to involuntary, intrusive capture and archiving. The dynamic of these practices is based on a willful subversion of the elements of technical systems (e.g. flow of data, online trackers, surveillance cameras, facial detection systems) to impede the construction of involuntary archives or deliberately construct what we might call counter-archives, which, while technically rich in "personal" data, yield little or no significance through their tendentiously obfuscated nature. The last example, Hasan Elahi's ongoing practice of tracking himself and continuously recording his presence in time and space, seems to stand out compared to the previous examples. What seems to make

the project distinct is less its visual dimension (not unlike mainstream, passive life-logging practices and popular use of platforms like Google Maps).[49] Nor is it the semantic dimension; the vast amount of personal data does not communicate a specific message (especially without the reader being aware of the context of this ongoing work). What seems most valuable, also in relation to this thesis, is the way that Elahi rethinks and later operationalizes technologies in his daily life, so that they give added meaning to the flow of his life. By "added meaning" or benefits I mean, on the one hand, a stronger, more confident and autonomous position in relation to the forces that attempt to control his life, and on the other hand, more control of the flow of his personal data and mediated memories which, framed and re-articulated in terms of art, also benefits him in his artistic and conceptual line of work.

In the context of this thesis, and more specifically, in relation to the concept of para-archiving that this section emphasizes, Elahi's project hints at another way of approaching and articulating "tactics" and "the tactical." In Elahi's work, the tactical emerges not through an impulsive response, but a conceptual shift and attitude to the forces and power dynamics that coordinate his daily itineraries. Instead of attempting to openly counteract them, to elude their effects, through a conscious shift in perception and the introduction of self-developed coordinates and objectives he incorporates them into his life, regaining a degree of control over their impact on his daily life.

This shift of perception in one's attitude towards forces attempting to strategically configure and capture one's life is precisely how Claire Colebrook (2001) suggests apprehending the notion of the tactical. In her approach to de Certeau's discourse on power in everyday life (pursued more as a feminist critique of Foucault's panopticon), Colebrook writes that "a tactical economy is generated not by moving to a different place but generating a different point of view, a different way of seeing, a figuration or poiesis" (ibid., p.557). Colebrook explains such a "tactical economy" as a deliberate construction of a certain metaphor or "another register" (de Certeau, 1984, p.32) which "generates space within a logic of ordered and proper places," simultaneously deploying "the proper for other ends" (Colebrook, 2001, p.556). This realization will be crucial here in terms of the concept of para-archiving.

In a similar vein, Ben Highmore critiques the persisting divide between strategies and tactics, which he sees as leading to interpretations of everyday life practices as mere effects of clashes between superior power holders and inferior, subjugated individuals (2002, 2006). As he argues, this highly problematic divide is what de Certeau in fact attempted to contest in his scholarship. If read not as an opponent to strategy, but as

49 Elahi uses the captured imagery and information from this project in other works, such as Thousand Little Brothers (2014), which compiles 32,000 images of everyday, mundane activities, captured during the first six months after being linked to terrorist activities.

something that emerged in tandem, the concept of tactic and the tactical can serve as "an antidote to those kinds of accounts that would reduce experience to machinations of power and discipline" (2006, p.112), such as Foucault's aforementioned model of panopticism, which, as Highmore asserts, has become one of the dominant frameworks for studying practices of everyday life (ibid., p.105). In fact, de Certeau was openly critical of Foucault's tendency to dramatize and dogmatize the triumph of the authoritarian order over citizens' life practices. At times referring to Foucault's writing style as a "detective story" (de Certeau, 1984, p.45), de Certeau questioned the heavy reliance on the "monotheistic privilege" (ibid., p.48) in panopticon-like apparatuses, suggesting that it significantly obscures the capacity to invite any other, minor techniques, developments and practices related to the organization of societal or individual life into a constructive discourse:

> What is the status of so many other series which, pursuing their silent itineraries, have not given rise to a discursive configuration or to a technological systematization? They could be considered as an immense reserve constituting either the beginnings or traces of different developments […]
>
> A society is thus composed of certain foregrounded practices organizing its normative institutions and of innumerable other practices that remain 'minor,' always there but not organizing discourses and preserving the beginnings or remains of different (institutional, scientific) hypotheses for that society or for others. It is in this multifarious and silent 'reverse' of procedures that we should look for 'consumer' practices having the double characteristic, pointed out by Foucault, of being able to organize both spaces and languages, whether on a minute or a vast scale (de Certeau, 1984, p.48).[50]

Strategies and tactics ought not to be seen as forces at two opposite ends of an axis. Tactics are not always about a direct and rapid response to a strategic force, but might also evolve silently as the result of an "inventive employment of possibilities within strategic circumstances" (Highmore, 2002, p.159). They do not operate outside the strategy that they seemingly confront: "to do this would require a counter-strategy, they are in an ambiguous position of being inside but 'other': they escape it without leaving it"(ibid., p.159). This means the everyday is irreducible to a single disciplining grid. Rather, the experience of the everyday is always particular and singular, evolving alongside "proprietary power" (ibid., p.159), it is never autonomous, as it is never entirely dependent. Flows of everyday life are seldom entirely conditioned by a pervasive disciplinary strategy; they are unique projects emerging from particular ways of operating in

50 This excerpt from de Certeau's Practice of Everyday Life could easily stand as a main declaration media archaeology, which, paradoxically, draws extensively from Foucault, particularly his Archaeology of Knowledge (1969).

relation to different forces that explicitly or implicitly attempt to shape them (de Certeau, 1984, p.ix). In this light, the tactical no longer appears as a force in a battle against strategy. It refuses to be associated with "liberatory," "progressive," or "heroic" actions against the strategic. Nor is it an attempt to completely withdraw and stay allegedly unaffected by it. In this light, the tactical might be aligned with the notion of resistance, understood not as an intensification of an effort to counteract, but as a voluntary limitation of commitment to directly combat the hegemonic force, and a subsequent redirection of effort, energy, and passion toward something else, such as one's own deliberate and consistently maintained everyday (media) practices.

Freed of these heroic connotations, the notion of tactical resistance lends itself to be read through its relation to technical/material/electrical procedures, or as a conscious act of mindfully lowering, balancing, and re-orienting the intensity of the (electric) current, consciously stabilizing the relationship between the (electrical) input and the output, and thus, to some extent, taking control of this current.

Uncoupling the concepts of tactics (and resistance) from their earlier articulation as counter-practices performed against strategies makes room for developing:

> [N]ot a counter-narrative, but a para-narrative (and a para-archive) where everyday life can be seen to move at multiple speeds with varied rhythms, where the daily articulates moments of cunning and stubborn resistance […]. Here the activities of everyday life stubbornly evade capture by discipline and tenaciously hold on to aspects of life that are in many ways residual and excessive to the revolutionary force of modernisation (Highmore, 2006, p.109).

Although Highmore does not explicitly elaborate on the concepts of para-narratives and para-archives, one might consider reading these concepts (especially the latter) in relation to de Certeau's general concern with the notion of the archive as a hegemonic construct and the "abstraction" that operates above yet essentially affects the everyday (in Highmore, 2006, p.85), as Foucault would have it. Thus, the move toward para-archives could be seen as a way of opening up and pluralizing our perspective on the archive, to foreground the accounts of the everyday that are formed singularly and silently from within. They emerge parallel to (and thus not explicitly against) official, formal archival "abstractions" concerned with the production and management of qualified knowledge, scrutinized to serve scientific, exploitative, anthropological, or medical ends (Highmore, 2002, p.89). What also appears to be of crucial importance in the para-archive is the singular perspective and specific standpoint from which it is formed. If official archival institutions can be seen as preoccupied with assimilating individual voices into unified, formalized, coherent, logical collective narratives, para-archives might be seen as concerned with

acknowledging the heterogeneity and plurality of micro-perspectives, forms of alterity that might be incompatible with the mainstream, strategic, and regulatory. Thus, the prefix para- in para-archiving, besides connoting what happens alongside and parallel (to the official, hegemonic, mainstream, regulatory, etc.), may be also seen as correspondent to categories used by de Certeau to describe practices of everyday life, such as "silent", "invisible", "elusive","opaque","clandestine","disguised","pers istent" or "stubborn" (in Highmore, 2002, p.108).

Performing Para-archiving

In the following section I would like to briefly cover two historical cases in which two individuals, in two different historical contexts, used simple recording devices (cameras) to bring into action their subjective embeddedness in particular contexts as to perform and construct records that can be seen as having para-archival qualities that will be subsequently discussed. These projects, successively and obstinately evolving and accumulating parallel to these individuals' everyday lives, are here to inspire a further step from counter- to para-, and thus to further unhinge the notion of the tactical from its opposition to the strategic.

While reading through the diary of David Sierakowski who created an extensive, written account of the daily life of inhabitants of the Jewish Ghetto in Nazi-occupied Łódź (then Litzmannstadt) during the Second World War, I stumbled upon a picture that, due to my interest in practices of sousveillance, immediately drew my attention. A tall man points his small camera at an internal officer, probably unaware of being photographed (Fig. 5.4). At the first glance this strong depiction seems to quite literally express the dynamics of souveillance: a subjugated individual confronting one of the agents of the oppressive force. But beyond the stratum established by this first association there lies a thicker, contextual texture. The man with a camera on the picture was Mendel Grossman, an amateur photographer appointed by the ghetto's Judenrat (the Jewish Administration Office) to work in its statistics department.[51] Grossman's official job, acquired due to his photographic skills, was to photograph ghetto inhabitants for official archival and statistical purposes. He was given a simple camera and access to a dark room with the equipment and chemicals needed to produce official photographs for documents and for the occupier's archives. Quickly realizing that his abilities were being instrumentalized to the occupiers' benefit, resulting in a one-sided account

51 The Judenrat was an organization within the borders of the Ghetto, imposed by the Nazis. It stood between the Nazi occupiers and the Jewish communities, helping the former to better control the daily life of the Jews. Besides being responsible for the meticulous documentation of information about inhabitants, such as their addresses, properties, occupations, time of arrival, and deportation, the Judenrat was also in charge of the internal police, which sometimes directly assisted Nazi soldiers in catching and sending Jewish inhabitants to concentration camps (Arendt, 1963 [2006]).

shaped entirely in line with the oppressor's vision, Grossman subverted the technologies he was given to create a different kind of account. He began smuggling the camera out of the photography laboratory. Repurposing his coat to easily disguise the presence of the device, cutting his pockets open inside, he was able to manipulate the camera without drawing much attention. When shooting images, he would point his body in the intended direction, quickly parting his coat and pressing the shutter through his pockets (Smith, 2003). In this way, Grossman systematically preserved an extraordinarily rich account of atrocities German Nazis performed upon the ghetto inhabitants, but also, or even primarily, the "rough texture" of the everyday life practices of the community; religious, cultural and family events conducted despite the pervasive fear and awareness of being held in inescapable confines (Sierakowiak et al., 1998, p.269). About 10,000 negatives reflecting the minutiae of the daily existence of a community on the verge of disappearance were shot, cataloged, and concealed, or even buried in the ground by Grossman and his companion, to be salvaged by his sister only after the war and his death. Today the images constitute an important part of the archive at the Ghetto Fighters House in Kibbutz Lohamei HaGeta'ot in Israel.

For a much less dramatic example of a recording practice diligently and silently performed from within the currents of one's daily life, we might turn to Zofia Rydet (Fig. 5.5) and her work in closing decades of the 20th century (Nowicki, 2017). Having graduated from an agricultural school in a small village and working as an assistant in a haberdashery store, Rydet gained an interest in photography mostly through grassroots amateur clubs, where she took part in discussions and peer review sessions with more experienced practitioners. Realizing her years were numbered, at the age of 67 Rydet decided to pursue a large scale project that would occupy her for the rest of her life. Without a car, she began travelling regularly with her modestly appropriated photographic camera single-handily documenting the everyday life of local communities, mostly in the rural areas and urban outskirts of Poland (later, in other countries as well). Her goal was to photograph as many local households and their owners as possible before they become eroded by the increasing industrialization taking place at the time. Her project resulted in about 16,000 negatives, out of which 22,000 pictures were eventually developed.

Figure 5.4: Mendel Grossman, photo: Henryk Ross, source: The Ghetto Fighters' House Museum, Lohamei HaGeta'ot, Israel.

Figure 5.5: Zofia Rydet, photo: anonymous author, source: Zofia Rydet Foundation, Kraków, Poland.

There is an important moment that Rydet highlights which emphasizes the move from documenting her personal life and concerns toward redirecting attention towards a documentary project of a broader cultural significance:

> Some time ago I noted down my feelings and concerns. Today I just try to create ordinary documentary photographs. This work, created with great consistency, brings me satisfaction and strength, as well as the certainty that I will leave something behind, assuming the world doesn't cease to exist (in Łyczywek, 1990).

The idea for The Sociological Record, as she called the project, came to her quite suddenly. She explained this moment as follows:

> Once some friends and I travelled to Jelcz [a small town in South-Western Poland, my annotation], and there was a hall that had been transformed into office cubicles. Although they were identical, they differed a lot, because the people working there decorated them with what they liked to look at. The things I saw! Beautiful girls and holy icons. Jazz stars and photos of children. Hunting trophies and rosaries. Each person marked his space with his personality. And that's how it began (in Łyczywek, 1990, pp.33-37).

In the everyday reality and life at the time, to a great extent shaped, homogenized and constrained by the communist regime, Rydet believed that manifestations of people's identities could still be found on a micro-level, in the private assemblages of mundane objects with which people surround themselves. It is precisely such details of material culture, mundane spaces, household interiors or, as mentioned in the quote above, individual cubicles, that were the focus of her recording activity. As her work spanned many decades, her record, diligently performed in parallel to her other daily activities, within time somewhat inevitably began to reflect numerous cultural, political and socio-material transformations that typical Polish households were undergoing at the time. These changes are seen in elements of material culture, equipment, tools, clothes, furniture, interior decorations, but also paintings and posters on the walls. Traditional, religious depictions of saints, the pope and folk depictions of the holy family were gradually accompanied, or at times entirely replaced by posters of pop culture celebrities, movie stars, soft-porn actors or portraits of prominent foreign politicians, such as John Kennedy.

These patchworks of traditional and modern representations, increasingly eclectic over the course of the project, evoke the political, cultural and ideological transformations that Poland experienced during last decades of Rydet's life. In her pictures, small forgotten villages and neighborhoods at the margin of urban zones and metropolitan areas appear as places where the currents of everyday life seemed to have evolved and

disappeared much more slowly than anywhere else. The tendrils of modernization and capitalism seem much less effective than in metropolises, and so traces of older modes of living and experiencing everyday life have a better chance of enduring. Encountering Rydet's project in its full scale begs the question of how such a consistent practice could be conducted in our day, in the age of distraction and "great acceleration" (Colvile, 2016), times that systematically deny us time for reflection.

In December 2015, while visiting an exhibition in the Museum of Modern Art in Warsaw where Rydet's work was displayed first time in its entirety, the value and epic dimension of her consistent work became evident to me. The volume and sequential arrangement of the photographs displayed all at once gave a sense of a cultural depth and historical weight which Rydet intuitively anticipated. She cultivated and nourished this prospect over twelve consecutive years of commitment, despite the difficulties of the time and her advanced age. "The more my Record grows," she said in the aforementioned interview, "the more I believe that it will be timeless." Although her work has increasingly been considered art and is displayed in art venues (such as the one in Warsaw), we should emphasize that Rydet herself never wanted her practice to be seen as art, at least not in its conventional, institutional definition. For her to frame the result of daily activity that emerges from curiosity and passion, not calculation, in terms of artwork was highly problematic, as it could create unnecessary boundaries and block regular people from identifying with the content, or perhaps even from pursuing a similar project. The use of photographic image, as she maintained, was primarily "a language" through which she wanted to speak to ordinary people, not artists. The greatest value of documentary photography, she insisted, was as a source of information, its content, and not the artistic statement, "which is only transitory" (in Łyczywek, 1990, pp.33-37).

Discussion and Summary of the Chapter

Based on the examples discussed briefly above, and in relation to the preceding discussion on tactics, strategies and tactical media practices, I would like to more closely address the concept of para-archiving. The obvious question is: what makes one's everyday, capturing practices para-archival, and how is a para-archival quality constructed and manifested? Moreover, how can para-archiving be carried over into and performed in a contemporary context?

I suggest that both practices might be perceived as special auxiliary layers deliberately conceptualized and woven by these individuals into the fabric of their everyday lives. Despite their radically different historical contexts, situation, and dignity, what unites these practices is the use of a technological capturing device (a camera) with particular motivations, which are then adhered to for a longer span of time (or even indefinitely).

There is an obvious sense of intentionality in how these practitioners attend to, motivate, and incorporate technologies of capture into their everyday life. Both projects are motivated by a desire to secure a record of a given moment in time.[52] This motivation, deeply entangled in their everyday lives (or even, to some extent, choreographing its flow) is, arguably, what gives their very existences a para-archival dimension. These conscious entanglements of recording devices with bodies and senses inhabiting particular times and spaces, produce what we might join Amad in calling "an unknown weight" (2012), whose value, meaning, and significance will most probably exceed their individual lifespans. This awareness of the scale, weight, and potential historical value of the personally collected material is quite present in how Rydet attends to her work, in speaking about its growing value over time. Thus, it can be said that what makes an everyday recording practice a candidate for para-archiving is a certain awareness, vision, and anticipation that the record one deliberately produces parallel to one's life and eventually leaves behind might hold special significance in the future. The para-archival quality is enabled by a pro-active attitude to producing, collecting, and organizing mediated traces and memories, in other words, by embedding an awareness of and preparation for the future in one's everyday recording practices.

Besides specific motivations, para-archiving can be said to operate through deliberate, material and performative interventions into the spatio-temporal conditions one occupies. The material intervention involves the appropriation and use of a recording device to serve a specific, individuated purpose, besides (and thus, parallel to) the one it was initially ascribed. This is especially clear and evident in the case of Grossman. In fact, Grossman's project stands out as one of the most unique and extreme cases of appropriation and subversion of authorities' strategic and instru-

52 Obviously there are a number of other practitioners incorporating recording technologies into their everyday life in a way that might further enrich the discussion on our (potential) understanding of para-archiving. This thesis obviously cannot accommodate them all. Some of these practitioners have been recognized and have received significant attention. Vivian Maier is one example, a nanny secretly committed to street photography and archiving newspaper clippings, audio recordings, and other material traces of everyday life. Significantly less known is Anna Beata Bohdziewicz, a photographer committed to a long-term photojournalistic project initiated in 1982, kept under the name "Fotodziennik" (Polish for "Photo-journal") to this day. Her project is a parallel record of the flow of everyday life in Poland's constantly transforming urban spaces. She has also described her project as a way of "rectifying" an otherwise ruthless everyday reality. Another example of a para-archivist might be Lou Bernstein, a self-taught photographer working in a small photography store in New York during the Great Depression. In a period of forty years, he used every moment of his spare time to travel to Coney Island, where he committed himself to an extensive photographic documentation of its various aspects. Peter Cusack, a pioneer of field recording, constructs systematic repositories of everyday soundscapes, focusing on places at risk of vanishing. A Romanian homeless man, Ion Bârlădeanu, lived for many years in a rubbish collection point in a simple block of flats in Bucharest. Despite the precariousness of his everyday life, he has created hundreds of collages from old newspapers gathered daily on the streets of Bucharest. While this simple practice allowed him to endure his unstable condition, it simultaneously generated a special record of times characterized by powerful communist indoctrination and strict censorship. Concealed carefully in the basement, Barladeanu's (para-)archive was discovered only after the political transformation that occurred in the 1990's.

mental technology to create a parallel, alternate account of everyday life from the perspective of a person in its stream. A physically re-purposed and manipulated camera is operationalized in a highly performative manner. By this I mean that the device is dissociated from its strategic, normalized, intended role, to "play" and "perform" a different role, yet within the same setting and the same field of forces and dependencies. What is crucial here, and what makes this practice much different from sousveillance (which Grossman's work might resemble at first glance) is that this performatively reconfigured function of a recording device is not explicitly motivated against the hegemonic power, but by a will to construct a particular, singular, and disparate account of a given time and space (potentially productive and informative beyond the here and now, and only then, perhaps, capable of serving as evidence to balance the hegemonic archive).

I propose seeing the long-term motivation and approach to recording technologies that characterizes these practices as another important quality of the para-archive. This long-term approach, the enduring and diligent nature of these works, also points to a different way of reading the notion of tactics, unlike the one that has dominated discourses on tactical media presented earlier in this chapter. As suggested above, founded on an antagonistic relationship between strategies and tactics, discourses on tactical media practices tended to portray tactics (and resistance) as built upon a "hit-and-run" logic. In other words, tactics meant a sudden, spontaneous, disruptive, and unexpected intervention into a hegemonic structure (e.g. an institution or a technical system) from a supposedly autonomous and untraceable outside place, to temporarily paralyze its mechanisms and gain short-term benefits. In contrast to this (and in line with Highmore's return to de Certeau), the discussed practices (including Hasan Elahi's project) allow us to perceive the notion of tactics and their dynamics differently. Here, tactics and resistance seem to emerge slowly, stubbornly, and persistently, over longer periods of time. Characterized by persistence, endurance, and discipline, these rethought tactics seem to acquire characteristics previously reserved for strategies. In other words, tactics no longer appear to be concerned with the desire to disrupt strategies, to temporarily regain or balance power; they themselves take on the role of alternative strategies or para-strategies that operate alongside (and benefit from) what they might have been earlier intended to combat.

This observation might be productive in the context of contemporary techno-cultural context in which a distinction between tactics and strategies becomes confused and blurred (cf. the conflation of sousveillance and surveillance), but also where constant technological changes, frequent and disruptive demands for updates, and accelerating technological obsolescence seemed to have pronounced tactical mobility as a default, perhaps a mainstream mode of living with technologies today.
A long-term commitment to a parallel record of selected subsets of ev-

eryday life, while potentially producing material to give posterity a particular, singular perspective onto a given moment, is certainly not devoid of powerful personal significance. On the contrary, this auxiliary layer of everyday life (or "second layer," as de Certeau had it) where para-archiving takes place might also be seen as a space where subjecthood is constructed. Thus, the "para-" in para-archiving might be indicative of a liminal zone where the public and private values of a practice inextricably blend.

Here we should return briefly to the notion of souveillance. In defining this concept, Steve Mann outlined essentially its twofold interpretation (Mann et al., 2003). On the one hand, he presented it in terms of *reflectionism* (ibid., p.333), a tactical use of technology to confront authorities, purposefully recording their actions (and misconduct) to reveal their mechanics, motivations, or violence, and, in so doing, to balance the distribution of power. In this reading of sousveillance, technologies are incorporated into one's existence to counteract the their hegemonic use by authorities who aim to control and discipline the society. On the other hand, however, he approached sousveillance as a practice incorporating recording devices into life as existential technologies, techniques of "self-determination and mastery over our own destiny" (Mann, 2003). This reading of sousveillance, which has not been picked up to the same degree as the other, "reflectionist" side, holds a kinship with several other voices in this thesis, exploring the relationship between the reflective and long-term use of technology and the shaping of personality, and hence, subjecthood. These are found in August Lux's discussion of the *spiritual center* of the amateur photography, as a way of counteracting the disruptive effects of modernity, in Stiegler's concept of mnemotechnique which can be seen as a form of *techne tou biou*, (the craft of one's aesthetics of existence in relationship to the technical) jeopardized by large-scale mnemotechnological systems, or in Foucault's *technologies of the self* as counterparts to the hegemonic forces inscribed in the working of dominant technical apparatuses.

Zofia Rydet suggested that the personal value of her long-term project never went away, but that the public and personal dimensions were always inextricably intertwined and equally relevant. In a video interview published on the website that organizes her legacy, Rydet highlights the fact that the regular exposure to a variety of personalities, their unique life stories and situations, enriched her own personality. Close, direct contact with people and their everyday situations enabled her to construct her own integral world-view and special sensitivity toward the surrounding world. Besides the material archive to be passed down for the benefit of others, the project provided her with a framework for experiencing everyday life, accumulating these experiences, finding her role in society, and developing a subjective entry point for a more profound and vital relationship with the others and what she called human fate:

> Though the project was originally supposed to be the simplest, objective and authentic record of reality from a cold distance, as I worked on it I noticed that it was gradually acquiring another magnitude. This ordinary documentation was taking on a greater truth about human fate. I was no longer able to maintain a cold distance. On the contrary, over time the project consumed me more than anything else I had done. It was becoming my new love and passion, gaining new perspectives and vitality (Rydet, 1993, my translation).

In sum, the goal of this chapter was to arrive at clearer articulation of the concept of para-archiving, to be expanded further on in this thesis. This articulation, however, was preceded by a discussion and analysis of several creative media practices that have evolved in recent years as tactical responses to the intrusiveness of capturing and surveilling technologies of which operations result in involuntary archives. As I have demonstrated, these creative responses are typically formed in relation to two major theoretical frames, one from Michel Foucault's discussion on panopticism as an apparatus of a top-down control and discipline, and the other from Michel de Certeau's thoughts on practices of everyday life as sites where individuals tactically negotiate and reconfigure power dynamics distributed by strategically operating technical and political forces.

The practices discussed in this chapter included sousveillance, obfuscation, and what I call, for a lack of a better term, overcompliance to strategic forces and overidentification with its demands (expressed through Hasan Elahi's project). I discussed how various individuals position themselves in these creative practices, and thus negotiate the notion of agency in relation to the current techno-cultural condition of involuntary capture and archiving. Practically all of these examples (with perhaps the exception of Elahi's project) can be seen as modes of counteracting this condition. In other words, their effort is to counteract strategic surveillance and the production of involuntary archives through different techniques, tactical appropriations, and critical interventions into technologies, technical and power structures. The majority of these practices can be linked to the concept of tactical media, which emerged precisely as a result of importing de Certeau's concepts of tactics and strategies into the field of media and media art studies (Critical Art Ensemble, 2001). To facilitate thinking not against the techno-cultural condition but alongside it, and hence to articulate para-archiving, I have included a critique of the reading of the antagonistic relationship between tactics and strategies offered through Ben Highmore's return to de Certeau's original explication of these concepts and their relation (2002, 2006). Arguing against perceiving and analyzing cultural (and, by implication, media) practices as struggles against strategic forces, Highmore argued for seeing them as evolving in an inseparable relationship. In other words, tactics are acts that do not emerge to merely oppose the strategic forces. However, with no place of their own tactics take advantage of these forces by recom-

posing and reconfiguring their components to serve alternative ends, motivations, and purposes. In relation to media practices, this view allows us to shift tactics from their association with "hit-and-run" logic performed by "happy negatives, always in search of an enemy," as Lovink and Garcia described tactical media practitioners (Garcia and Lovink, 1997). It is a move that allows to speak of tactics and, as such, tactical media practices, as not merely short-term, unsustainable interventions into power structures (technical, political, economical) from a supposedly autonomous and untraceable outside position, but also as semi-permanent, long-term engagements in inventing, composing and (re-)configuring life *with* technologies, devices and media systems, from within, alongside, or parallel to hegemonic, regulatory, and mainstream forces. As Verbeek asserts, echoing late Foucault, "the freedom of the subject does not consist in being liberated from power but in interacting with it. One becomes a subject not by securing a place outside the reach of power but by shaping one's subjectivity in critical relation to it" (2011, p.73).

PART III

The arguments presented in the part of this thesis dedicated to media practice approach called for a kind of media studies that complements the analysis of existing media-technological practices and landscapes with a strong practical engagement in forging new and regenerating obsolete ones as to inspire reflection on the contemporary techno-culture and possibly a critical and creative reconfiguration of one's position (as a researcher as well as media practitioner) in it. This call becomes addressed in this part through description and analysis of some of my on-going personal archiving practices as well as through composition of new modes of living with technologies in capture culture that originate from these on-going ones.

At this point it is important to recall research questions presented in the initial part of this study.

> What insights can historical and contemporary aesthetic practices involving technologies of capture provide to inspire other modes of personal archiving than those offered by the mnemotechnologies currently prevailing in capture culture?
>
> What observations can be acquired by committing to personal archiving practices that might address and challenge modes of living with technologies prevalent in capture culture?
>
> In the context of capture culture, what tactics or strategies might be conceptualized and implemented into the everyday use of technologies to enable the emergence of inventive modes of personal archiving beyond the ones offered by dominant mnemotechnologies?

In the chapter dedicated to capture culture I provided an analysis of some of currently dominant mnemotechnologies concerned with capturing, processing, mediating and archiving personal memories. In relation to Stiegler's articulation of technological transformations as a series of transitions from mnemotechniques to mnemotechnologies I maintained that personal archiving practices in capture culture are subject to significant mutations taking place on several plains including material, agential, temporal, performative and ethical/moral. Here, when describing and analysing my personal para-archiving practices, I will be doing it in relation to these different dimensions, in particular material, performative and temporal, giving them various degrees of attention at different moments.

By referring to concrete examples and moments in the development of my work I will attempt to demonstrate how these dimensions, arguably jeopardized and eroded, and certainly modified by mainstream mnemotechnologies, can be actively intervened in, negotiated and re-generated provided that one takes care for, motivates and pays attention to choices when engaging with technologies on a day-to-day basis.

For example, while discussing manual note-book keeping, I will focus on its material and performative qualities vivid especially when compared to dominant mnemotechnologies of capture culture. While discussing my regularly performed recording practices (such as soundtracking and minuting, which are daily practices of soundscape-recording), I will focus on the way I have been adopting basic technologies, defining certain constraints for how they are to be used along the currents of my everyday life and actively configuring relationships with and between them. The agential aspect can be seen as of special importance in that case. In the case of the fragmentarium, a hybrid media practice of materializing and manually organizing outcomes of my personal archiving practices in a physical cabinet, expanding on material, temporal and performative aspects, I will bring to the fore observations related to the issues of media-material hybridity as well as forms of performatively opening the personal onto other media practitioners.

To address the question recalled above which asks about tactics/strategies for living with technologies in the current condition of capture culture, I will make connections with the second theoretical framework proposed in the part two and particularly the concept of para-archiving. As suggested there, para-archiving is a practice (or differently put, a quality characterizing a practice) of deliberately constructing a record of some aspect of everyday life from within its currents, as well as in parallel to other involuntary capturing and archival mechanisms at play, at times also taking advantage of them. Thus I will be identifying the emergence of para-archival qualities in my practices over time while discussing such aspects as their durational character, long-term orientation or the fact that they are tightly integrated into the fabric of my everyday life. This para-archival quality will be also seek in these practices' interest in recording marginal, often peripheral and opaque aspects of everyday life, but also, in their deliberately ambivalent situatedness in between the digital and non-digital media, as in the case of fragmentarium. In particular while discussing fragmentarium I will venture to establish closer links between the concept of para-archiving and the post-digital, understood here as a critical and reflective revision of digital through a partial turn to and adoption of non-digital techniques into one's way of living with technologies and working with personal memory and archiving.

Following the spirit of media archaeological approach, in the graph below I present different layers of the project and a series of transformations it has undergone over last ten years or so (Fig. 7). For the sake of

clarity, the graph presents the practices as they have evolved over time. In my writing I will be establishing relations between various moments and aspects of these practices, at times in a non-linear manner. With this simplified graph my intention is hence to visually indicate three major phases of my on-going project. The *pre-digital* phase of manual note-taking and scrap-booking, the *digital*, multifaceted and media-rich phase and the *post-digital* which is characterized by a partial regeneration of pre-digital techniques. This differentiation is merely to help establish points of reference and by no means represents any premeditated realization of some strict plan or program for my living with technologies over time (in fact, these cuts could as well be performed according to *pre-network*, *network* and *post-network* phases as to highlight the inevitable impact of network computing on this trajectory which will become apparent in my discussion). The graph is hence a reconstruction of the process, which in retrospect appears to be inscribed with some intentionality (a smooth transition from point A to point B) but which on a micro-scale of my everyday life has often been characterized by noise, ambiguity and intuitive decision making.

Being aware of the complexity as well as heterogeneity of these projects in terms of their rules, dynamics and kinds of media, techniques, temporailities, sites and actors they incorporate, I will focus primarily on three selected segments. In the first section I discuss the practice of manual, personal notebook keeping, in the second I will discuss how the notebook has evolved into a series of multi-modal digital practices and eventually a digital framework comprising outcomes of these practices characterized by various para-archival qualities. The third section will focus on fragmentarium, a hybrid media para-archival practice, which is the latest phase in this continuously evolving trajectory of mutations. But before moving on to discussing these practices in detail, I will introduce a methodological assemblage of perspectives, concepts and approaches that while building on media-practice approach presented in the first part of the thesis, is then subsequently applied in the practice-based study.

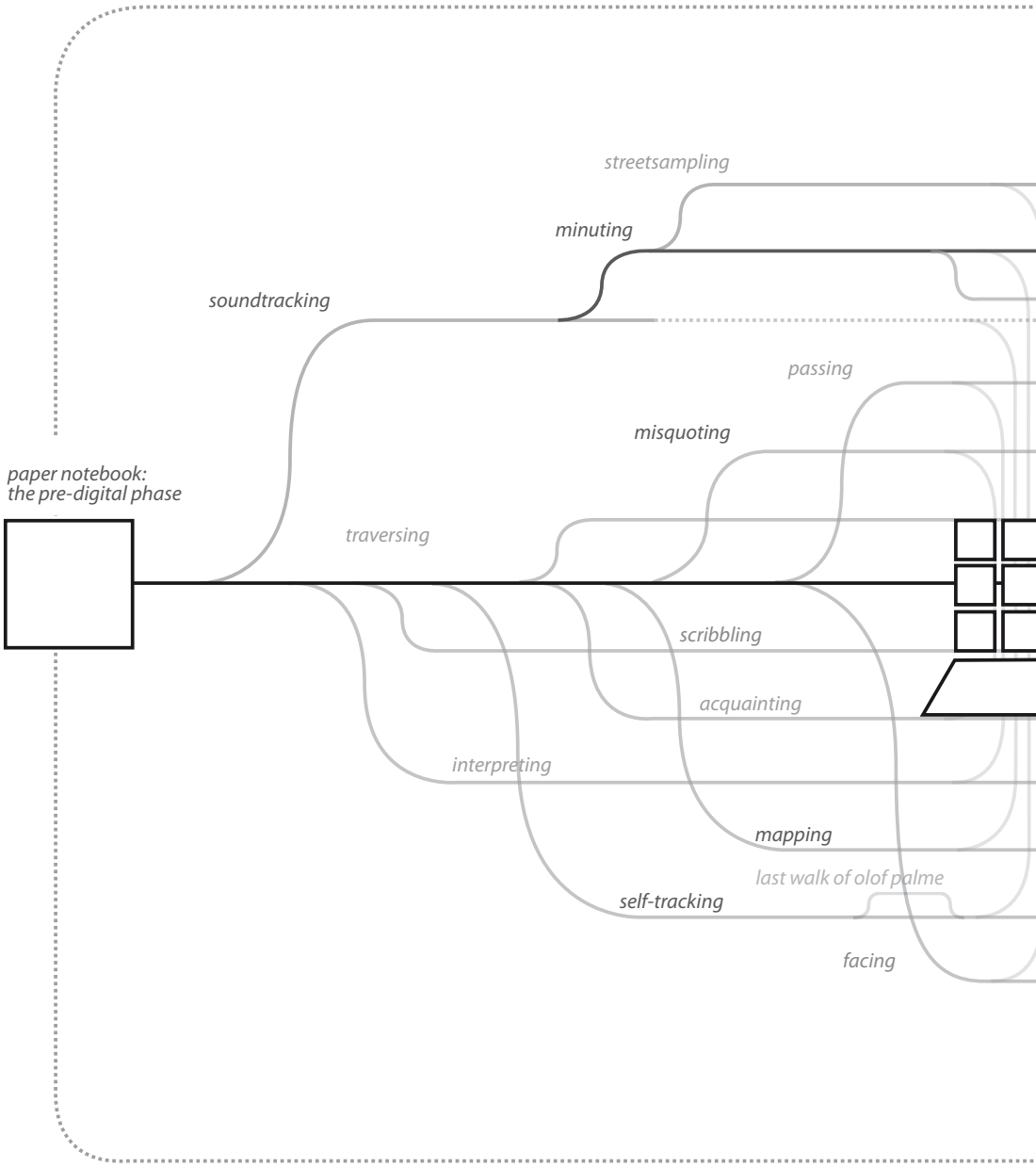
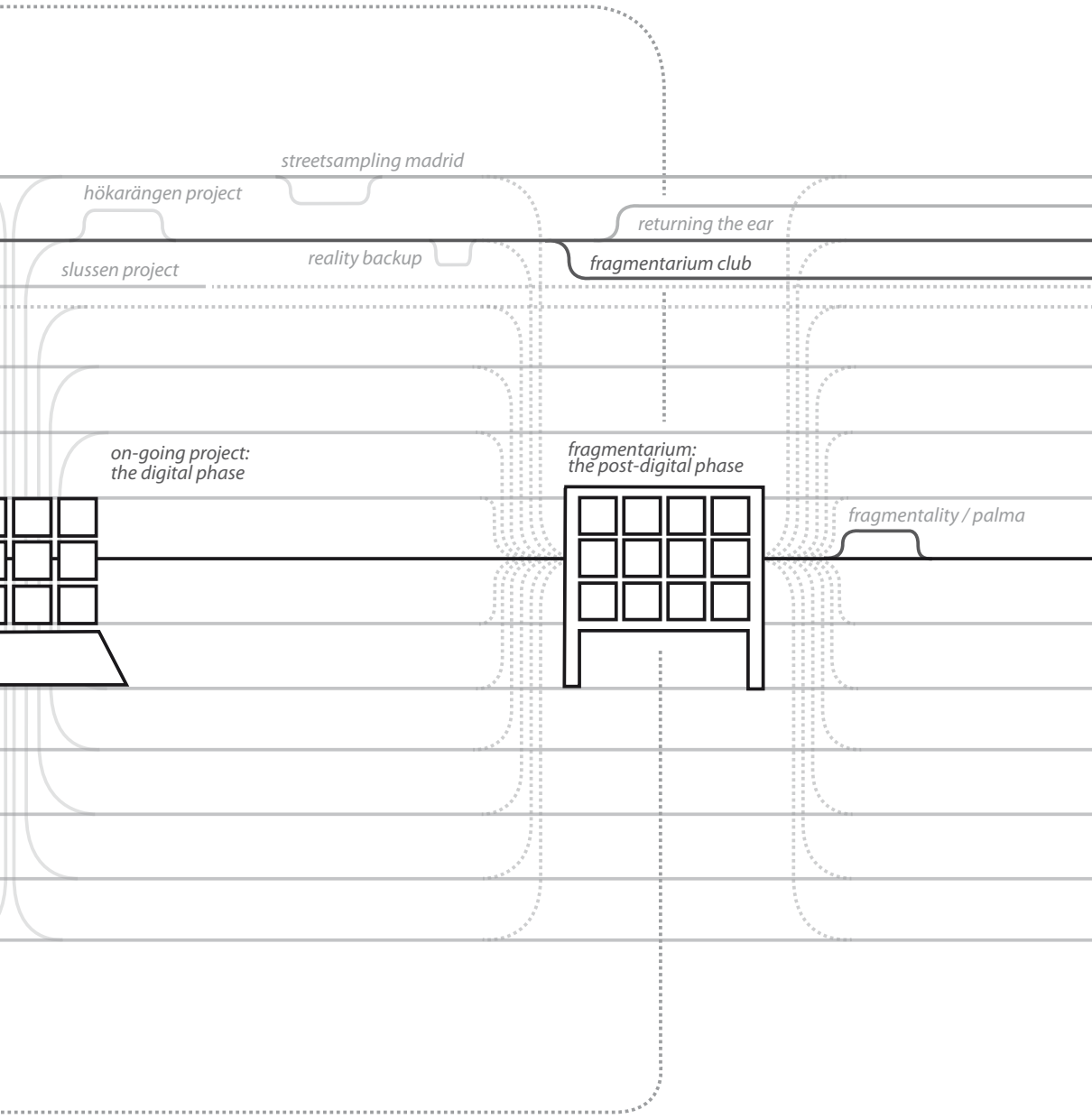


Figure 7: A graph depicting the development of the on-going project over time.


streetsampling madrid
hökarängen project
returning the ear
slussen project
reality backup
fragmentarium club
on-going project:
the digital phase
fragmentarium:
the post-digital phase
fragmentality / palma

6. METHODOLOGICAL EXTENSION OF THE MEDIA PRACTICE APPROACH

Between Procedurality and Performativity

My understanding of method in this thesis aligns with John Law's (2004) as expressed through his notion of methodological assemblage and the notion of performativity. A conventional way of describing a research method would present it as a set of procedures, indications, or suggestions for how to approach the problem that the research attempts to address, or to tackle the questions it sets forth. Thus, methods exist to provide conceptual and practical guidelines for how to enter and understand a field, to collect and then analyze data. The findings that these actions bring contribute to the field or area of interest in which the study is located. In other words, methods can be seen as codes of behavior or conduct that researchers rigorously adopt as to obtain and communicate knowledge about reality, or to discover the truth about it. In *After Method: Mess in Social Science Research*, John Law states that "the picture of the method shifts" (Law, 2004, p.45). If methods are typically aids for analyzing an aspect of the world, as Law asserts, they might also work against such a belief. Methods might even block the researcher from being open to the world, limiting his/her ability to note and reflect upon pre-established norms. In Law's words:

> If 'research methods' are allowed to claim methodological hegemony or (even worse) monopoly, and I think that there are locations where they try to do this, then when we are put into relation with such methods we are being placed, however rebelliously, in a set of constraining normative blinkers. We are being told how we must see and what we must do when we investigate (ibid., p.4).

In response to this, Law proposes an approach to method as "not a more or less successful set of procedures for reporting on a given reality," but always a "performative" act, and consequently, a support that helps not to reveal, but "to produce realities" (ibid., p.143). Thus, the shift he proposes can be seen as a move from a method as a reporting procedure (or device) toward a generative, productive and performative act. In using the term performativity, I also echo Kember and Zylinska's understanding of it as a consciously enacted, aesthetic (and political) shift within ideas, practices, and values, possible even, as they argue and as I demonstrated in the preceding chapter "within the most constraining and oppressive socio-cultural formation" (2012, p.189).

The method assemblage addresses precisely this sensitivity toward the multiplicity of relations continually being formed between the researcher and other human and non-human elements (such as technologies) in the investigated terrain. In Law's words, method assemblage is "the enactment of a bundle of ramifying relations that shapes, mediates, and separates representations in-here, represented realities out-there, and invisible out-there relations, processes, and contexts necessary to in-here" (ibid., p.84). Method assemblage sees the field of study as subject to constant flux, a never stable, and fully accountable field of relations. A grasp of this field is always only partial and subjective.

Law does not go so far as to propose more specific instances of method assemblage or immediate solutions for tackling this multidimensionality of relations between non-human and human actors and their complex spectra of visibility/invisibility (as a matter of fact, suggesting a concrete direction would contradict his belief that methods should have no prescriptive nature). Instead, he summarizes how one might potentially address this problem by making an inventory of *qualities* that the researcher might incorporate in his/her study, potentially inspiring a vital generation of alternative methodological approaches. In his view, these alternative approaches would favor uncertainty, slowness, reflexivity, generosity, multiplicity of attitudes, open-endedness, and process-orientation (ibid., p.151).

Somewhat similar approach to method, not as fixed prescriptions, but as a list of approaches to be proactively incorporated into one's inquiry of the subject, has been offered by Celia Lury and Nina Wakeford in their edited book *Inventive Methods: The Happening of the Social* (2012). The authors propose an assemblage, or what they call "a perpetual inventory" (ibid., p.2) of various attitudes to invigorate established methods, not only in the social sciences and cultural studies, but in other disciplines as well, such as media and communication studies. Their overall point is that knowledge can be produced in multiple ways and sites, taking into account diverse, unconventional, experimental, and aesthetic approaches. Their use of the "method" is unbound from its strict connotations to rigorous procedures of collecting and analyzing data; their articulation embraces a variety of conceptual tools, theoretical frameworks, artistic techniques, and technological, material devices, such as tape recorders or probes. As the authors' introduction states, tapping into Law's observations, methods are not means for verifying truths about the world out there, but means for practically engaging in the world. The inventive is not necessarily achieved through entirely novel criteria for studying reality, it does not equal the new. Inventive(ness) can also be achieved through re-composing relations between familiar techniques, approaches, gestures, devices, prototypes etc., or their juxtapositions with contexts that they are typically not native to (the authors, for instance, consider disruption, shock, and rupture as what they call "inventive methods of

perception" [ibid., p.4]). When applied to a study, such inventive methods tend to reconfigure relations and uncover previously invisible ones. If methods traditionally aimed to describe and report on the world, inventive methods, as offered by Lury and Wakeford, are concerned with what is about to come. They are not concerned with a description of the present as such, but with how the present is negotiated through incorporating a particular device, prototype, performance, technology, etc. In this sense, methods deliberately act on the situation into which they are brought, but with no clear anticipation of what the result might be.

Building on these observations, my understanding of methodological assemblage and inventory involves a versatility of positions that one can and should take in relation to the subject of study. As I have suggested earlier, capture culture has no place outside of the workings of media technologies and their effects on everyday lives. This means that, to study technologies, media-technological practices, their transformations and effects on everyday life, one needs to recognize one's embeddedness in this condition. This embeddedness does not mean a single, fixed position, but rather a potentiality of many positions that can be actively developed, practiced, and re-configured from within. Some positions that I have deliberately taken at various moments in this thesis include: researcher (in relation to the entire project), practitioner and consumer (a user of media technologies on a daily basis), artist (in the case of an exhibition at an artist run gallery or in the way I was perceived by others, such as some of my dialog partners), amateur (a self-trained programmer), craftsman (of the archival cabinet and its content), designer (of the cabinet, its digital substrate as well as the website and archive of the fragmentarium club, one of the discussed extensions of my practices), collaborator and dialog partner (as in the case of conversations with critical friends and other practitioners which subsequently led to collaborations although not discussed extensively here).

Each of these positions allows to capture something particular, while surely obscuring something else. For example, a prolonged immersion in one's practice and its micro-level analysis might result in certain habits of mind, decrease sensitivity toward the broader picture and detach one from considering the wider context of one's practice. On the other hand, by relying extensively on external objects/subjects of study, or pre-existing analyses of such, one might miss subtleties that might be gleaned only through a personal, individuated approach, empirical practice or conversations with others. This is why mobility within this assemblage of positions is important.

Auto-ethnography through Creative Media Practices

Given that Part II of this thesis took on a more distanced position in the way I discussed the effects of present mnemotechnologies (also drawing on observations and concepts of others), in this part, the priority is given to a perspective enabled from within my practical work. The way that I work here aligns with auto-ethnographic approach as well as some postulations offered by Kember and Zylinska in their creative media manifesto (2012, p.201). To a significant extent overlapping with some of the views demonstrated above via Law, Lury, and Wakeford, Kember and Zylinska call to regenerate methods in media studies and analysis of media(tion) by embracing the creation and invention of new forms of media (to which in this thesis I also add a re-generation of old forms), not only conceptually, but through actual material and performative practices. This is a mode of working with media that reconciles traditional scholarly modes (such as critique through analysis) of academic writing with more experimental critiques performed through creative practices, and the active composition of new media assemblages. In the authors' words:

> We envisage such creative media works to be situated across the conventional boundaries of theory and practice, art and activism, social sciences and the humanities. They can take a variety of forms – essays on, polemics with regard to, and performances of what it means to 'do media' both creatively and critically. They can also incorporate a variety of media, from moving and still images to interactive installations, codework, creative writing and more traditional papers (2012, p.188).

It is important to point out that the way that the authors work with the notion of creativity is unlike how it tends to be approached by commercial media producers, designers, and proponents of so called "creative industries", as a feature that can be somewhat calculated and applied instrumentally as to foster competitiveness, performance, and prosperity or to challenge the other players on the market (see for instance a critique of the notion of creative industries proposed by Galloway and Dunlop, 2007). Kember and Zylinska write that this institutionalization and "marketization of creativity" by tech industries leads to more choices but essentially of the same. They further state that most of today's technological media inventions are conservative and predictable, "[i]n other words, they represent 'theatre-as-we-know-it'" (2012, p.189). They point out, for example, an increasingly standardized and homogenized mobile phone market, offering more or less the same range of options disguised behind notions of the new, upgraded, faster, more efficient, and advanced.

Following this train of thought, instead of submitting to the perpetuation of sameness which media studies, concerned with a descriptive and analytic approach, may be doing by focusing strictly on the "theater as we know it," they argue for a scholarship that opens up to see media land-

scape as a "theatre-as-it-could-be." This concept cuts into the here and now of the media technology landscape; it is an intentional, performative diversion from the prevailing norms and patterns of the mainstream media landscape. It is a risk taken to recombine and rewire established modes of living with media technologies, to demonstrate and test alternative possibilities. While the Kember and Zylinska's intent is primarily to raise the significance of the performative in knowledge-making and media scholarship, it can also be seen as an inspiration to recognize the performative, and thus the inventive side of everyday living with technologies. In other words, foregrounding the notion of the performative allows us to see everyday life with technologies as a stage in which a deliberate and vital composition of relationships with technologies is always possible, and can simultaneously provide a solid basis for engaged scholarly perceptiveness.

One of the main objectives of creative media manifesto is to establish a stronger correspondence between distanced, analytic approaches to studying media and an "inside-out perspective," by which we can also understand an engaged, hands-on, material approach to analyzing media technologies while actively composing relationships with them. Such a blurring of the border between outer and inner focus in studying a subject corresponds to auto-ethnography, a form of writing that openly "allows readers to feel the dilemmas, think with a story rather than about it, join actively with the author's decision points" (Ellis and Bochner, 2000, in Wall, 2008, p.44). Auto-ethnographers do not protect the readers from becoming emotionally involved in the case at hand (Muncey, 2005), but expose them to a "patchwork of feelings, experiences, emotions, and behaviors that portray a more complete view of life" (Wall 2008, p.10). But perhaps what is most important is that the added value of auto-ethnographer's work is above all his/her ability "to connect the personal to the cultural"(Ellis and Bochner, 2000, p.739). As such, auto-ethnography does not happen in seclusion from external contexts. It is not a reflection written from the perspective of an isolated entity, but rather from the perspective of a conscious subject who recognizes its complex links to and an entanglement in wider social and cultural contexts of which the auto-ethnographer's reader is also a participant. Moreover, in auto-ethnography the researcher's personal experiences can or even should be explored parallel to the experiences of the other subjects (Ellis and Bochner, 2000; Maso, 2001). In this sense, the method acquires a dialogical dimension, and therefore does not risk being taken for a detached introspective monologue – a recurrent point of critique it receives (Coffey, 1999). But while letting fresh air into the tradition of qualitative studies, the auto-ethnographic method has also raised other critical opinions. One major issue with auto-ethnography is the means through which this subjective form of creating knowledge should be evaluated. While Ellis suggests that good auto-ethnography is where the analytical depth and

evocative potential compensate for each other, allowing the reader to gain knowledge while emotionally identifying with the subject, Laurel Richardson (2000) suggests applying distinctive criteria for evaluation such as: substantive contribution, aesthetic merit, reflexivity, the impact that the narrative has upon the reader, and how much the narrative expresses the reality. The last criteria that suggests a narrative's capacity to express reality can be seen as problematic, especially in the light of what has been said earlier through Law, which is that every methodological approach to certain degree produces and performs specific reality, as opposed to expressing or representing one that is given. Echoing this thought once more, I propose to attend to (and possibly approach the evaluation of) my auto-ethnographically informed study of the modes of personal archiving a process of shaping, constructing and accounting for one, particular view on techno-cultural reality from within.

Overall, I align with Kember and Zylinska's postulate in their creative media manifesto which endorses the idea of a personal mode of research as a force balancing or enriching the impersonal approach which with its prioritization of attending to and seeing "the world from the outside" dominated media and communications studies in the past (2012, p.192). Balancing the two kinds of research modes (personal and impersonal) and orientations (from the outside and inside) I perceive as closely aligned with my declared intent to complement and intertwine the focus on what has been known in media and communications studies as the media effect with a perspective from the turn toward media practice and media materiality. Adopting the principles of creative media manifesto while performing and discussing my practices in the following chapter, I attend to my everyday life as a territory, a theater where personal modes of living with present-day technologies are being invented, performed, and reflected upon, parallel to the theater as we know it, which is to say, the mainstream media processes that capture and archive data.

In line with the objectives of the auto-ethnographic method, in conveying an overview and analysis of my practices, my intention is to plug the reader into the trajectory of my life with technologies, as well as a series of decisions and responses made in relation to the proliferation of capturing technologies. I do it, for example, through highlighting transitory moments from one technology or technique to another. These decision-making moments on the level of my everyday life are correlated with technological changes taking place simultaneously on a macro-scale. In this way, I try to establish bridges between the micro and the macro, or the inner and outer perspectives.

It goes without saying that auto-ethnography is a difficult method. It is easy to fall into traps set by one's beliefs and opinions. This is why I find it extremely important not to reduce research to the auto-ethnographic method alone. I find it necessary to complement auto-ethnography with other methods and other voices, to juxtapose with one's own opinions.

This is why, in this thesis I subscribe to seeing auto-ethnography as only one component of a more complex assemblage of approaches and voices. Other practitioners, historical and contemporary, committed to various recording practices, representing different skills, levels of commitment, and degrees of recognition and establishment within cultural milieux are brought in to enrich my auto-ethnographic writing with other inside-out perspectives on personal archiving. More concretely, I expose my work, the para-archival cabinet, to other practitioners who take the role of critical friends. Turning to peers and colleagues as such critical friends is an established method for example within pedagogy and education (Baskerville and Goldblatt, 2009; Costa & Kallick, 1993). The idea is that the critical friend observes and offers friendly criticism on the colleague's work as to help advance his/her performance. In this thesis, however, the role of the providers of feedback on my work is secondary. The prime interest is to let these critical friends use my work as a conceptual trigger for a discussion that spans their own practice and opens up to broader aspects (such as materiality, media hybridty, performativity in personal archiving and use of technologies).

Besides being a method for analysing the trajectory of my para-archival practices, auto-ethnography has been also applied in the second part of this thesis to share some of my direct encounters and experiences with mnemotechnologies in capture culture (for example the life-logging device Narrative Clip or Evernote). Grounded in my daily interactions with technologies, these encounters can be seen to have complemented observations adopted from other practitioners and theoreticians, though made in relation to the macro-scale of technological transformations and their effects on a societal scale (e.g. Stiegler, 2010; van Dijck, 2007). In other words my personal accounts might be seen as a kind of a micro-layer of capture culture that I have attempted to weave together. While giving priority to the currents of a singular everyday life, this micro-layer, I believe, simultaneously opens a perspective onto a macro-perspective, and hence meets a condition of the auto-ethnographic account: connecting the personal with a broader cultural state of a given moment.

The results of auto-ethnography, as ethnography at large, are typically communicated through writing. In this thesis I attempt to challenge this by aligning with Tom Ingold's call for alternative, experimental modes of communicating research. Criticizing the tradition of ethnography for its excessive focus on describing the results and not the process of study, Ingold suggested a shift from an anthropology of to an anthropology with a given object or process. Why arguing for diversifying modes of doing anthropology he seeks inspirations in craftsmanship and more specifically extended attention to the matter that craftsmen and artisans are exposed to. "The way of the craftsman" he writes "is to allow knowledge to grow from the crucible of our practical and observational engagements with the beings and things around us" (2007, p.6). He calls this mode of ob-

servational engagement "an art of inquiry" and alternatively "correspondence" (ibid., p.6). Correspondence is a particular relation to the world and the subject of inquiry which evolves in a processual way, through an extended practice. Such a mode of studying and learning departs from methodological approaches that are concerned with approaching a phenomenonon (artefact, practice, event) as a source of data that can be extracted as to be later analyzed and scrutinized. Correspondence, as Ingold suggests is about understanding the practice while it emerges by staying with it. Consequently he asks whether an artifact can be something that emerges during the process of studying and researching as opposed to being an object of that study:"Could we not regard the artwork as a *result* of something like an anthropological study, rather than as an *object* of such study?" (Ingold, 2013, p.8, original emphasis). The methodological extension of the media practice approach offered here resonates with this postulate in the sense that it attends to the aesthetic practice as one mode of conducting research, as well as one of the results of this research. Ingold argued that:

> Results of anthropological research need not be confined to written texts. They may also include photographs and films. But could they also include drawings, paintings or sculpture? Or works of craft? Or musical compositions? Or even buildings? Conversely, could not works of art be regarded as forms of anthropology, albeit 'written' in non-verbal media?" (2013, p.8).

The initial part of the practice-based part will be focused on the past of my on-going practices. Thus the mode of describing and analysing them, to use Ingold's term, follows what he sees as an insufficient form of doing ethnography which is writing *about.* While referring to the process of working with my early notebooks, I can not but only reconstruct, more or less successfully, my thoughts and intentions from the past.

However, the interpretation and analysis of these notebooks and their various qualities take place simultaneously along the lines of my writing process. Thus, the process of reading, flipping through the pages of the notebooks and physically interacting with various life accounts they comprise can be seen as following the idea of doing (auto-)ethnography, or in this case, taken into consideration the interest in the material aspects of this practice, an auto-archaeology *with*, rather than merely *about*, or perhaps both, simultaneously. In sections that follow this analysis of notebooks in which I discuss the latest stages of remediating my personal archiving practices the mode of writing *about* will be gradually complemented by writing *with* the process of, for instance, constructing the hybrid media archival cabinet. Alongside conceptual and theoretical insights, this archival cabinet can also be seen as one of several "non-verbal" results that emerged throughout the period of this study. Other such "non-verbal" results include *the fragmentarium club*, a practice and platform (offline and

online) for collaborative sound-walking and sonic para-archiving, and series of post-digital publications (forthcoming) on para-archiving practices that combine digital and non-digital media and which results from my dialogs and various encounters with other practitioners facilitated by my work on the para-archival cabinet.[53]

Practising Archaeology of Media(tion)

Arguably, at a first glance media archaeology seems quite discordant with such perspectives as creative media presented above. While Kember and Zylinska strongly emphasize the focus on media as dynamic, performative processes and practices of mediation, media archaeology seems to center and stabilize the focus on the materiality of media objects and machines. While a creative media perspective seems to call for interventions into the current media saturation and to some extent envisioning future media landscapes, media archaeology perspective tends to be oriented toward the past. Despite what initially seem to appear as contradictory imperatives, one can find several points of intersection to pull these approaches closer together. One premise that unites these views is their discontent with the oppositions that pervade media studies (such as old/new, analog/digital media). Secondly, both approaches advocate getting practically involved; if not inventing media practices, then certainly engaging more thoroughly in understanding functionality, flows, mechanisms and operations underlying various media technologies and infrastructures. Kittler, for instance, has argued that the traditional alphabet does not suffice to convey a study of contemporary culture, and that, in our day, one needs to know at least two programming languages to truly engage in the study (in Manovich, 2013). In other words, both of these perspectives (creative media and media archaeology) can be seen as theoretical standpoints and empirical methods for engaging in media through practice. I would also argue that combining media archaeology and media practice approaches supplies the latter with a much-needed historical sensitivity. The media practice approach, in turn, might help shift media archaeology's predominant interest in the medium, understood as a mechanical artifact, toward how this artifact and its mechanisms have been historically incorporated into practices of everyday life. In other words, we might call what potentially emerges from the collision of these two perspectives an *archaeology of mediation*. Its subject of interest would be not a media object's internal configuration of elements and procedures, but a complex mesh of relations that it enters, establishes, disrupts, and negotiates (natural, environmental, cultural, political, bodily, etc.). While media archaeology might appear to be somewhat a clinical, sterile dissec-

53 See www.fragmentarium.club for the soundwalking and sonic para-archiving initiative and www.para-archives.net for the post-digital publication on para-archival practices.

tion and examination of technical objects divorced from their contexts, archaeology as such is an "unpredictable" and "messy" practice occurring in situ (Hall, 2013, p.357). Thus what perhaps might make media archaeology more interesting and reliable as an approach to media study is its practical articulation, as it takes place through for example practical artistic and amateur forms of engagement with technologies, in the lab, art studio as much as on the rough terrain of everyday life. In this thesis when speaking about obsolete technologies I try to remain aware of their specific situatedness, and thus put stress on different ways that their use was problematized and enacted at the time (for example the earlier discussion on Brownie while certainly focusing on its material properties, was at least to the same degree balanced with a discussion of its different, potential qualitative applications, such as an archival medium along the currents of everyday life)

We are currently witnessing a growing interest in extending media archaeology into experimental methods through various aesthetic practices. Ernst describes media archaeology as "both a method and an aesthetics of practising media criticism" (Ernst, in Parikka & Huhtamo, 2011, p.240). This practical engagement happens through restoring old technologies, tinkering with and opening technological "black boxes." The critical dimension comes in two ways. On the one hand, this immersion in practice, reconstructing old technologies in the light of the current developments, opposes a traditional, description-based kind of scholarship, progressively building on historical media canons. As Parikka asserts, "you can critique media by doing media and even doing media histories differently" (ibid., 2011, p.137), also in a non-linear "recursive way" (Huhtamo, 1997; Parikka & Huhtamo, 2011). Secondly, and perhaps more relevantly to this thesis, aesthetic practices that draw on media archaeology are something of a parallel dimension in which the advancement of new technologies, the endless pursuit of newer, more efficient, easy-to-use, and imperceptible media can be contested. In a similar vein, Parikka describes aesthetic practices that engage with obsolete, or soon-to-be-obsolete technologies in terms of alternative narratives or temporalities, to provide critical insights into "assumed-natural state of digitality, whether technological and social" (ibid., 2011, p.139). In relation to the merging of artistic and scholarly practices into a space where media technologies can be rethought in terms of a theater as it could be, it might be said that media archaeology is about "a theater as it could have been" if the history of media had taken a different course. Art allows us to not only speculate upon imaginary media, but to construct and employ them as instruments to investigate "the nature of progress, change and the novelty-obsessed technological culture" (Parikka and Huhtamo, 2011, p.139), here and now. Aesthetic engagement with old technologies is not about restoring the long-gone so as to nostalgically reconnect and better comprehend the

past. Rather, revisiting the past allows us to better reflect upon the present; as Zielinski points out, not to find the old in the new, but to find the new in the old, and what we could add in relation to this thesis' interest, finding bilateral relations and correspondences between the two.

(Reverse-)remediation

Besides reconnecting, conceptually and theoretically, with often obscure capturing and archiving technologies and practices of the past, throughout the course of this thesis media archaeology is also incorporated in a more practical way through the aforementioned reverse-remediation.

Reverse-remediation is a diversion from the notion of remediation proposed by Jay Bolter and Richard Grusin (1999) as a way to understand new media in terms of processes of refashioning already existing media into new forms. The authors argue that the history of media can be interpreted in terms of a series of transformations of media where the new media re-purposes and thus represents older media in a new, more advanced way. Thus, remediation is "a representation of one medium in another," and, as they further argue, this process can be seen as "a defining characteristic of the new digital media" (ibid., p.45). Examples are a picture gallery (digitized paintings or photographs) or collections of literary texts converted into digital files. The principle steering the design of new media forms is essentially to improve the experience of older forms. In a way, new media forms are intended to create conditions as smooth and transparent as possible, so the old forms of media (a painting or a book) can be experienced in an unimpeded, direct manner. This might also include the removal of material inconveniences and obstacles. In other words, new media is intended to disappear, to dissolve into the virtual so it can provide the most transparent access to an old medium. However, some scholars have argued that the concept builds on a teleological agenda (Baetens, 1999). Jan Baetens has suggested that remediation implies a sense of an underlying programmatic and linear evolution toward more advanced state of affairs, toward what might be called a premeditated condition, where the old is always succeeded by its more advanced iteration. Questioning this articulation, Baetens suggests a more pessimistic approach that draws on Foucault's and Adorno's readings of technological transformations. Processes of remediation, thus, have never been at peace, but are continuously torn, regulated, and manipulated by external forces, such as marketing strategies, trends, economic, political interests or cultural industries. This assertion becomes coherent with Stiegler's concept of the pharmacological nature of technological transformations, which, while introducing progress into some spheres of life, might simultaneously instigate regress and disruption in others.

Remediation can have a range of scales and orientations. While Bolter and Grusin's problematization takes into account a broader, or perhaps

a macro-scale of media technological transformations, different practices of remediation might also simultaneously be occurring on a micro-level, through individual, communal, and aesthetic appropriations. In his work on transversal media practices, Kristoffer Gansing introduces a range of aesthetic and cultural practices to demonstrate that different forms of remediation also happen through engaging with media technologies of the past. Some examples are the collective and individual engagements with analog TV, overhead projectors, or radio (Gansing, 2013). Gansing's iteration of remediation disrupts its easy connotation with the dynamics of the mainstream market (based on production and consumption) and position it in relation to other motivations, such as critical reflexivity, curiosity, and aesthetic exploration. To better express his stance, Gansing draws on the concept of reverse-remediation as introduced by Saskia Korsten (2010). Korsten articulates the difference between remediation and reverse-remediation as follows:

> In remediation, hypermediacy (multiplying technologies) is used to make possible a seamless transition between different (older and newer) media in order to render all media transparent, which follows a historic desire for immediacy. In reversed remediation, hypermediacy is used to display the incongruities between media in order to frustrate immersion and foster critical awareness (ibid., p.4).

In other words, reverse-remediation, as opposed to remediation, is not driven by the intent to make the medium less visible and obtrusive, but quite the opposite. Reverse-remediation resists this logic; it makes the medium more visible to facilitate its sharper comprehension and examination. As a practical instance of media archaeology, reverse-remediation can be seen as a particular material and performative critique of contemporary media; a deliberate turn to older technologies and technological practices, so as to prompt critical reflection, not on the practices themselves, but on the current techno-cultural condition, which "does not necessarily represent the best possible state" (Zielinski, 2007, p.7).

In my work, I attend to reverse-remediation in a similar fashion, although with some additional amendments. I see reverse-remediation (like media archaeology as such) as being about reaching to the past in order to identify individual elements, tropes, and motifs characteristic of older technologies and practices that might be informative in the context of the current techno-cultural condition. This reaching back is done to enable, on the one hand, a reflection on this present condition (through enhancing historical sensitivity and the capacity to critically traverse the history of technological transformations) and on the other, the emergence of alternative visions and practical modes of living with technologies. In this sense, reverse-remediation aligns with the concept of the post-digital which I will elaborate on later in the chapter dedicated to the hybrid

media cabinet. Briefly here, the post-digital takes as its starting point a certain disenchantment with the current state of technological development. Although it is not about renouncing the digital as such but critically and constructively attending to the consequences of digitization. Thus, a question we might pose here is whether reverse-remediation could be seen as a mode of conceptually and practically addressing this post-digital disenchantment? And if so, what insights would a revisiting of and thus learning from the selected aspects of past, pre-digital technologies (their uses, and discourses around them) provide in the current techno-cultural context?

Between Prototyping and Provoking

As mentioned earlier, one example of reverse-remediation in this thesis is the material prototyping of a physical, archival cabinet inspired by pre-digital forms of organizing personal documents and media. Thus prototyping or rather combination of prototyping and reverse remediation is one other way of methodologically extending the media-practice approach. However, the prototyping that I have in mind differs if compared to the more common definition of the term. This is why in this section I propose a term *provotyping*, a portmanteau of provoking and (proto-)type. The term "prototype" generally stands for an early model, a sample of a product for testing and evaluating before a final decision is made and the final design becomes executed. The role of a prototype is to let a maker or producer learn and gain insight into how the project might be further improved and after being improved possibly implemented on a mass scale. *Proto-* in the term prototype indicates a state of an object which is to be followed by another, more advanced state. In other words it signifies progression. Thus with the term *provotype* and *provotyping* I want to differentiate my way of attending to the understanding of the term, especially taking into consideration the reverse-remediation of which it is a practical manifestation. With the term provotype I want to highlight a certain singularity and distinctiveness of the archival artifact which by no means is intended to be perceived as a model, blueprint or direct indication for how to go about constructing an archival device of such kind.

There are numerous traditions in approaching and problematizing prototypes, particularly in the field of design. Against views that regard prototyping as an initial stage in series leading to the release of a product, some scholars prefer to see it as a complex event that involves a range of stakeholders and practices (Wilkie, 2010). The tradition of participatory design attempts to problematize the role and power of the designer by opening up the process of prototyping to include end-users and consumers (Brown, 2009; Björgvinsson et al., 2012). Other scholars advocate a departure from seeing prototypes as mere material anticipations of future products and services. Instead, they propose shifting the focus onto the

broader implications of outcomes of design processes (e.g. social, cultural, political, environmental) to consider these broader contexts as possibly subject to prototyping. In other words, instead of an end product, it is the experience that a given designer intervention enables (or disables) that is regarded as the subject of prototyping (Buchenau and Suri, 2000).

An innovative perspective on prototyping has also been offered by Bill Gaver, Tony Dunne, and Elena Paceti in their conceptualization of "cultural probes" (Gaver et al., 1999). Cultural probes are assemblages of various objects, such as maps, recorders, postcards, and booklets, which invite the user to participate in an experiment by providing opportunities for reflection and response (ibid., p.22). The authors argue that, unlike quantitative scientific methods, cultural probing is not intended to yield specific data for close analysis. Instead, cultural probes are thought of as means for triggering new understandings, visions, and insights (e.g. into technology) that can reach far beyond the initial intention (ibid. p.25).[54] Thus, the value I find in cultural probing as a specific form of prototyping offered by these authors lies in its ambiguity, modularity, and intentional lack of precision in executing the prototype, as well as its lack of precision in setting forth the aim to be achieved.

Besides the kind of prototyping driven by objectives such as improvement of the product, service, and more broadly, social and individual well-being, there are also strands of design research and practice that apprehend prototyping as a method for critiquing and raising awareness about a given issue. This kind of prototyping to some degree relates to the earlier concepts of creative and inventive methods (Lury and Wakeford, 2012). Critical design, for instance, an attitude and perspective on design practice and research (Raby, 2001), focuses on interrogating, highlighting, delving into, and staying with problems, as opposed to solving them. In this sense, prototypes ought not to be seen as any early versions of products or services yet to be produced and distributed on the market, but rather never fully completed artifacts, establishing what McLuhan would perhaps call *anti-environments* (1997), which are spatio-temporal conditions that help articulate existing, often imperceptible problems, concerns, and networks of relations.

This approach to prototyping and engaging in the production of artifacts that comment, raise awareness, and create space for reflection instead of supplying ready-made remedies, seem to have less in common with conventional design than critical art projects such as Krzysztof Wodiczko (a series of critical vehicles and personal instruments) or Michael Rakowitz (public interventions through the disruptive distribution of critical artifacts) once produced. If one may speak of any clear aims

54 While being a positive move that removes distance between the designer and the participant, this gesture could also be subject to critique. The reduction of complexity motivated by a desire to even disproportions of power and expertise could be paradoxically enhancing them. This is because the power over the decision to perform such a reduction still lies in the designer's hands.

that drive the development of such artistic prototypes, it is perhaps to reorient and reconfigure modes of perceiving things, phenomena, and attributes of our surroundings which we might otherwise take for granted. Returning to how Korsten described reverse-remediation, in creative and critical prototyping, instead of satisfying the previously mapped, specific demands of the market and consumers, what seems to be at stake is to irritate and provoke a wider range of responses and insights.

In my research the archival cabinet has adopted the role of such a "provotypical" device which is with an intention to trigger thoughts and insights, both from within my on-going work with it as well as from encounters with others with whom I interact and to whom I occasionally present the work. Yet I should emphasize that provotyping is one role that the cabinet has taken. Next to this provotyping function it has been a personal archiving station, helping me to both stabilize and further develop my work as well as take care of its outcomes on a day-to-day basis. In the concluding section I will return to these several functions and attempt to evaluate to what extent this gesture of equipping the personal archival device with a specific, methodological role to provoke thoughts and insights has been productive.

Figure 7.1: The cover of one of my first notebooks which I have been using regularly since 2006.

7. PAPER NOTEBOOK (THE PRE-DIGITAL PHASE)

Figure 7.2: Inner pages of the paper notebook containing tickets and receipts.


नाम/ Name
पता/ Address
128 37
एअर इंडिया
AIR-INDIA
LHR
AI0133/11JAN
AI873056
AIR-INDIA
AI873056
ARN
SK0528/11JAN
AI873056
BEAUJOLAIS
2006
LOUIS PÈRE & FILS
187 ml

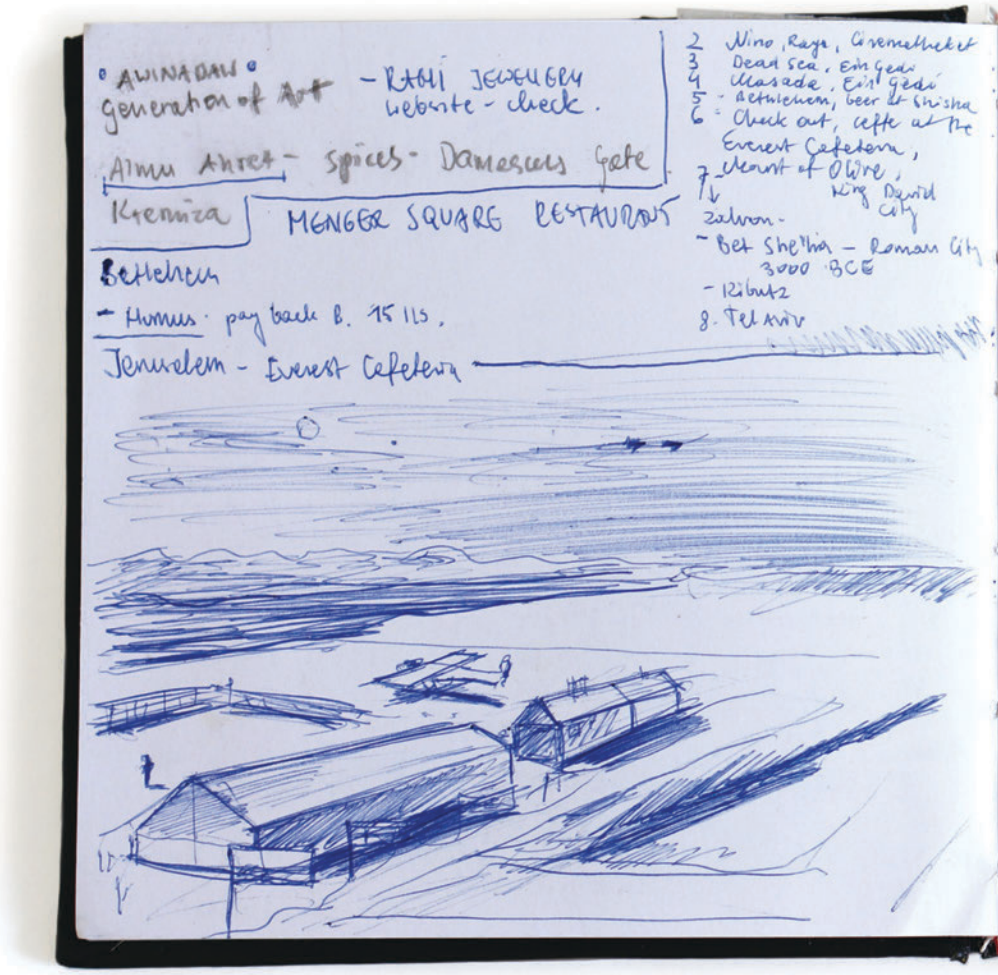


Figure 7.3: Inner pages of the paper notebook comprising notes and sketches.


— CATFISH —

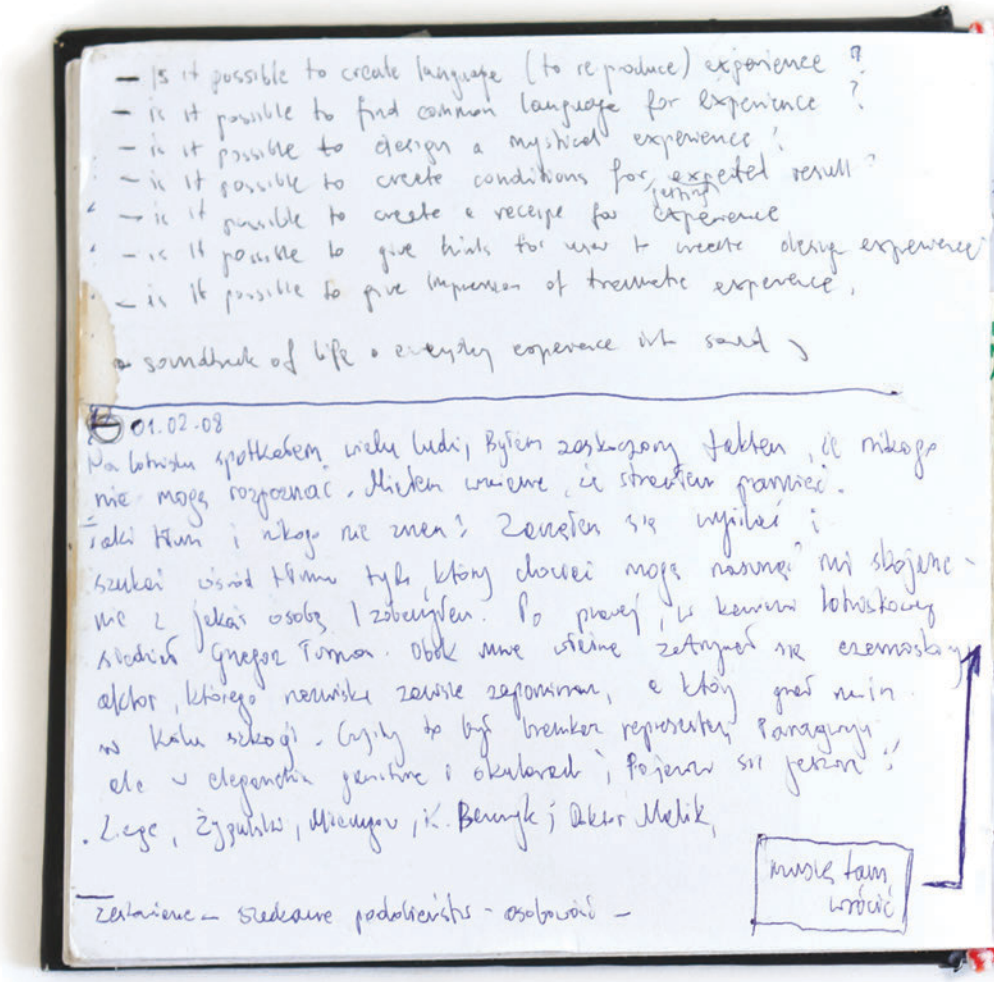
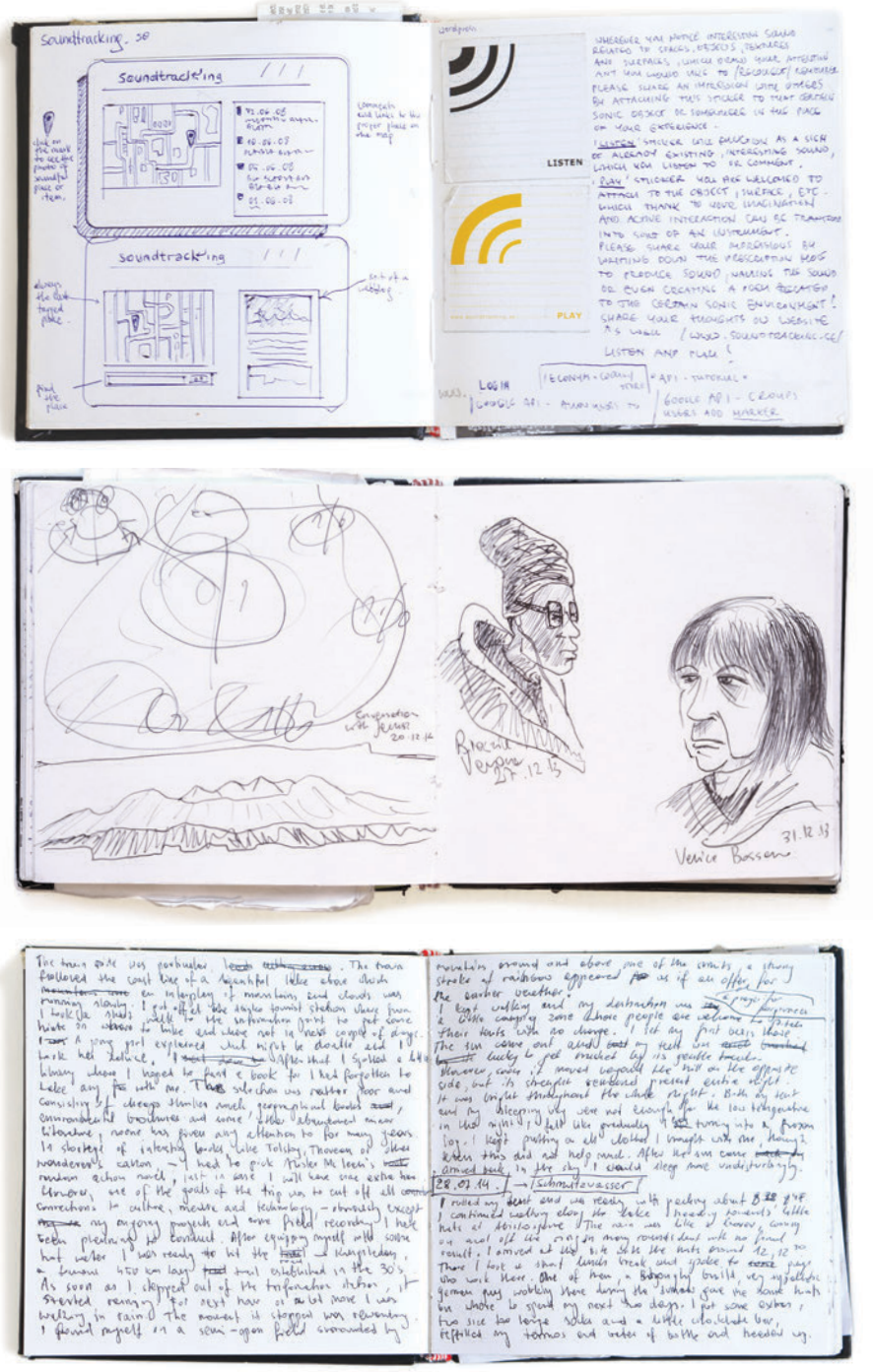


Figure 7.4: Inner pages of the paper notebook filled with notes and material traces.


Tom Igoe
Relay
Circuit
Designs
Miniatures
Architecture
Phone : (O) (079) 2658213(
(R) (079) 26750381
Mobile : 98254 38502
98254 63030
Art Book Center
SPECIALIST IN BOOKS ON
INDIAN ART AND CULTURE
Madalpur, Nr. Jain Ternple, Ellis Bridge,
Ahmedabad-380 006. (INDIA)
E-mail : artbookcenter_2000@yahoo.com
Web site : www.artbookcenter.net
WE ACCEPT MASTER / VISA CREDIT CARD

Figure 7.5: Inner pages of the paper notebook with a hand-drawn sketch of the local landscape.


01.08



Figures 7.6, 7.7, 7.8: Inner pages of the selected notebooks from years 2007-2014.

In summer 2006, upon arriving in Kolding, Denmark, where I moved temporarily to study and work, I purchased an inexpensive notebook (Fig. 7.1). Apart from a few earlier attempts, this little notebook soon became my first mnemonic device used in a truly conscientious manner. It served not only for thoughts, dreams, or sketches, but also, and sometimes even primarily, as a scrapbook holding pieces of newspapers, receipts, tickets, and other ephemeral objects that many of us, at least at some points of our lives, tend to collect, in an attempt to capture special moments. Soon I became attached to the notebook's simple, plain format, its size (14cm x 14cm) and thickness (80 pages). One black, faux leather-bound notebook, which, to this very day, is worth about the same amount of money (20 SEK in Sweden, 20DKK in Denmark), typically serves me for about one year. Effectively, each completed notebook indicates a one year period, acquiring of the role of a chronicle of the past year.

Not being rigidly structured or evenly compartmentalized by months and days, the inside of the notebook leaves room for flexibility, making it possible for events to attain various degrees of presence and visibility, respective to their significance at the time. For example, some events are expressed through textual entries or drawings stretched across several pages, while others are reduced to a snippet of a receipt or a business card pasted in a corner of a page. This flexibility and diversity of forms of interacting with the notebook are facilitated by the notebook's blank pages, unlike other, popular types of notebooks, often equipped with lines and grids (such as the legal pads continuously in use since the end of the nineteenth century). While, on the one hand, the structuring of a page might help keep order and maintain a consistent logic, one can argue that, on the other, it can implicitly steer, determine, and linearize how one records events and interacts with the notebook. My choice of an inexpensive blank notebook, besides the price factor, was undoubtedly dictated by the fact that writing was not the only medium I used to take account of my everyday life. As a matter of fact, now, looking back at my first notebook, I can see that notes were not my dominant practice at the time (Figs. 7.2-7.5). The majority of the first entries were chaotic drawings, sketches, fragments of texts, quotes, and collages made of excerpts from newspapers, tickets, leaflets, and other mundane paper objects.

Revisiting these early notebooks today, after years of immersion in various daily digital recording techniques that followed my use of these physical notebooks, and in relation to dominant forms of capturing life today, three major kinds of observations or groups of qualities can be highlighted among the numerous observations and reflections: material, performative and temporal. Since these three aspects are closely interwoven and operate simultaneously, it is hard to examine one aspect without mentioning or invoking associations with another. Therefore, I will first present the way these different aspects manifested themselves in revisiting these paper notebooks, to end with selected notes and reflections

from this revisiting set in relation to thoughts on contemporary media technology solutions for capturing, mediating, and organizing everyday memories.

This entanglement of performative, material, and temporal qualities reveals itself already in the simple gesture of pulling out a cardboard box with my early notebooks and my first physical contact with one of them. Opening a notebook to a random page, a few loosely attached snippets, tickets, stickers, and receipts come unstuck and fall out. I collect them and replace them between random pages, where they most probably did not belong. This unexpected incident governs my way of interacting with the notebook for some time. At the beginning I seem to be focusing more on these loose pages, the inserted scraps, than the fastened pages with their organized handwritten notes and sketches. My attention is drawn to pages where receipts, bus, and flight tickets are scotch-taped at times intentionally, at other moments quite haphazardly. They function as bookmarks of a sort, or gateways to specific moments in time, a journey or purchase. These mundane material traces, typically intended for quick use, validation, and subsequent disposal, here constitute more or less effective triggers for memory recall, occasionally contrasted by completely different, much more visceral and striking records. Such is, for instance, a piece of a bandage with blood stains retained after an operation in 2007. This strong marker is accompanied by fragments of newspaper headlines, probably published on the day of the surgery. Together, they make a somewhat surreal assemblage, where an extremely private, intimate medium, blood (and the life story it signifies), is veiled, or, one could say, poetically ciphered through an absurd collage of newspaper headlines, a medium typically intended for the widest possible public. These juxtapositions of highly private and public are a recurring motif in several other notebooks.

After some time, I begin to flip through the pages more regularly. Various other types of materialities reveal themselves, coalesce, and compete for attention, while populating neighboring pages more or less intensely. Among the materials I find dried leaves, remnants of herbs taped to the paper, some flat metal accessories, pins, and a BMW symbol, a disturbing depiction of a fetus cut roughly from a cigarette box found on a street in Palestine. These insertions add to the thickness of the notebooks, sometimes making them crack, break apart, or affect neighboring pages, incidentally impressing their shapes, colors, dirt, tinctures, indentations, and scents. There are numerous such random artifacts and keepsakes, or at least, they seem to me random today. My memory is fallible and not always capable of identifying the original meaning and intention with which these ephemera were collected. Price tags, receipts, short notes and spontaneous observations penned down on public transport: concrete meanings with which all these markings were probably charged at the moment have, over time, been lost, or considerably remodelled. With

some entries accompanied by a date, place, or a concise annotation, less mental effort is required to reconnect with a particular event. The other notes, ones without contextual meta-information, pose an extra challenge to my memory and thus require more time and focus. However, the lack of a clear context does not discourage me; it propels me on to make up interpretations and generate associations between other parts and entries that precede and follow the ones I am trying to decipher. Hence, it is not always a single entry but often an odd, eclectic combination of notes and markings, and the relations between these various traces characterized by different material and tactile qualities that eventually help me recall and mentally reconstruct specific moments in life.

One page in a relatively new notebook, for example, comprises a very rough sketch of an abstract diagram (Fig. 7.7). A short, quickly penned annotation in the corner states that the drawing was commenced during a conversation with an old friend. Consulting other markings on the neighboring pages, such as sketches made on a train in Veneto a couple days later, I am able to locate the event more precisely in time and space and, while attending to these and other marks as indirect cues, I can gradually reconstruct the meaning of the diagram, at least to some extent. In other cases, if the intended meaning cannot be recalled, the ambiguity of the content, the cryptic, dashed-off notes and drawings or unceremoniously pasted snippets of found visual material invite me to drift away from the path to their origins, and instead to confabulate and generate new meanings. This interplay and juxtaposition of different kinds of accounts enhances the fluid, performative, and sometimes playful character of interacting with the notebooks, and establishes relations between the multiple categories of notes in their pages. Clear, direct statements and observations ("90 kg, average plastic use per person yearly"), remarks on events recently attended ("Informal Cities, 6.IX.08", "24.IX.08, Balice to Stockholm, 4 hours' delay"), messages, questions and reminders to oneself ("check magazines at a flea market," "return to the text on masks," "why do garbage cans in Germany look like tanks?") tend to share space with much more random, fragmentary, abstract, at times completely deterritorialized thoughts ("park, then stairs from the station, up," "cables, speakers, meaning and no meaning...") and snippets of information that are now completely useless (for example, phone numbers with no names of their owners). These different types of annotations might account for the versatile roles of the notebooks, which at times worked as supports for short-term memory, and at other times as logbooks for information intended to be retained over a longer time.

This leads me to my other observation on the notion of temporality. As mentioned earlier, individual entries in the manual notebook differ greatly in terms of the medium they deploy. While at the first glance, even to me, this eclectic constellation of multi-modal entries might generate a sense of chaos, at the same time, it also accounts for a multiplicity of time-frames

that the creation of these entries occupied. In other words, regardless of whether the semantic dimension and personal meaning are retained or not, each material trace on its own terms seems to capture and communicate a particular sense of temporality that the given experience (and the construction of its trace) occupied. For example, a roughly inserted newspaper clipping, or a loosely pasted sticker peeled off a traffic pole evoke completely different feelings and senses of time than a hand-made pencil drawing of an interior of a mountain shed made while waiting for a storm to pass. Similarly, snippets, rough sketches, collages, receipts, and other ephemera seem to represent life-time as an entity, built of short, punctuated situations and vivid moments squeezed between more stable and arranged chunks of time dedicated to, for example, work or study (these are reflected in much more organized traces, sketches, and lengthy notes). In contrast to these sharp and abstract fragments, much more studious, elaborate, realistic but also sometimes kitschy and pretentious hand drawings of landscapes or architecture communicate relatively long, attentive, and undisturbed segments of time. As we may guess, these more elaborate depictions (in some instances spanning several pages) were afforded by holidays, breaks from work, or a surplus of time in waiting rooms, departure halls, or train terminals. While some studious depictions account for moments of careful attention, others are elaborate, often imaginative and fictitious, some combining a depiction of real elements of the space occupied at the time with fantastical and grotesque figures, signify acts of killing time, escaping the confines of boredom and mundanity. There are also examples of entries that complicate this interpretation, of course. One of these is a numbered ticket from a bank queuing system, simple in its form and rather hastily affixed to the page, yet possibly accounting for a prolonged moment.

Notes and Reflections

With the manual notebooks, every physical gesture corresponds quite closely to the experience and its record. Each entry appears to be inscribed with a distinctive characteristic derived from the hand-movements that created it. With standardized and simplified digitally constructed memories, hand gestures leave no such individuated marks. Manual gestures are strictly conditioned by the technical specifications of the device, and thus limited to a preset range. In other words, digital devices tend to orchestrate hands to a set of scripted operations, so the anticipated procedure can be smoothly executed and the result achieved. This reduction of the performative and compositional role of a hand to the trigger of a preprogrammed procedure makes the connection between the subject and the externalized trace generic and devoid of singular attributes. A link can be found here with the notion of the dissociated mnemonic milieu, the result of mnemotechnologies in capture culture, programmed to intensify

the production of personal data for the benefit of tech-corporations, jeopardizing individual and local "know-how" (practical knowledge). There, hand gestures become pre-programmed and simplified as to synchronize with the demands of the device and the technical system it is a part of. If pressing of a button feels like commanding and setting an order (triggering the execution of one's intent), this same gesture can also be seen as the result of commanding and ordering performed by the device and its technical specifications. In other words capturing hands simultaneously become captive to the set of technical procedures that keep them away from a more profound form of engagement with the world. Ingold captures this transformation brightly by stating that, with the growing automation of technologies, "at the very same moment when the whole world is at our fingertips, it also seems completely out of our hands" (2007, p.122).

One might ask how the restoration of this regressed role of hands, and more broadly, the restoration of the manual side of working with one's personal memory might be enacted within the context of the mnemotechnologies of capture culture?

To address this question, one might turn to the notions of resistance and resistivity as they unfold here in relation to manual, hands-on practice. In manual practices, one's hands constantly encounter material and temporal difficulties, tensions, counter-forces, and pressures. A manual practice involving one's body is an enduring encounter with the resistance of the material one interacts with. This sense of resistivity – the capacity of a material or body to resist the flow or impact of another force – arguably comes organically in any practice concerned with material, manual intervention. If compared to mechanized and automated processes, manual practices are and will always be to some degree retarded and belated. Hands have to stay with, negotiate, or following Ingold's thought, come into dialog and establish a degree of correspondence (2007, p.122) with the resisting qualities of a material for a longer period, whereas automated, passive technologies can often ignore them. In this sense, hands and the body occupy a vulnerable position compared to automated technologies. But with a shift of perception, hands' vulnerable position and the sense of deceleration they offer can be seen as an advantage. Hands appear to be vulnerable if one approaches them from a standpoint that privileges automation (and by implication, efficiency, seamlessness, immediacy). Sennett advises learning from vulnerability, material resistance, and arduousness, as opposed to seeking immediate solutions for overcoming them. Similarly, drawing on de Certeau, Highmore sees the body (and thus the hand) as a force that always inherently resists automation: "we see the resistance of the everyday as extending from subversive 'poaching' to a brute facticity of a body that is not a machine" (Highmore, 2002, p.161).

In today's increasingly automated, seamlessly operating, "user-friendly" mnemotechnologies, material and temporal difficulties and friction

are seen as mere deficiencies to be immediately tackled and eliminated. As argued in the second part of this thesis, mnemotechnologies promise to capture and mediate memory immediately, efficiently, without friction. One obvious result of this tendency is the over-abundance of mediated experiences, an increase of quantity at the cost of quality. Thus, one might wonder whether a (re-)turn to manual practices of constructing and working with personal memory and archives, or restoring some of the aspects that incorporate manual gestures and physical engagement with matter might help address what seems to be an unrestrained generation of life-bits in capture culture, and consequently foreground the qualitative aspects against the predominant quantitative trend? If we agree with French archaeologist and anthropologist André Leroi-Gourhan, that technicity has become significantly (and, in the context of capture culture, perhaps strategically) "demanualized" (1993, p.255), the question here is whether a deliberate reinstatement of manual aspects, a conscious (re-) endorsement of material resistivity and the restoration of attributes like difficulty and effort in personal memory practices might be conducive to a generation of para-archival modes alternative (and resistant) to the dominant mnemotechnologies?

I must emphasize that, at the time of collating the early notebooks, by no means did I consider them to be an explicit form of resistance. It is only now, in retrospect and in relation to the recent proliferation of mnemotechnologies, that such qualities have become identifiable and have let these open questions and speculations arise.

One other contrast between manual and automated means of capturing and mediating life experiences that became apparent while surveying the content of the notebooks was the organization of records, and particularly the way this organization reflects the duration of the events themselves. In comparison to manual notebooks, digital services designed for storing and mediating personal memory (such as Facebook) strike me as spaces that flatten the depth and specificity of the temporal dimensions of experiences, which manual techniques seem to record in a more compound manner. The reason for this is not only the dominance of the visual image over other media (or the flatness of the screen they are displayed on), but more importantly, the way that the mediated memories are formatted and organized in a template. Each picture or video receives the same amount of predefined and automatically assigned space. Effectively it seems that each represents an event not only of the same personal value, but also of the same duration. Thus, in relation to the manual notebook, where a mark of a life event can be individually negotiated, crafted over time, and intentionally inscribed with a depth corresponding to the significance of the experience it stands for, Facebook and the like present themselves as mechanically engineered devices for a maximally streamlined, even, and immediate display, leading to a homogenization of events they capture and mediate. While this streamlining, simplification, and standard-

ization of visual language (and interaction) aims to attract and serve the broadest possible audience (establishing vectors for comparison, reaction, response, and cross-reference), the cost is a limited possibility for substantial manipulation of the framework, or its re-composition according to one's individual needs, intentions, and motivations. Here, arguably, technical systems (like Facebook) reveal their lack of "bricollaging" potential, which is how, borrowing from Claude Lévi-Strauss (1962), Sherry Turkle (1995) describes tinkering and coding with no imposed specifications.[55] Furthermore (as argued in the chapter on capture culture), it must be continuously kept in mind that the direction in which this stylistic and structural streamlining evolves is closely linked to economic factors and the rules of data markets. In other words, the rules governing the visual language (and forms of interaction occurring on the front-end of services like Facebook) are carefully engineered to enable the smooth extraction of techno-value at the back end. The increasing user-friendliness is hence inseparably tied to its opposite: data-market-friendliness.

One other notion that interaction with these manual notebooks evoked and which relates to materiality, and even more, to performativity, is the control over openness and disclosure of their content. It goes without saying that these manual notebooks were strictly personal. Serving primarily as material supports for keeping track of life events, a kind of a private "montage desk" for externalizing, assembling, and re-assembling thoughts (Walter Benjamin's way of describing a notebook recalled in Marx et al., 2007), they have never been intended to be easily communicable beyond the orbit of my everyday life. This predominant personal function is reflected in the highly ambiguous and idiosyncratic character of most of the notes, semantically inaccessible, perhaps, to any third parties, and even if deciphered, probably yielding no special value. The combination of the notes' complex material qualities and textures, the visually ambiguous nature of the traces, and what presently seems to me as a deliberate absence of clear indications of a common thematic or structural denominator to allow them to be easily compared and cross-referred makes these journals seem rather heretical, presumptuously incompatible, solipsistic, and at odds with the increasingly normalized features of today's digital culture: constant connectivity, unrestrained sharing, openness, self-disclosure, and a certain intrusiveness with which accounts of others' lives enter and disrupt our own.

At the time, I was obviously not interested in what I would now call the para-archival layer of personal memory practices. In other words, my journaling was not thought to provide a particularly coherent insight into the given moment or a specific subset of everyday life. These para-archival motivations came only in the following years, along with the opening

55 For Lévi-Strauss, the concept of bricollage meant taking apart a given set of events or objects (psychological, socio-historical, and technical) and reassembling them in new ways, to serve alternative ends (1962, p.33).

of my manual note-taking to include digital technologies and techniques, which I will discuss in the next chapter. The idiosyncratic nature of these early notebooks prompts us to ask about the balance between reclusiveness and openness (or directedness and equivocalness) in today's memory practices, a question which certainly pertains to the concept of para-archiving.

Unlike openness, reclusion (a term taken from the French *reclus*, a person who hides away from society, often for religious meditation) might be defined as a state of deliberate reservation and closeness (Hög Hansen, 2017). If personal notebooks often used to play the role of enabling a reclusive state, in today's capture culture, infected by the mantra of total and immediate self-disclosure and sharing, opportunities to construct a reclusive state through mnemonic practice seem impeded.

In another piece of writing (Smolicki, 2017), not in reference to the notion of para-archiving (but in relation to the notion of openness in digital culture), I addressed a similar concern, suggesting that, while for an individual media practitioner, the degree of the openness of mediated memories in capture culture is increasingly difficult to control on a technical level, there might be still room left for action on an aesthetic level. In other words, given that to negotiate if our everyday lives are open to the workings of mnemotechnologies becomes impossible, then how we open those lives (a question concerning mode, style, and aesthetics) and by what motivations seems to be, at least to some degree, left open. My point was that mainstream forms of capturing and archiving everyday life can be challenged by, for instance, developing and implementing techniques of ambiguity and idiosyncrasy in how one goes about constructing representations of personal events (cf. the earlier discussion on obfuscation). This means that attention to the degree of openness could be paid while motivating, constructing, and then externalizing one's memory, in other words, before and within these acts as opposed to after, through a post-factum use of a ready-made, technological layer of security, for example.

8. ON-GOING PROJECT (THE DIGITAL PHASE)

Soundtracking and Minuting: From Digital Technologies to Techniques

In the preceding section I discussed, rather briefly but hopefully suggestively, the early phase of my notebook keeping. In the following section I will introduce several practices that branched out from it, and which, over time, I came to refer to as *the on-going project.*

Already incorporating non-textual media, such as images, collages and drawings, in the following years my practice expanded beyond the physical boundaries of the notebook. With the proliferation of increasingly affordable personal digital devices, I began involving other kinds of media into how I recorded everyday life, such as sound, video, and photography. By then I had been working with technologies such as computers, cameras, and audio recorders. However, their use was often inconsistent, random, generic, and highly fragmentary. It was around 2008, at the dawn of social media and the smartphone industry, when I started focusing on conceiving more conscious ways of employing these technologies to record various transient aspects of everyday life around me. Consequently, over the years that followed, the manual notebook has been losing its central role. What started populating its pages were more often notes, sketches, and annotations related to these digital practices, and initial ideas for a framework to help organize their products.

For the first digital extension of my mostly paper-based journaling, in the summer of 2008 I commenced a project based on exploring and recording everyday sounds in public spaces. I discuss it here not only because it was the first activity that led to other digital, para-archival techniques and a larger framework for the on-going project, but also because it points toward three important shifts in my personal approach to technologies. One transformation was the shift from visual to sonic techniques, or complementing looking and observing with listening. The second transformation within this sonic practice which has affected my way of thinking of technologies in general concerns the move from physically constructing recording devices to composing assemblages of existing technologies and their use in my everyday life. The third shift concerns a re-prioritization of motivations and intents of incorporating technologies of capture into everyday life.

In times of the growing popularity of blogging cultures, social media platforms, wearable devices, smartphones – all intensifying sometimes obsessive, mostly visual forms of inward-orientation, self-centeredness and "presencing," which means using media technologies to keep others constantly aware of one's presence and concerns (Couldry, 2012), I was becoming successively interested in what, for lack of a better term, I would call an outward-orientation. By this I mean techniques for observing, re-connecting with, registering, and poetically re-articulating the experience of everyday life through the technologies available at the time.

The objective of this project, since then called *soundtracking*, was to question the dominant role of visual means of relating to our everyday surroundings and constructing accounts of the everyday. Through this project I aimed to balance this disproportion by emphasizing the aural, seen (or rather heard) not as an inferior aspect of the visual world, but as Christian Metz proposed (1980), an equally constituent element of the world. Soundtracking was also my response to the growing abundance of technology for visual capture and what I saw at the time as a limited interest in using contemporary media technologies to explore and record the sonic dimension of the world and everyday life, particularly in mainstream media practices. Moreover, the rapidly growing popularity of Iphones (only year after their release on the market) and general proliferation of smartphone culture meant the growing presence of ear-buds in public spaces. Noticing this trend (certainly present before, though intensified due to smartphones and cloud-based music streaming services) I explored people's sonic preferences by provocatively stopping them on the street and asking them to describe what they were just listening to. This simple, disruptive act, taking people out of their comfortable sonic realms (their favorite music, podcast, news streams) and bringing them into the here and now (the context of a stranger somewhat obscured by their immersion in sonic realms) inspired me to think of alternative vectors for personal and wearable technologies of capture. I became interested in re-thinking personal capturing technologies as devices for creatively restoring a sense of attachment to a space and a given moment, as opposed to enhancing a feeling of alienation, which at the time I perceived as a prevailing by-product of weaving wearable technologies into everyday live contexts.

I began constructing various experimental portable and wearable devices to allow me to record sounds through direct, embodied interaction with the material elements of public spaces. Several semi-functional, rough, vulnerable and rather primitive prototypes were developed in this period. One was a pair of gloves with embedded electret microphones for metaphorically fetching and shaping sounds in one's hands (Fig. 8.1); another was a cane with a metal wheel and a built-in contact microphone, an extension of one's arm and ear, making an audio recording of interactions with different surfaces and textures. In a "DIY" spirit of working with

technologies (Triggs, 2006), all these objects built on a combination of recycled material and cheap, off-the-shelf components.

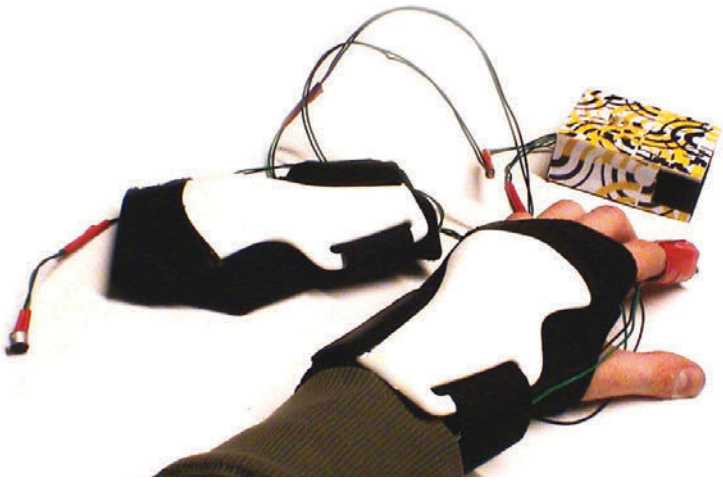


Figure 8.1: A prototype of a pair of gloves with embedded electret components for the practice of soundtracking

However, a simple frustration that often accompanied me in constructing these devices – a feeling undoubtedly amplified by my insufficient knowledge and experience in this kind of tinkering – made me gradually give up and resort to available and affordable audio recorders. While this moment might be seen as a failure, I recognize its relevance in triggering a conceptual shift. It inspired the relegation of effort from conceptualizing and building prototype devices to adopting pre-existing ones in accordance with tailor-made concepts. In other words, my interest in assembling individual technical components into unique, autonomous wholes (prototypical devices) has been gradually superseded by an interest in conceptualizing and implementing aesthetic coordinates by which pre-existing, off-the-shelf devices (audio-recorders, headphones, binaural microphones) could be adopted and set in specific relations within the flow of my everyday life and other gradually evolving ongoing projects.

Consequently, in switching to a pocket-size, portable audio recorder (about half the price of a new smartphone), and for the past several years, a pair of binaural microphones, the length of the clips was adjusted to rules for recording and archiving. Their typology was adjusted as well. I was interested in two types of sonic situations in particular. One would include sounds that seem inherently present in a place and thus co-define its specificity and experience (for example, unintended sonic side-effects of materials interacting: the hum of a broken ventilation system, a flag tapping against a mast, the automated roll of an advertising poster or

a parking machine). The second group included situations where sonic events resulted from the active manipulation of material in a given space (for instance, the squeak of door hinges, a high-pitched lament of the lid of a garbage bin upon lifting, the rumble of loose cobblestones).

The maximum length of a single recording was thirty seconds. Each act of recording concluded with writing a short comment, critical reflection, or association on a sticker and left at the site as an idiosyncratic tag for the subsequent retrieval of the sound by others, who could visit a crude, self-designed website based on Google Maps, where the sounds were systematically stored. In this sense, the project could be seen as a hybrid inventory, combining two distinct modes of experiencing everyday soundscapes. One mode was enabled through the direct experience in situ, and the other hosted online. The stickers in the places where the sounds were originally experienced and recorded functioned as interfaces, hinting at and raising awareness of the surrounding sounds. They signaled the chance to experience these soundscapes directly, in situ, by whoever happens to notice the sticker. Informed by short, evocative instructions on the sticker, the subject's physical presence, his/her body and senses, were invited to act like decoders with real-time access to the soundscape. The online database held sound recordings from the same places. They were accessible through the listener's network device, regardless of his/her location and proximity to the original places. Since the sounds were pinned to the map, one could find the exact location of the soundscape, to track it down in person.

Soundtracking also became open to other people, at times transforming into actions to raise sonic awareness through documenting sounds and tagging them with phrases that would poetically interpret or critique them. To this end, I would distribute stickers, mostly among my friends and acquaintances, hoping to stumble upon some of their findings while wandering in search of sounds or simply heading somewhere with other intentions in mind. However, these actions and their results, were very sporadic, and unlike my own work, I documented this collective part of the project in a very scanty and limited way.

In time, I abandoned these auxiliary complications. I stopped tagging the soundscapes and withdrew from the Google Maps service. I realized that the stickers were unnecessarily adding to the visual pollution in the public space. Initially, I thought of these tags as a critical intervention. Their design stood out compared to other visual materials, tags, and advertisements typically encountered in public spaces. What made them different was the blank background for handwritten comments. Ultimately, each sticker was different, and resembled mini-grafitti or a subversive tag put directly on a structure in the public space. However, over time my concern was that these tags worked too intensely on a visual level, which rather contradicted the project's primary objective to reduce preoccupations with the visual. Furthermore, as I was unsure about copyright im-

plications and ownership policies, I eventually removed the project from Google Maps. Like other popular services, Google Maps has continuously readjusted its policies and visual style, but also the technical precision with which uploaded content is located and displayed in relation to geographical coordinates. Gradually, I lost interest in cataloging the sounds and pinning them precisely at their location. Moreover, I was not complacent with the visual style of the map, which resembled many other generic services for corporate and commercial purposes. The practice of soundtracking has gradually lost its importance, supplemented by two other, more active practices for para-archiving everyday soundscapes: *street-sampling* and *minuting*. The former involves the regular documentation of ephemeral soundscapes created by buskers in public spaces. I record one minute whenever I come across a street musician in a public space. The archive grows parallel to my everyday life and comprises a rich variety of street music encountered by chance in various places since 2010.[56]

The other sound-related practice, minuting (today perhaps the strongest part of the on-going project), involves recording one minute of sound every day, when my attention is drawn to a particular sonic situation in a public space. It was exposure to the dense sonosphere of the Middle East, with sounds of bells, chants, prayers, shouts, pre-recorded announcements, and buskers that made me initiate minuting. Ever since my stay in Jerusalem in July 2010 I have pressed the record button of my portable audio device for sixty seconds, daily. While the choice of the one-minute unit has no straightforward explanation, it can be seen as holding a symbolic meaning. In colloquial language, one minute often signifies a brief period of time for taking a break. In the phrase "give me a minute," we are requesting a bit of extra time to accomplish something, pause for thought, or prepare an answer for a question. Similarly, minuting has been a deliberately carved out moment in time, for pausing and re-prioritizing the act of listening in visually overstimulated times. Another reference is the expression "minute of silence", a widely accepted mode of public mourning of those who have recently died, but also a form of contemplating and commemorating a tragic historical event or loss.

No less than the other parts of the on-going project, minuting has been characterized by consistency. The simple realization that at some point during the day, finding myself in the public space, I have to pull out my audio recorder, stop, and record one minute of sound, has sharpened my attention to sound in the public space, not only for that moment, but throughout the day. The minute in the title is not really a minute in practice. While each recording is indeed about sixty seconds, the whole act

56 As of summer 2017, the archive includes about 550 recordings. It is stored primarily on my local hard-drive, though fragments are occasionally opened and presented, as in the case of a performative workshop in Madrid that coincided with the introduction of a law reducing the amount of street musicians in public spaces (In-Sonora, 2014)

that produces it (concentration before the recording, starting the recorder, later downloading, numbering, cataloging, possibly annotating and listening to the recorded sound) is significantly longer. Minuting is hence about heightened attention and perceptiveness toward the sounds of the everyday; to some extent it can be compared to what Pauline Oliveros calls "deep listening" (2005, 2013). It is a practice in time that encompasses previous experiences. It does not happen at only the moment the sound is noticed. Past experiences affect how a sound is apprehended, thus enabling a more profound, subjective perception, interpretation, and retention of the sound at large. Oliveros claims that hearing is a momentary response to an audible signal, while listening extends the act of hearing through time and space. Thus, the dynamics of (deep) listening, unlike hearing, might stretch from a millisecond (or minute) to several years.

Minuting is a continuing record of situations with peculiar and interesting harmonic features, or sometimes mundane, disruptive, noisy, even irritating sonic situations which tend to dominate the urban context. It might be described as a different kind of journaling, as compared to most common, textual journals. It is a form of sonic note-taking or sonic excerpting where words are replaced with the sonic qualities of a space.

On a personal level, these sound bites operate as entry points or markers signifying particular days, moments in life, or experiences of public spaces and events I found myself in. For example, minute No. 1317 in my archive is a recording of tango music, probably Astor Piazzola, played on cheap audio equipment and mixing with a sound of a basketball a kid is bouncing in the background. Upon re-listening, it takes me back to a square in Hökarängen/Stockholm, and my conversation with a vendor from Argentina whose dream, as I learned in a later conversation, was to organize tango lessons in that square. Another minute, No. 1822, is a recording of the dense white noise of a rushing water stream. While initially it yields no meaning and seems rather abstract (it could be taking place anywhere in the world), after listening to the minutes from the day before and after, I clearly recall the reason I focused on it and recorded it. It is the sound of a powerful stream of water rushing through a hole carved in a rock by the local Sami people, forced into heavy labor while constructing the railway line in Abisko, north of Sweden. While some of these bits of sound immediately reconnect me with an event, place, or powerful experience, other require a much longer time; in many cases I do not at all succeed in reconnecting. For example while listening to minute No. 1996, I can only deduce from the reverberation and the acoustics of the space that it was taken in a train terminal or a waiting room. Thus, while some recordings have strongly impressed themselves onto my memory, others tend to work on an affective level, less signifying a particular experience than pointing to generic qualities of the spaces, events and daily situations in which they were taken (and can be associated with multiple other situations).

The sharpening of sonic attention (a personal side of the project) I see to be one of the two main roles of minuting. Besides the ongoing exercise of sonic perceptiveness, what motivates this practice and aligns with the principal incentive of para-archiving has been a construction of a repository of manifestations of everyday life in the sonic sphere of public spaces. Thus, as implied above, while some minutes have highly personal meaning (and thus questionable significance on a broader scale), others involve phenomena that might be seen to be characteristic or symptomatic of our times, and thus more easily identifiable by others (for example local cultural events and rituals found in certain neighborhoods, in some cases jeopardized by socioeconomic transformations, industrial sounds colliding with sounds of nature or temporary, elusive soundscapes coming from demonstrations or acts of political unrest I stumbled upon and witnessed). While minuting and encountering a situation which, after reflection, intuitive judgment and discernment, appears to hold a broader significance, I often record an extra commentary to help me later differentiate that minute from the others, and make a short contextual annotation.

In writing on photography, Susan Sontag (2001) describes street photographers as "an armed version" of *flâneurie* (ibid., p.55). In other words, the camera equips the sensuous and aimless wanderer in urban spaces (the essence of flâneurie) with the chance to leave a material trace. Likewise, minuting can be perceived as a street *audiography*, or sonically armored flâneurie, combining attentiveness to the sonic and consciously deployed audio-recording technology that preserves these moments of sonic awareness. One aspect partly retained from flâneurie is that the sonic situations I encounter and record are never intentionally sought; I find myself within them, incidentally, with no anticipation and planning. Minuting happens on the go, on a daily basis, insistently intertwined with the vignettes of quotidian life, wherever I happen to be at the moment. However, these incidental encounters may lead to more studious, site-specific projects aimed at a more extensive audio-archiving of particular architectural sites or neighborhoods (Smolicki, 2014).[57]

I will return to minuting in two other parts of the thesis. In the discussion on the fragmentarium I will briefly discuss how the recordings are organized, and toward the end of the chapter, how the practice opens to include other practitioners.

57 Such as a sonic ethnography of the Slussen area in Stockholm (Slussen Project, n.d.) or of the neighborhood of Hökärangen in Stockholm reflecting changes caused by its ongoing gentrification (Augmented Spatiality, n.d.).

Misquoting and Mapping. From Capturing to Re-capturing

Prompted by my work with these sound practices, over time I have also developed other multi-modal techniques for sampling and excerpting from the experience of everyday life. I have been adopting affordable, consumer media technologies designed for other kinds of capture and mediation, such as pocket-size cameras and wristwatches with built-in GPS receivers. I do not intend to go into an in-depth analysis of each activity, as this would radically and unnecessarily expand the scope of this work. Nevertheless, in this section I want to point at two other practices with para-archival qualities. They differ from the other techniques in that they do not use recording equipment. Their dynamic relies instead on appropriating existing visual representations, or, more precisely, their excess in the public sphere. By the excess of visual representations I mean found objects and trash, such as snippets of freely distributed newspapers, business cards, and fragments of maps I pick up while walking in public spaces on a day-to-day basis, then assemble into collages and digitize by scanning them. As they all encapsulate and communicate specific events (in the case of newspapers), identities (in the case of the business cards), or spaces (in the case of maps), I have been seeing these fragments of urban refuse as material agents which, on their own terms, record the rhythms, textures, and temporalities that mark contemporary everyday life.

For example, in *misquoting*, which is an iteration of the older practice of scrapbooking, I use snippets of free local newspapers to compose evocative collages, once a week. Sometimes critically or sarcastically, but also playfully, other times in a more contemplative way, the majority of these collages comments on global and local political and cultural events in societies characterized by the pervasiveness of computer technologies. At home, flipping through these newspapers, generally picked up on my way to or from work, at a train station or bus stop, I let my attention be stirred and caught by the most visceral images and strongest headlines. The dominant visual themes and motifs include over-scaled parts of human and animal bodies, weaponry, pharmacological supplies and media technology devices, such as screens, mobile phones, wearable gadgets, and laptops. I devote my attention to these fragments and select those that seem to have the greatest impact on my visual perceptivity. A more sarcastic and playful depiction would be a person with virtual reality goggles observing a car crash that was concealed from the real world (Fig. 8.2). A more contemplative collage would be a simple, invented headline reading "Remembrance, do not assume it was left by accident" (Fig. 8.3). The fragments of headlines for this collage came from a free newspaper picked up in New York during my visit that coincided with the tenth anniversary of the 9/11. In this newspaper, articles commemorating the victims of this tragic event were interrupted by visual alerts, asking the

Figures 8.2, 8.3: Collages from the practice of misquoting.

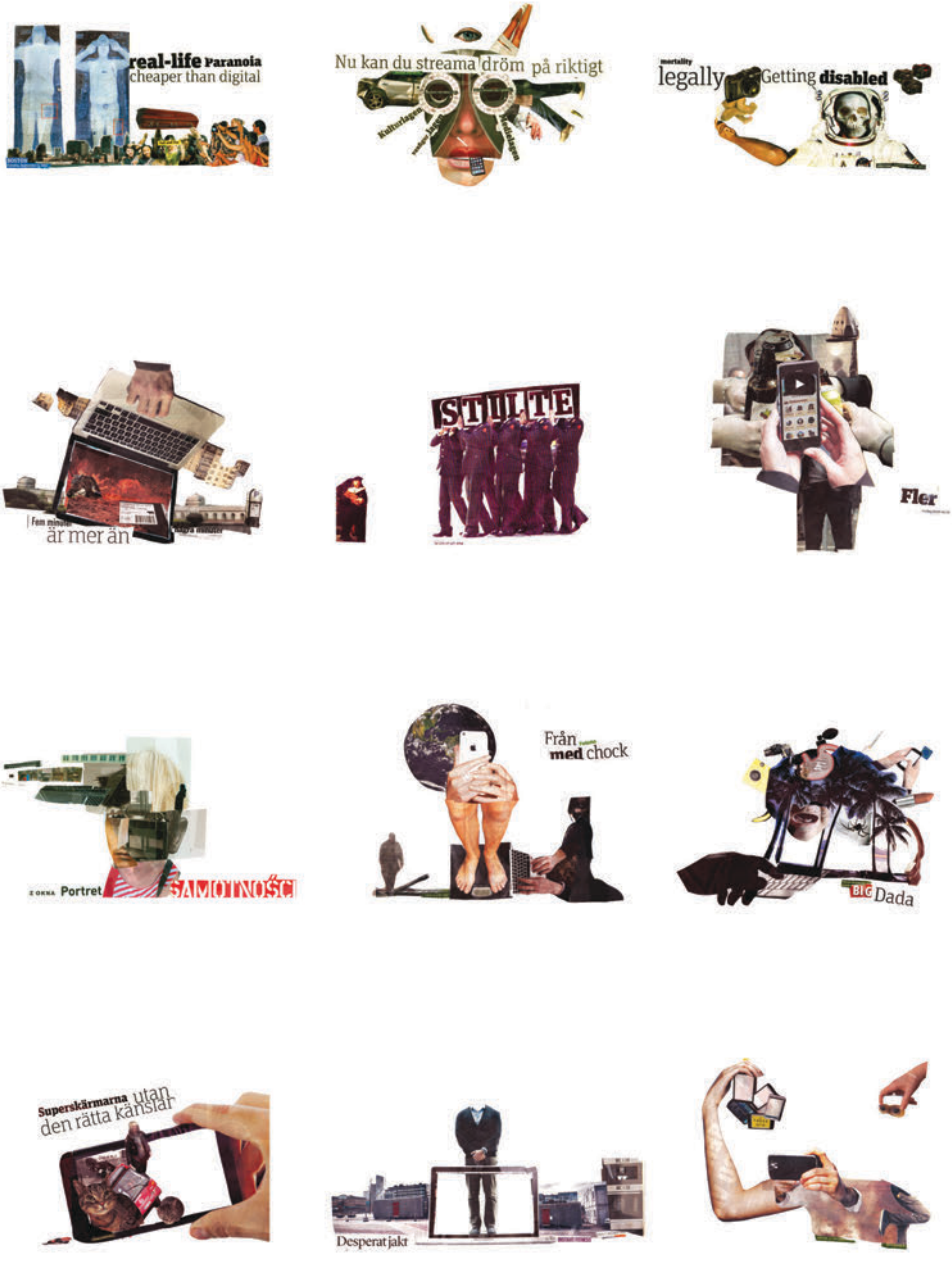


Figure 8.4: A selection of collages from the practice of misquoting.

reader to pay attention to suspicious-looking items left in public space.

I see this practice as a form of extending the longevity of material culture that was intended to be quickly consumed and discarded. As such, I seem to be acting counter, or, more precisely, parallel to the intention with which they were conceived. In other words, I see this act of misquoting as a mode of re-capturing and re-assembling the image of reality that the fragmented representations were initially intended to communicate. In Stuart Hall's terms, through the montage (first on a sensory level, by selecting portions of visual representations and then material, through cutting and setting the snippets in a new configuration, pasting them on the blank side of recycled office paper), I "retotalize" the message initially encoded therein, following "an alternative framework of reference" (1993, p.103), which, in this case, is the para-archival principle of my ongoing projects. This retotalization produces a new composition with an ambiguous and perplexing meaning (acknowledged in the very name of the practice). It is a hybrid record, in which fleeting, obsolete and residual elements of the public domain are stabilized into a parallel account through my subjective response to their affective charge (Fig. 8.4).

The other practice that stems from scrapbooking and draws on a principle much like misquoting is *mapping*. This is a technique of recording my presence in time and space by assembling randomly found snippets of tourist maps, fragments of leaflets, night club promotion fliers, newspapers, or business cards, all printed with some kind of cartographic representations. This collaging results in the visual juxtaposition of often physically unrelated spaces, bound only by the factor of my having passed through them (Figs. 8.5, 8.6). Every collage is a representation of fictitious, "heterotopic" space, in Foucault's sense of the term, as an unresolved site with several simultaneously operating layers of meaning, beyond what the eye first apprehends (Foucault, 1984). Since each individual collage corresponds to a one-month period of my life, one layer beyond the immediate visual sensation is time.

On a personal level, looking at this seemingly chaotic clash of diverse spaces with no defined center, in some cases I am able to recall very concrete moments and situations, inaccessible to anyone except those who were with me at the time. For example, a heterotopic representation of the month of August 2015 contains a snippet of a map I was given by a couple of friendly shop assistants at a bike store in Squamish, Canada, where I stopped to buy a bicycle lock. This snippet, already quite heterotopic due to several obtrusive local business advertisements integrated into it, also has some advice on local attractions penned down by the shop assistants. Another snippet from the same area comes from a leaflet advertising a heritage walking tour that connects several historical places, primarily related to the expanding presence of Europeans in the nineteenth century. Next to it is a fragment of a hiking map depicting the Chief, a holy mountain of the native people. On the way down from the mountain, in a local shopping

mall by the highway, I spoke to an older man employed there as a guard. As it occurred, his line of descent was from the native people of Squamish. He told me about boarding schools his relatives were put through and the politics of forced assimilation there, about which he wrote a book, on displayed, as it turned out, in one of the stores in the mall he was guarding. The map described above is remarkable if compared to other months spent all in one place or with a reduced social interaction. Some maps would include only one or two snippets, thus indicating a certain "uneventfulness" of the month. Yet even in such cases, looking at the map might bring to mind, for example, a particularly studious period of time spent writing an article at the library.

Mapping can be seen as aesthetically coded records of my presence in time and space. I use fragments of visual debris, its excess and availability in public domain as patches that while put together are intended to veil my own personal experiences and memories. Respecting the capacity and fallibility of organic memory, the records require an active input of my internal memory in order to be more precisely deciphered. But besides this personal dimension, due to their origin in and correspondence to specific spatial and temporal contexts as well as originally intended purpose to serve broad amount of people and purposes, these fragmented, heterotopic images still seem to be accounting for broader phenomena characteristic to our times. From that perspective they can be seen as samples of tendencies in the way that visual representation of space is constructed and prevails at the moment, especially in the commercial and tourist sector. If set next to each other, their cumulative effect may reveal predominant aesthetic styles in advertising, tourist and entertainment industry. The potentially historical value of these maps (again, taking into account regular, accumulative character of this practice) might be recognized in their capturing of stylistic mutations also influenced (perhaps even put at risk) by web-based mapping services such as Google maps and locative apps. But while exposed during conversations with other practitioners or friends (which I will partly return to in the chapter on the fragmentarium), they also inspired thoughts beyond immediate reflections bound to their visual layer. This is where, I believe, the very technique of collage rather than what is being collated takes precedence in the way that this mnemonic trace is interacted with. Besides recollections on personal level sending viewers to concrete experiences related to the depicted places that they themselves happened to visit, these cartographic patchworks also yielded observations on broader issues and concerns characterizing contemporary lifestyles. Such were for instance reflections on mobility and especially the ease and privilege of travelling. Other reflections revolved around the fragmentation of everyday life experience, reduction of space to key representative sites (as in the case of tourists maps) and acceleration of time (and lifestyle) expressed in maps picked up at train and bus terminals on which distances between locations are often synthesized and shrunk.

Figure 8.5: A trace from mapping, combining fragments of cartographic representations found in public places visited in a period of one month, August 2015

Figure 8.6: Mapping, 12 months of the year 2016 in cartographic collages

Self-tracking. From the Quantitative to Qualitative

While each of the practices discussed above concern a certain shift in operationalizing technologies of capture, whether through material or conceptual intervention, in the following example I want to demonstrate another kind of shift, this time concerned with the function of a digital, capturing device as well the way that the (numeric) data it produces is taken care of and assigned with qualitative value. It has been revealed already several years ago that smartphones such as Iphones imperceptibly collect and save every detail regarding geographical position of the device.[58] In *self-tracking*, I attempt to take partial control over this involuntary, digital trace-making to construct a visual record of my walking in public spaces and also to re-enact historical walks, routes or to mark an outline of an architectural setting of some relevance (Fig. 8.7). However, I do not use a smartphone for that purpose. Instead, I have been re-purposing consumer-dedicated digital watches with an in-built GPS components used typically for tracking and optimizing routes of one's running exercises and fitness activities.

Divorced from algorithmic, quantitative analyses, the data that the watch captures is used instead as a qualitative material for the making of a subjective cartography of my and my companions presence in space and time. Effectively, a result of this process - a simplified mark - acquires to me a role of an idiosyncratic mnemonic trace of a particular site, day or event in my life and lives of those who accompanied me at the time (Fig. 8.8).

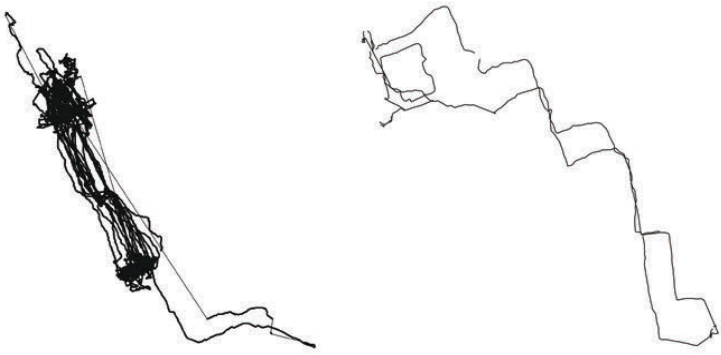


Figure 8.7, 8.8: The first is particularly vivid a visual trace created on 28.02.2011 and resulting from numerous reenactments of the last walk of Olof Palme, Swedish prime minister assassinated in 1986 on his way back from a cinema at Sveavägen, Stockholm. The second is a trace of a walk taken with a relative upon a visit in Warsaw, 20.12.2015.

58 One early project that addressed this issue was a mobile phone application *openpaths*. It allows smatphone users to decide how they want their data to be used. It protects the locative data, but one can also decide to share it with specific research initiatives, art projects, or educational programs of choice (House, 2011).

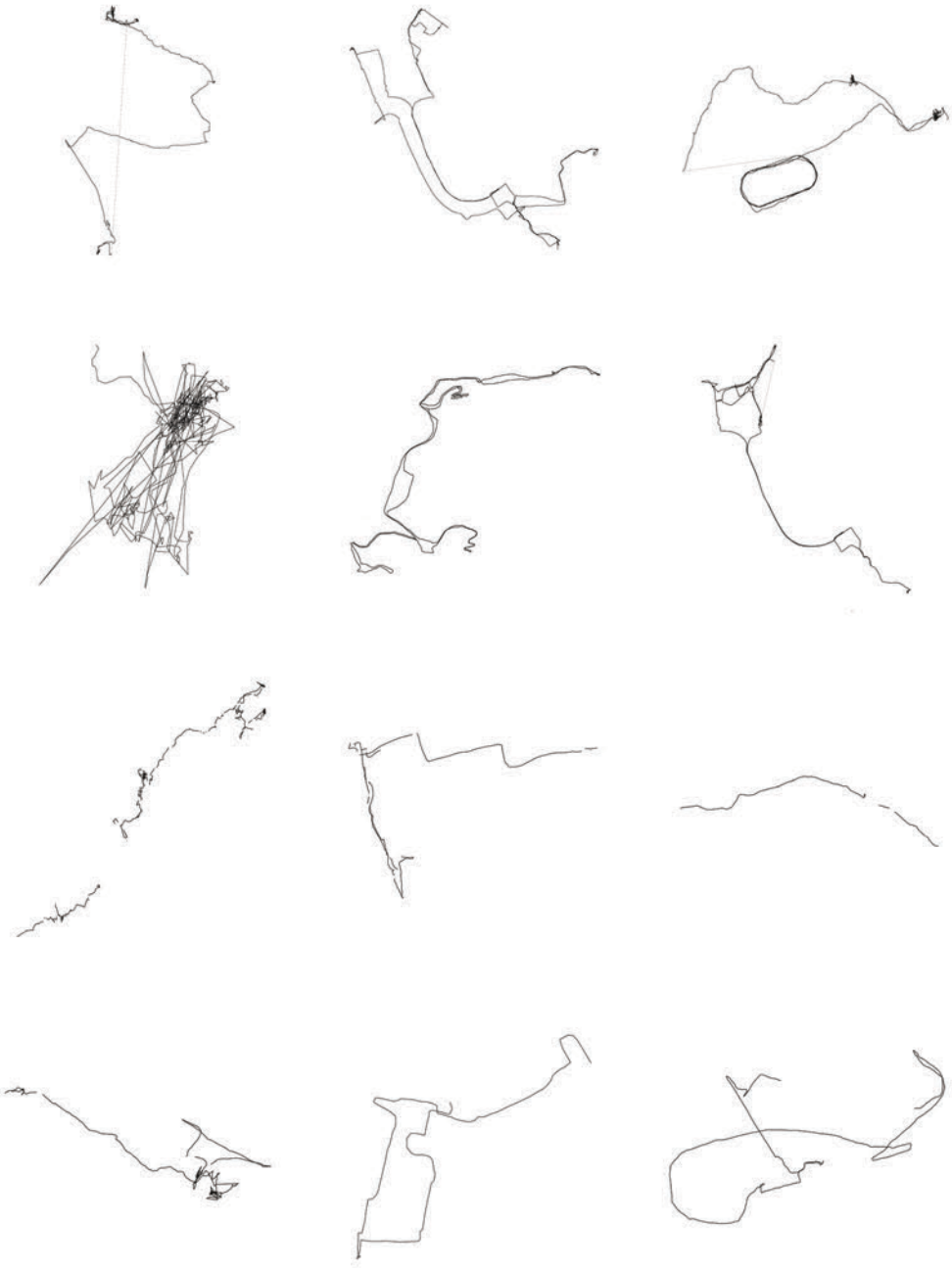


Figure 8.9: A selection of visualizations of daily itineraries based on GPS data extracted from a proprietary watch.

The arrival at this simple, mnemonic trace is preceded by several steps during which data is successively transferred, molded and eventually visually rendered. In other words this simple mark is being constituted through a sequence of migrations across several sites. These sites include the very watch, its memory, space-based global navigation satellite system comprising about 30 satellites orbiting the Earth about 19000 kilometers above its surface, specific environments of several software products, my portable computer's random access memory and its hard-drive storage memory as well as a dedicated Linux server at a data center in Bend, Oregon.[59] Some sites and environments in the process of moving my data are unavoidable, but some can be deliberately intervened in and some new introduced.

To download the geo-positional information from the watch, I use a freely available software dedicated to fitness enthusiasts (Training Center) that enables communication between the device and computer. Every watch of this kind usually comes with a dedicated software, although a range of alternative products, also freeware, can be easily found online. While transferring data I make sure to disable automatic upload onto the cloud which some services offer as to enable a comparison of data sets between users and/or sell the data packages to third parties. I export data from selected days and save them into a specific format, such as GPX on my local hard drive. The file is essentially a registry of data points representing longitude, latitude and altitude from my movements in space and over time. To convert this information into a graphical image, I use an online, freeware service called GPS Visualizer. Described by its author Adam Schneider as a "Do-It-Yourself mapping tool", GPS visualizer is a free of charge, donation based software. Having been deliberately commenced as such (and remaining ever since 2002) users can support its author financially or through a purchase of concrete items such as household supplies or workshop tools, of which need Schneider announces on the service website. Highlighting the independent nature of the service, in the description Schneider highlights that the service „is not intended as a Facebook-style "sharing" site where you can upload and comment on all your photographs, videos, etc. Files that are created here are permanently deleted a few days later". The maps produced via GPS visualizer can be downloaded and saved into many formats, appropriated and used freely across other platforms and websites. In my case the format is an open standard known as SVG, which stands for scalable vector graphics.

Next in this self-tailored, relational assemblage of software products, sites and temporalities, is a tool enabling a conversion into JPEG format and cleaning the resulting image of any extra, unnecessary information (date, time, distance, etc.). The only element that eventually remains is

59 Information on the satellites is based on Garmin, a producer of GPS-based personal navigation systems (Garmin, n.d.).

a simple visual mark. In this phase I most frequently use an outdated version of Illustrator, a commercial product of Adobe Systems. While being a recycled remnant from my previous job as a web/graphic designer, here constituting an element of a larger composition, it sufficiently serves its specifically defined role. Alternatively, I deploy freeware equivalents of Illustrator such as Inkscape. To ensure a consistence in terms of the size and format among the series of these visualized traces, I use Infra-View, a photo editing freeware. To assure the consistence in naming and cataloguing the files, as the last step in this series of conversions before uploading it to a database, I use another freely available software such as Bulk Rename Utility.

One could pose a question about the longevity of these freeware and thus possibly precarious technologies and techniques. As the longevity of these freeware tools often depends on donations and users' disinterestedness, some of these tools might get eventually discontinued, or lose their functionality over time, especially when confronted with the newer versions of operating systems they inevitably rely on. Although, from my experience it can be said that the majority of the freeware solutions that I adopt in my practice have been around for many years, with no significant disruptions along the way (an example here could be Total Commander, a shareware file manager with a FTP client service, that has been around with no major changes since 1993). But what needs to be mentioned is that in the case of discontinuance of some, there is always a variety of alternatives and replacements available. The field of open-source, freeware and shareware software is wide and one can find often very closely resembling tools that borrow from each other. This is provided that one knows what and where to look for. Thus, this compositional mode of working requires attention to technological developments, and a sustained curiosity, which in return provides a feeling of excitement, vitality and sense of satisfaction contrasting, quite vastly, with a somewhat "programmed" sense of tranquillity or "calmness" that mass-produced, ubiquitous systems are set to provide their users with (Fuller and Matos, 2017, p.181).

Another question could concern the vast amount of steps needed to arrive at a visually unsophisticated result. Along the way leading to this simple graphic mark, I subject my mediated memory to several processes, which, despite this multi-sited distribution, one can argue, provides a significantly higher degree of control over if compared to popular mainstream mnemotechnologies. Never entirely utilizing the full capacity offered by one single tool, on each step of this multi-phase process I instead engage with a selected function. This way I do not subject my memory to just one kind of processing and stylistic homogenization. Thus, the final outcome, in its stylistic and procedural dimensions, becomes a result of a dynamic transfer of the exteriorized memory across these deliberately chosen software products. Each step leaves a particular imprint, but the ultimate mark is a result of the working of the composition of several tools

put volitionally into a temporal alliance with each other, hence forming something of a meta-software with no single site.

While each step modulates the file in a specific way, it also produces particular residue, a kind of digital sawdust that can be retained and possibly re-purposed further on. This production of the sawdust can be seen as a manifestation of a certain (perhaps continuously minimal, yet detectable) degree of technical transparency (understood in-line with the meaning rooted in the pre-web 2.0), gradually disappearing today in favour of user friendly technological systems promising seamless and clean experiences. The digital sawdust is hence an evidence that accounts for a process that takes place. In contrast to meta-data or other contextual data scraped by imperceptible algorithms that process memories as in the case of large scale mnemotechnological systems, this sawdust does not become completely disclosed or instantly hidden. For instance, since much of the process takes place locally, on my computer, I can keep the numeric data from the first phase of the process which I can subsequently use to, for example, re-articulate the movement in space in another medium such as sound (by converting the digits into musical notation). Similarly, the vectorized file can be recycled towards, for instance, becoming a blueprint for a three-dimensional print, laser cutting or engraving in wood by the means of a rotary device. In that sense the work further acquires characteristics of a responsible craftsmanship, in a way that it attempts to make qualitative use of the refuse and side products accumulated along different phases of the project.

Thus, what from such a perspective appears as of especially crucial value is the process, at least as important as the outcome. In comparison to this, all-encompassing, automated types of technical solutions for working with and mediating digital memory tend to obliterate this processual dimension, eschewing its aesthetics value in favour of values such as efficiency, immediacy an utility.

Digital Framework. From Programming to Digital Crafting

After expanding the palette of technologies and the number of practices within the on-going project, the organization of their outcomes into a coherent digital structure as well as its online presence were next, natural steps. Initially as a way of organizing and displaying digitized traces I was relying on consumer dedicated platforms and free content management system used typically for blogging or websites (such as Wordpress) as well as web mapping services (such as Google Maps). However, within time I decided to build an unsophisticated, self-contained HTML5-based framework which could function simultaneously as a locally based archive and an online repository with a selected content, in both cases accessible via internet browser (Figs. 8.10, 8.11).

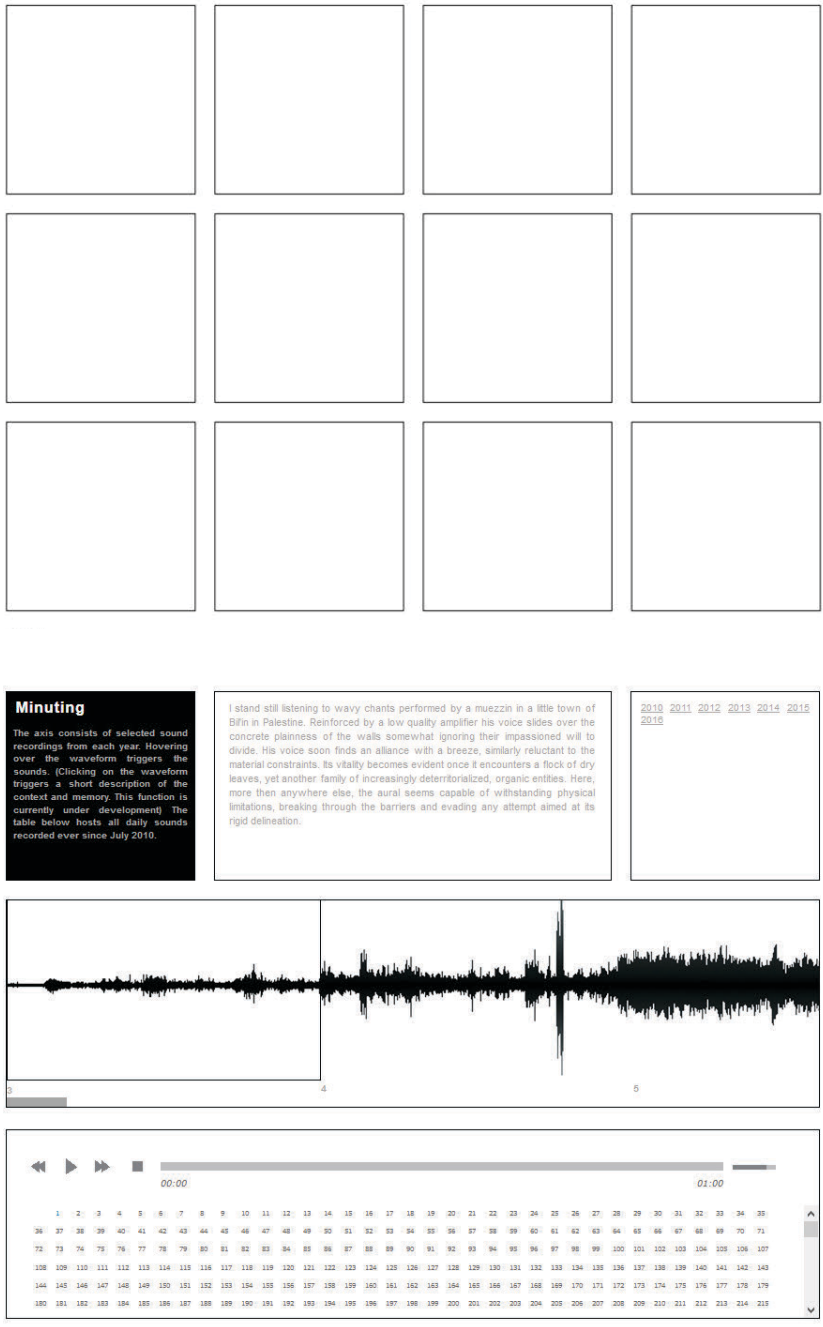


Figure 8.10 and 8.11: Screenshots from the landing page of the digital framework and the section of the digital framework dedicated to the sound practice, minuting.

To a certain degree, the development of my work on the digital framework has been opposite to the way I have worked with some of the digital recording technologies. While, as I explained earlier, in practices of the on-going project I have been gradually moving from tinkering and constructing devices to adopting existing ones in adherence to particular coordinates, here I have been somewhat moving in the opposite direction, from using existing templates and black-boxed, data management systems to a time-consuming, open-ended crafting of an ad hoc framework. The term crafting I use here intentionally, echoing the general premise of this part of the thesis which postulates a return to more hands-on approach to personal memory and archiving. But also, by using this term I draw on its close relationship to the concept of mnemotechnique and align with its use as a critical term in relation to the automation and oversimplification of technical developments (Wilkinson-Weber and DeNicola, 2016). I will return to the notion of digital craft in the concluding part of this chapter.

The direct motivation for crafting the framework was to achieve a simple, solid and yet flexible structure that could closely correspond to the outcomes and pace of my practices. The structure has been envisaged as a kind of a hub where the diverse types of outcomes could be accommodated over time, in their own terms. In other words, I perceived the idea of a self-contained structure accommodative to multitude of formats and media (sound, video, image, text, scans of drawings) as an alternative to a necessity to rely on several proprietary services for storing and displaying data, each specialized in a different type of medium. In the age of an increasing dispersion of one's digital traces, I have considered this design of an integral framework as a way of restoring much valued by me characteristics of a manual journal by which I mean especially its integrity, compactness and sovereignty. Effectively, the visual and to some degree structural side of the framework has been directly inspired by the format of my early notebooks. Each constituent practice received its own section of which template was based on a square.

One other strong reason for constructing an ad hoc framework as opposed to relying on a ready made one has to do with technological obsolescence and what it entails, constant changes, often beyond any direct control to an individual user. A deliberate move towards a self-constructed, minor and crude structure if compared to the robustness of mainstream solutions for data storage and archiving available on the market, can be seen as a form of resisting this tendency. Besides the ever-mutating politics concerning privacy terms, a commitment to a personal framework also resists stylistic amendments and necessity to follow and comply to specific guidelines in order to assure the framework's functionality, responsiveness, compatibility with the newest devices launched on the market. Self-designed, structure of which complexity is deliberately reduced and remains in tune with requirements established the character of one's own work, helps avoid unexpected consequences such as when

the software (or a plug-in) that one has been entirely reliant on over an extended period of time gets suddenly purchased by another corporation that subsequently imposes license fees or shuts it down completely.

There is obviously a number of downsides characterizing self-designed frameworks. Precisely such issues as incompatibility with the newest versions of browsers, operating systems, problems with responsiveness on mobile devices can be seen as some vast disadvantages. Personally developed structure, especially if one's programming skills are not continuously exercised and regularly updated, can get quickly sidetracked and outdated in the context of popular, mainstream technological developments. This is obviously a disadvantage if one looks from a perspective of someone willing to be in constant touch with the rest of the online realm and sees value in a constant refashioning of technologies and thus the modes of living with them. For me, the state of lagging behind, partly non-intended yet sustained somewhat deliberately helps evade getting unnecessarily captive to and distracted by the ever-accelerating chain of mainstream developments and updates. Although what has to be said is that evading distraction on that level introduces repercussions elsewhere. Considering my basic knowledge and level of skills in programming and writing code, every step in designing and crafting the framework takes relatively long time and at times causes irritation and frustration. These moments of frustration and nervousness emerged through encounters with the resistivity, characterizing both the very material (the potential of the code or given programming language) but primarily resistivity resulting from the confrontation with the horizon of my capabilities.

One way to overcome this encounter (beyond merely moving on to ready made solutions) which I incorporate in my practices is through resorting to such techniques as collating, recycling, bricollaging or what I would call digital rag-picking, in other words an appropriation of elements of code from diverse range of sources. Clearly, such kind of approach to working with the code has less in common with what programming typically stands for. Such a polyrhythmic mode of working, sometimes more organized, clean and coherent and other times, dilettante, intuitive, sloppy and messy, does no longer fall under a definition of programming as a series of coherently developed set of instructions "programmatically", and hence somewhat linearly leading to an anticipated result. This patchy way of working with code makes the digital framework remain in a state of continuous development, indeed the on-going project as the very name suggests. Some parts remain underdeveloped longer than others, waiting for enough time to be found or a supportive advice given. This polyrhythmic mode of working also points at a degree of connectedness to others, despite the intention to construct a somewhat self-standing framework. While automated solutions are typically applied instantaneously without a necessity to engage in any dialog with others, or a requirement to purchase special license in order to get in touch with

another human (such as in the case of Evernote discussed earlier), slow digital crafting seems to be more conducive to encountering others and thus can be seen to be equipped with a certain communal aspect. In my design of the framework, based primarily on HTML 5, with a simple JavaScript and JQuery-based functionality, I have been relying on experiences of other developers, online communities and members of open-source forums. Open-source communities and online groups, or remaining adjacent to the nomenclature revolving around craft, "digital guilds", (such as stackoverflow.com or w3schools.com), provide numerous indications for how to address, often highly distinct code-related challenges. The forums offer extensive libraries of tutorials, and if the answer is not found there, the question can be posed and shared publicly. This possibility to consult one's work and to learn from and rely on experiences of others, who often respond with specific sequences of the code that one can directly incorporate, iterate and appropriate, further accounts for a multi-sited and to some extent collaborative character of this seemingly reclusive project. The fact that in my shaping of the personal framework I include generous advice and hints from others, whether directly or indirectly, suggests that no matter how asynchronous, deliberately slower and invisible I would like my framework to be, it continuously depends on the speed of online communication, degree of openness towards and reliance on third party components, external flows of data, such as fragments of code developed by others.

This leads me to another important observation concerning the aesthetics emerging from the eclectic nature characterizing the bundle of software that I use for the editing of the content of the archive. In black-boxed, user-friendly frameworks, concerns related to the compatibility in regard to formats, extensions and size, resolution of the uploaded material (e.g. image, video) are preemptively eliminated. Conversion and adjustment of one's mediated memory happens automatically. In other words, upon uploading, the content is simultaneously and imperceptibly appropriated to meet techno-economic demands of a given service. This is different in case of a makeshift and extemporaneous framework. It does not have the front-end through which in popular services for data aggregation and display one typically uploads the content to be processed to yield an anticipated result. Here all amendments, including uploads of the material, require direct intervention into the code. The sculpting of the material to be subsequently deposited in my digital archive happens externally, much slower, through the use of different kinds of auxiliary software products and services (as it was discussed in the case of GPS tracking practice). In other words, every entry is previously edited by external means which entails an extra investment of attention, time and dedication. To the extent I can, I try to rely on open-source and freeware solutions (for example PSPad, Total Commander) which altogether constitute a specific assemblage of software products tailored to the proces-

sual dynamics of my para-archiving practices.

In contrast to mnemotechnological services, the possibility of a direct access and manipulation of the source code in a makeshift structures like mine, allows for a retention of not only the successful and functional command lines but also elements of left-over code, dysfunctional remnants such as symbols, sequences, annotations to oneself "commented out", which is to say put on hold in terms of their effectiveness for the time being. The programmed artifact hence becomes simultaneously a residue, or a record of steps taken along the way, while obviously acquiring its intended function of a repository and structuring device for organization and display of digitized content.

Discussion and Summary of the Chapter

> Here we have a man whose job it is to gather the day's refuse in the capital. Everything that the big city has thrown away, everything it has lost, everything it has scorned, everything it has crushed underfoot he catalogues and collects. He collates the annals of intemperance, the capharnaum of waste. He sorts things out and selects judiciously: he collects like a miser guarding a treasure, refuse which will assume the shape of useful or gratifying objects between the jaws of the goddess of Industry (Benjamin, 2003, p.48).

While this excerpt on rag-picking from Walter Benjamin's writings on historical materialism speaks quite directly to the practices discussed earlier which concerned collecting and re-purposing the excess of visual representations and printed matter (misquoting and mapping), it might as well be seen as productive to the concept of para-archving at large.

To Benjamin, rag-picker constituted an opposite to a bourgeois collector, historian and archivist typically bound to the confines and rules of their professions and institutions. Ignoring the most valuable and historically exceptional, the amateur archivist, or a para-archivist as we might figuratively call a rag-picker, orients himself/herself instead towards the margins of modernity and by-products of its processes. In parallel to his precarious condition, away from any attention, he/she creates a prodigious account of consumerist society's continual demand for the new (Highmore, 2002, p.61). Certainly, what motivates the rag-picker's taking to the streets and "botanizing on the asphalt" (Benjamin, 1973) differs radically from the motivation of a conventional collector, historian and archivist. The goal in the rag-picker's case is not to construct any historical record, but to make a secondary use of debris as to essentially prolong one's basic existence. However, this ambiguous position of rag-picker in relation to capitalist forces, established rhythms of production and consumption that determine the life of the city, became for Benjamin an inspiration for rethinking methods of inquiring into modern material culture. Overall lifting rag-picking to the status of an aesthetic practice

was a critique of established, mainstream archival practices, and perhaps even more, the dogma of historiography predicated on the idea of linear progression. As Highmore asserts, the focus on debris allows on one hand to refuse the lure of celebrating the new and progressive, and on the other, prevents from sentimentalizing the long gone broken promise which this debris is evidence of (2002, p.65). Thus, the practice of rag-picking operating always on peripheries of historical relevance is an indication for how archiving might be performed differently, or rather in parallel to dominant kind, captivated by the heroic gaze of statues, aura of canonical books stored in museum, linearity of textual documents compiled carefully in archival collections, all set into suspiciously coherent relations maintaining the myth of an alleged unidirectionality of human progress. The transposition of rag-picking into a technique of inquiry into material culture is explored (yet not quite completely) in Benjamin's Arcades Project:

> Like a poor and burdened man cleverly picking through the rubbish of the previous day, the materialist historian selects from amongst all that is disregarded and from the residues of history. At the library he is unconcerned with what has been accredited as precious and valuable, but rather is drawn towards historical refuse. Waste materials are to enter into significant connections and fragments are used to gain a new perspective on history (in Marx et al., 2007, p.252).

In Benjamin's method archiving and rag-picking coalesce while revealing one other relevant influence, namely a technique of montage, at the time explored extensively within avant-guard art circles. In all these seemingly polarized realms, taking place within different societal, cultural and political milieux, trash and what it connotes - the marginal, peripheral, left-over, liminal, circumferential – establish a unifying vector. Concerned with reassembling and potentially preserving the fugitive ecologies of everyday experiences founded upon the very debris that they yield, each of these figures - avant-guard artist, historian and rag-picker - in his/her own terms becomes a para-archivist of the time. As Highmore highlights, through this transcendence of trash, Benjamin productively subverts the alienation caused by an excessive penetration of media technological and industrial forms into everyday life. The accumulation of trash is turned into a specific dialect that creatively embraces, communicates back and, we might add, para-archives the fragmentation, shock and excess - the effects or by-products of the arrival of these very techno-industrial forms (Highmore, 2002, p.69).

To some degree, in a way that corresponds to Benjamin's search for alternative aesthetic forms and modes of experiencing and registering everyday life from within a given techno-cultural condition, in this chapter I presented selected, personal archiving techniques as they successively evolved from the earlier practice of manual notebook-keeping. In each

single case I attempted to highlight a certain shift or series of shifts (conceptual, aesthetic, performative, material) that made the given technological device or technique acquire an auxiliary, para-archival function in my everyday life.

In sound practices (soundtracking and minuting) this conceptual shift took place towards sonic qualities of everyday life at the cost of visual aspects, arguably dominant today in the way we capture and relate to the surrounding world through technological means. The second shift highlighted in the case of these sound practices concerned a move from the construction of idiosyncratic, recording technologies to conceptually reprogramming the ways of using already available ones. Consequently, I discussed how I adopt a portable recording device in adherence to simple conducts which I would then follow and which concern, for instance, recording and annotating a minute of sound daily. In practices of collaging excerpts from freely distributed newspapers as well as discarded cartographic representations picked up from public places (misquoting and mapping, respectively) conceptual and material shifts can be identified in the way I substitute a need for producing new visual forms with de-composing and then re-assembling existing ones and through doing so, inscribing them with an additional personal value and potentially wider, cultural meaning. In other words the shifts in the case of these visual practices concern a recognition of potential mnemonic and para-archival qualities among the elements of material, visual culture typically intended for quick consumption and inevitable degeneration. As I also suggested, on a personal level both practices might be seen as indicative of the way through which a state of partial ambiguity and reclusiveness in the context of today's ubiquitous capturing, archiving and disclosure of mediated memories might be achieved.

The practice of recording traces of my movements in public spaces (self-tracking) was an example where a shift from a default, generic function of a proprietary capturing and monitoring device takes place towards alternative motivation which is a construction of a mnemonic trace. Thus, in this particular practice the device and data that it produces can be seen to enter alternatively motivated set of relations, a specific mnemonic milieu. The quantitative data passively accumulated by the device in parallel to my everyday life acquires special, qualitative significance by becoming subject to various instances of what I came to call digital crafting, performed across consciously identified software tools and computational procedures. Lastly I discussed the construction of an ad hoc, digital framework aimed at organizing the outcomes of these multimodal para-archival practices. The shift in this case can be seen in the recognition of the value of slow and arduous processing and organization of mediated memories contrasting with the immediate, oversimplified mnemotechnological solutions that tend to intensify production and consumption of digital content. In other words, the transition here con-

cerns endorsement of resistivity, a notion discussed earlier in relation to manual notebook, here entailing more specifically a productive acknowledgement of the limitations of one's skills against the horizon of today's technological possibilities.

In many ways, the on-going projects can be seen to expand on techniques used earlier in manual notebook-keeping. Despite their reliance on digital technologies, the digital practices carry on qualities of these earlier manual techniques; in other words there is a certain convergence of sensitivity and care for material aspects of memory practices with possibilities and selected functions that digital capturing technologies offer today. The term digital crafting which I used earlier seems to capture this convergence well. The notion of craft in relation to digital and more specifically computational technologies and programming has been lately discussed by for example Lane DeNicola (in Wilkinson-Webster and DeNicola, 2016) who traces the history of the discourse on programming as art and craft, referring back to the early 70's. It is around that time that Donald Knuth, a computer programmer and author of "the art of computer programming" posited that:

> Computer programming is an art, because it applies accumulated knowledge to the world, because it requires skill and ingenuity, and especially because it produces objects of beauty. A programmer who subconsciously views himself as an artist will enjoy what he does and will do it better (Knuth, 1974, p.673).

Arguably, computer code lends itself to be considered in terms of an artistic medium and consequently working with the code as an aesthetic practice, craft or a kind of contemporary mnemotechnique as long as it is characterized by a sufficient degree of plasticity and openness that can subsequently foster a range of creative or even renegade operations and manipulations on the user's end. In line with this premise, DeNicola suggests that mainstream producers of technical devices and software (such as Microsoft and Apple) in their gradual pursuit of a vision of result-oriented technology (as opposed to process-oriented) radically reduced these attributes in contemporary computerized culture. Artistry, once emerging through an active and effortful commitment to the process of coding today mutated into more or less ready-made features, styles and templates to be purchased upon a click of a mouse. Interaction has become reduced to a pre-defined pool of operations and calculations (Fuller and Matos, 2017) taking place on the surface level (interfaces, desktop, etc.). Put more crudely, manipulation of the code in the context of the mainstream digital culture means ornamentation of its surface as opposed to an interrogation of its depth:

> In 1980, most computer users who spoke of transparency were referring to a transparency analogous to that of traditional ma-

> chines, an ability to "open the hood" and poke around. But when users of the Macintosh talked about its transparency, they were talking about seeing their documents and programs represented by attractive and easy-to-interpret icons (Turkle, 2003, p.20).

In contradistinction to the passive forms of utilizing code, digital crafting and artistry can be defined more clearly as "a conscious attempt at an engagement (or re-engagement) with production via a honed, reinvigorated sensory receptivity" (DeNicola in Wilkinson-Webster and DeNicola, 2016, p.54). But in the context of digital technologies, this sensory receptivity characteristic to traditional craft, manual gestures, tactile qualities, effortful corporeal activity certainly can not be comprehended (and applied) in a direct sense, but more on an abstract level. In other words the point is not in transferring qualities of craft to the digital sphere in literal, one-to-one manner but through sustaining a similar attitude, sensibility and perceptiveness that can in turn facilitate a recognition of certain parallels between the two. The code and programming might acquire attributes of craft provided that they are open to attributes such as imperfection, misalignment, glitch, slowness, seen not as devaluing but rather productive forces. In other words a conscious incorporation into a process of constructing a digital object (website, database, framework, personal archive) is what might potentially turn engagement with code or software into the act of digital crafting. Learning from and evolving with the "digital resistivity", to paraphrase Sennett, acknowledging the limits (one's own and the material's) as opposed to overcoming them passively is what appears to be lifting the status of coding to a level of aesthetic practice or/and a mnemotechnique.

Certainly, one can argue that in the age of black-boxed technologies possibilities of such an unswerving control over one's process (and outcome) of digital crafting is limited. As the space for imperfection and other attributes listed above become today successively obliterated in the pursuit of efficiency and seamlessness that stir major trends on technological markets, one can ask whether there are any other moves possible that can potentialize a restoration of mnemotechnical qualities in living with digital technologies? As a plebeian type of a programmer with limited skills of which development is additionally constrained by time limits, as I demonstrated in the discussion of my practices I have been recognizing such potentiality in an act of actively setting relationships between diverse components and attributes of existing, even black-boxed software products, services and programming regimes. This mode of working, with the mindset composed of attributes characterizing work of an artisan, amateur but also rag-picker, aligns quite closely with the concept of aesthetics overall seen in this thesis as an active commitment to a vital composition of new (and re-composition of existing relations with technologies in everyday life.

This observation connects us to other issues such as subjecthood and morality. As they have not been outlined too explicitly, few words are needed here. Writing on modes of engagement with algorithmic culture and positioning oneself in the algorithmic complexity of today's media technological landscape, Mathew Fuller has lately suggested that:

> Self-constitution can be read as an act of mixing different temporalities, degrees of focus, procedural operations. This composition is collective as well as individuating , since such procedures are drawn and imposed by numerous resources, and contexts that operate across persons, organizations, economic regimes and conditions of information (Fuller, 2017, p.202).

Fuller posits that one's subjecthood, particularly in today's highly meshed technical reality, is a construct of many simultaneously operating forces. Self-constitution is always intercepted and modulated by numerous forces operating either visibly or imperceptibly. Here I want to suggest that the same can be said about the nature of personal archiving, if we see it as a form of exteriorizing this subjecthhood into material traces. Thus, regardless their subject's will to be sovereign and autonomous, in capture culture, personal archives are always to some degree determined and contaminated by numerous agendas. But as demonstrated in this chapter, this degree of conditioning can be intervened into, reconfigured or as Fuller suggests, re-mixed. While the quote above points at this twofold architecture of subjecthood, at once subjected to the complex mesh of technological relations and yet capable of turning them into a subject of volitional reconfiguration, it also entails various moral considerations that inevitably accompany this negotiation. In the chapter on capture culture, while discussing and experimenting with automated forms of capturing everyday life, I suggested that precisely due to immediacy and automation characterizing proprietary technologies, the site for ethical considerations in terms of active decisions as for how to live with techne, whether individually or collectively, (a horizon of possibilities for how to adopt technologies into one's life) have been challenged.

The breaking of the process into phases and introducing, slower, compositional approach to crafting one's relationship with capturing technologies and accounting for one's life at least to some degree seems to be opening some room for reflections, attention and hence moral consideration. If the process is broken into components, a decision needs to follow each moment of moving from one to another and effectively this might potentially inspire more considerate choice, for instance in regard to the use of software. A simple example can be a move towards a low-scale, freeware and donation based program at the cost of relying on a proprietary, corporate solution. Another example can be moving to communities of programmers and forums, which entails that the author of the script, program or patch that one eventually adopts can be more directly ad-

dressed, remunerated and overall that the relation with the author might be more direct and trustworthy. Thus, the deceleration, partial de-automatization of the process of personal capture and archiving, breaking it into diversified phases, sites and rhythms, might allow for a more conscious and considerate way of negotiating the web of relations between its constituent nodes. Such moves might allow for making at least some nodes of the web more visible and adjustable. In other words the deceleration through re-manualization of memory practices seem to enable conditions for a more direct and careful configuration of the web of relations, or differently put, a constitution of web of such relations that evolves and can be cultivated in parallel to the involuntarily and imperceptibly operating web that we are inherently immersed in.

Deceleration of the process of capturing and archiving one's experiences and memory, might also instigate conditions for a reflection on their excess and significance, both on personal and broader, cultural level. The restoration of the value of difficulty, effort and multiphasic character of the working with one's memory might facilitate a turn in perception to the quality of what is recorded, at the cost of the quantity. Regarding the very notion of the personal and individuated, given that the withdrawal from the underlying procedures of capture culture is inescapable, the meaning of the individuated and personal also changes. Thus, what I would suggest also connecting to Fuller's words above, the personal today might be achievable not through an attempt to strictly delineate that which is mine and which is not, but through attentively mixing these categories and building productive relations between them. In other words, what we might consider to be making capturing and archiving personal in the context of capture culture, is the singular character of relationships attentively set between different technical forces that give rise to a particular, and in that sense personal, mnemonic trace.

9. FRAGMENTARIUM (THE POST-DIGITAL PHASE)

While the previous chapter focused on the initial period of my recording practices and their incremental development into a set of digital techniques, in this chapter I will discuss another step in this series of remediations: a reverse-remediation. This step concerns the ongoing work on the *fragmentarium*, a hybrid-media archiving cabinet facilitating the creation, organization, and mediation of selected products of the ongoing project. As in the previous chapter, here I focus on the material, performative, temporal, and hybrid aspects of this practice. Apart from the cabinet, in the later part of this section the emphasis also falls on different modes of opening the cabinet and its practices which come to include other actors and contexts, inspiring other similar initiatives and creative media practices.

I propose to begin with two everyday situations that prompted me to engage in the making of the fragmentarium and to look into the history of filing cabinets and their use in personal archiving. Slightly amended here, these mundane accounts come from my journal and were penned down sometime in the fall and winter of 2015.

I was sitting on the "fast train" (a literal translation of the Swedish snabbtåg), working on updating my personal archive. My external hard-drive, which I use for this purpose, was set on a book, next to my computer, on a little foldable desk in front of me. At some point, quite unexpectedly, the train began to slow down. The hard-drive slid and fell on the floor. The book remained on the table exactly where it was. The hard-drive's internal disk continued to spin as it fell. This meant it was scratched and irreversibly damaged. After this incident, I consulted several companies that specialize in retrieving data from damaged hard-drives. While some of them saw no hope for rescuing the data, others offered to take up the challenge but with no guarantee of success, and at an extremely high cost, regardless the outcome of the operation. The content from about forty days of para-archiving, which I had hoped to back up upon arriving home, was lost. I was frustrated. I kept thinking of the heavy, and much less vulnerable, slow and bulky paper book still occupying the same spot on the little table in front of me, almost completely resistant to the annoyingly irregular micro-turbulence of the train. Even if

the book fell, I kept thinking, its content would not have been affected. I cursed the "fast train," our dependence on speed, efficiency, and comfort that this train embodied to me. I promised myself not to take the fast train anymore, and stick to slower ones, which I have tried to do ever since.

Another time, I was sitting at Stockholm's city library writing my thesis and occasionally editing my ongoing projects. Getting tired of my extended period of time in front of the screen, I looked away. Behind the rows of other people starring at their laptop screens or working on stationary computers distributed evenly in the library space, in the very corner of the reading room, I spotted an old filing cabinet. Certainly, it had not been used for many years. Now little more than a historical prop and a static ornament, it simultaneously appeared to be a remnant of an increasingly obsolete, if not entirely bygone era of manual organization of knowledge, an attentive mode of offline browsing. This simple shift of attention triggered a sudden recollection of an article on early filing cabinets written by John Tagg. Tagg's description of these fixtures as instruments of power, privilege, and control (2011) recalled the concept of mnemotechnology. Even though Tagg did not use this term, his description portrayed the cabinet as a constituent part of a larger economy of remembering (or industria memoriae, as I would call it today) – a predecessor of what we now call a digital database. Yet, I thought, the twentieth century's advancements in information management and technology seemed to have deprived this manual cabinet of any such attributes. I asked myself whether, superseded by the ubiquitous cloud, a bulky, wooden and disconnected cabinet such as this one was not, paradoxically, the safest, most stable, and reliable technology for organizing memory today? A space for regaining autonomy and control over a vulnerable digital legacy in capture culture? Mnemotechnology turned mnemotechnique, as an inevitable consequence of technological transformations?

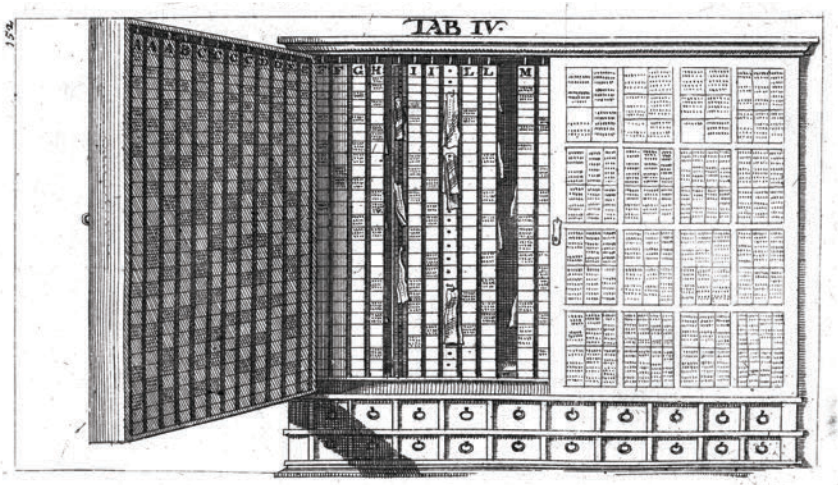


Figure 9.1: An anonymous cabinet for organizing snippets of information as depicted in *De Arte Excerpendi* by Vincent Placcius, from 1689. Source: *GC6.P6904.689d, Houghton Library, Harvard University.

The growing role of printing press and movable type in the sixteenth century accelerated the proliferation of textual media, quickly raising a lot of concerns and worries, but also posing challenges to their organization and dissemination. This "book flood" was addressed as a serious problem, calling for new methods to access, organize, and navigate ever more rapidly accumulating written information (Krajewski, 2011, p.9). One early way of tackling this situation was compiling special books that contained meticulously crafted lists of all the volumes in a collection, house, institution or state. An early example of this is *Bibliotheca Universalis*, composed by Conrad Gessner, a Swiss naturalist and bibliographer. Written between 1545-49, the book was an extensive catalog, gathering and organizing information on all books in Latin, Hebrew, and Greek published before then. This long term project saw Gessner traveling extensively, visiting many European book collections and libraries; it consisted of snippets of information, such as names of authors, titles, and places where the books were published, as well as relevant keywords summarizing the books' subjects. Bibliotheca Universalis was a single-minded archive of all texts available at the time, or, as Markus Krajewski had it, "an index of indexes," yielding access to a concrete piece of information through a simple, manual "algorithm."

Gessner's invention belonged to a family of practices and devices described historically as *De Arte Excerpendi*, or, in English, *the art of excerpt-*

ing. This is a term borrowed from the title of a book written in 1689 by German philosopher and teacher Vincent Placcius (in Krajewski, 2011, p.16). *De Arte Excerpendi: Of Scholarly Book Organization* provided an array of instructions on how to compose customized frameworks and personalized approaches to storing and organizing a collection of notes in times marked by an unprecedented proliferation of textual media. Highlighting its processual dimension, Krajewski defined the art of excerpting as "a private" and "discreet" practice of scholarship and memory (Krajewski, 2011, p.16). In light of the Renaissance ars memoriae discussed above, which was jeopardized by printing technology, the art of excerpting can be seen, to some extent, as an extension or remediation of Camillo's memory theater, but in the vastly reconfigured reality of the age of reason.

The illustration at the head of this section, originally published in the aforementioned book by Placcius, depicts an anonymous example of a device for the art of excerpting (Fig. 9.1). When the doors are opened, this simple wooden piece displays a complex array of hooks for hanging little paper snippets with handwritten thoughts, observations, and references to other texts, to be organized according to principles devised by its owner. The device had two major functions. First, to facilitate the organization of discrete notes into a constellation configured according to a set of independent, overriding principles. Second, it was an inventory of singular nodes, modular fragments that could be easily assembled into ever-new configurations, potentially yielding new meanings and inspiring the generation of new modules for the collection. In other words, unlike a book – an earlier form of organizing personal notes, such as the Bibliotheca Universalis – excerpting devices as this anonymous cabinet provide both fixity and mobility, two modes of working with memory: one that facilitates storage according to a set of pre-established coordinates, and one that provides the possibility of continuous reconfiguration, re-edition, and augmentation, to trigger new thoughts, impressions, and meanings. In more contemporary terms, the excerpting practice was comprised of two main elements: software, or a set of principles choreographing how one goes about gathering and ordering knowledge, and hardware, or the material storage, the physical medium, such as a book of paper excerpts or a paper card cabinet (Krajewski, 2011, p.20). In this light, this "recombinant poetics" (Seaman, 2007) of the art of excerpting, can be said to predate the logic of the digital database, where digital data sets are at once stored and open to continuous reshuffling, reorganization, and reordering (Manovich, 2001).

This anonymous illustration from Placcius' book became a blueprint for the production of other, more rigorously engineered index cabinets. One found its way into the possession of Gottfried Wilhelm Leibniz, the German mathematician, philosopher, historian and librarian, also known for his work on the art of combinatorics. This personal cabinet inspired Leibniz to work on a large-scale library cataloging system. At the time,

books belonging to a library were typically placed on shelves in no particular order, or only according to a very basic denominator, such as the name of the author. Krajewski reminds us that chance and random encounters with books, strolling through the aisles of libraries, were also common modes of browsing and gaining knowledge, before they were organized in accordance with complex classification systems (Krajewski, 2011, p.32). The eighteenth century marks the time when the organization of knowledge migrated from bound pages of books and catalogs to loosely compiled, individual index cards, enabling multiple ways of navigating a collection of books. Simultaneously, however, this moment can be seen as initiating a more rigorous management of knowledge and collective memory, a more disciplined control over their production, rationalization, systematization, and dissemination. It was also around that time that, as Krajewski argues, "the library becomes a bearer of capital, a data bank, lending information as if it were credit" (ibid., p.24).

The efficiency that came with the invention of standardized index systems was believed to finally complete the objectives Gessner set forth in his Bibliotheca Universalis; this time, however, on a far more unprecedented scale. Among the projects aiming at capturing the totality of knowledge and creating a "gigantic," "universal," and "complete" record of the world's knowledge, one can certainly include Henri La Fointaine and Paul Otlet's work on *Repertoire Bibliographique Universel*. This long-term enterprise initiated at the end of the nineteenth century was a collection of index cards that contained facts about the world, with references to the literature available at the time. From about 400,000 entries in 1895, the Repertory reached about twelve million at the time of WWI (in Boyd Rayward, 1990, p.227). The authors saw the fragmentation of the written knowledge into synthesized snippets of information as, if not the only method, then certainly the most efficient way of coping with what we could now consider a forerunner to the big data phenomenon. While initially the copies of index cards from the central repertory were sent directly via hard mail to those who had submitted a query, the inventors' ultimate dream was to establish a network of these devices to span the major cities around the world, making the circulation of knowledge much more efficient. These regularly updated hubs were envisioned as egalitarian, freely accessible centers of knowledge, open to all. Repertoire Bibliographique Universel inspired a range of other inventions, imagined as nodes of this new, globally unified ecology of knowledge. Such was, for instance, *Mondothèque* (Fig. 9.2), a personal archiving station and an extension of earlier wooden cabinets, now enriched with the new media of the day, such as photography, telephone, gramophone, and microfilm. This hypothetical, hybrid media archive served as a link generator, working desk, file catalog, and communication and broadcasting device. Benefiting from the connection to the network, it was designed to let the user not only organize his/her own mediated experiences and

memory, but also to compile a customized repository of information acquired from a network of similar devices. Disturbed by WWII, this vision could not be turned into material reality. After the war, like Repertoire Bibliographique Universel, Mondothèque never again received attention to enable its development from a technical sketch to a fully functioning device. On the contrary, during the years following the war, the positivist thinking that certainly lay behind this technological endeavor was contested, inevitably leading to a gradual decrease in funding opportunities and its ultimate discontinuation.[60]

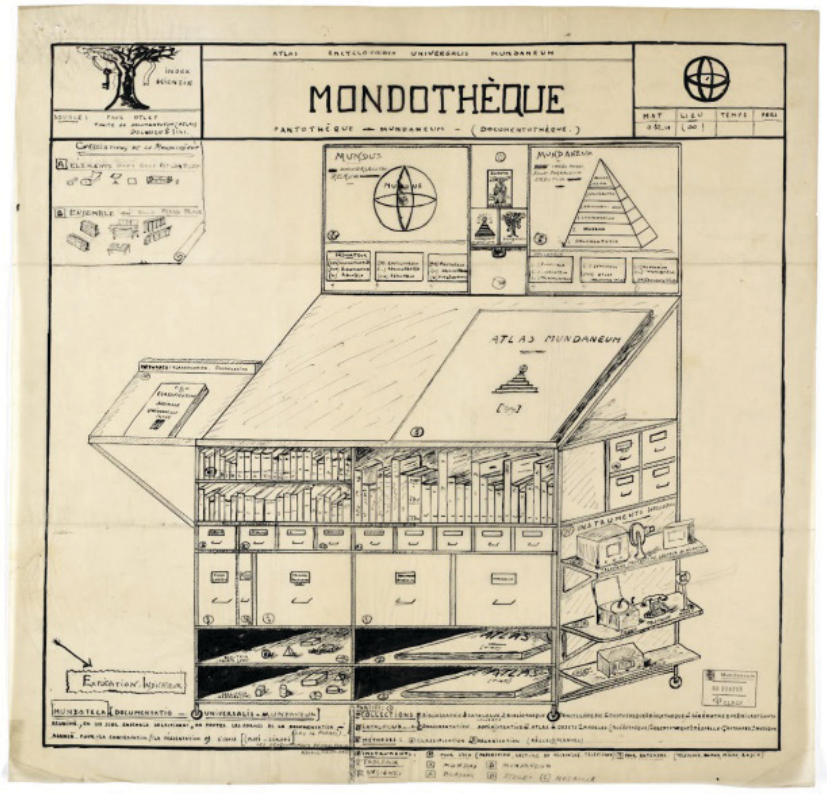


Figure 9.2: Paul Otlet's vision of Mondothèque, a personal multimedia station for organizing and processing personal information. Source: Mundaneum/Wikimedia Commons.

Not without some controversy, recent years have witnessed a wider recognition of Otlet's legacy. Some years ago seen as a foundation for information science (Boyd Rayward, 1975) and a conceptual prototype of digital search engine (van den Heuvel and Boyd Rayward, 2011), Otlet's

60 The objectives of Repertoire Bibliographique Universel, and Mondotheque in particular, did not entirely vanish, and can be recognized in Memex, a personal archival station designed by Vannevar Bush in the US after WWII.

invention was recently endorsed by Google. Google has pointed out parallels not only between the pre-digital mechanisms of indexing and their own advanced browsing algorithms, but perhaps more importantly (and controversially), the universalist and democratic motivations driving the two enterprises. After investing in Otlet's archive at the Mundaneum in Mons, Belgium Google began referring to it as "the great ancestor of Google" and "Google on paper." Through a purchase of rights to his vulnerable heritage, Otlet, known for his pacifist mindset, became somewhat artificially inserted into the history of Google, and subsequently used in a campaign to promote the image of the corporation as the greatest proponent of democratic access to knowledge.[61]

Paper Machines, Haunting Specters, and Creative Media Devices

After becoming a norm in structuring and organizing knowledge across libraries and archival institutions, indexing cabinets were subsequently endorsed in office environments. In what served as a promotional booklet and the first handbook on modern filing cabinets and techniques of organizing, classifying, and retrieving information, the biggest producer of such fixtures at the time, the Yawman and Erbe Manufacturing Company of Rochester New York, highlighted the devices' growing indispensability in the modern work-space (Yawman and Erbe Mfg. Co., 1920). Besides being presented as instruments guaranteeing unprecedented productivity and efficiency in tackling the growth of administrative challenges, index cabinets were promoted as essential tools for the modern businessman. It was stressed that filing cabinet know-how needed to be acquired as a basic step in future workers' education.

Beyond work-spaces, index cards and filing cabinets soon entered private houses and everyday life. Spieker notes how Le Corbusier envisaged filing cabinets as constituent parts of a household, a modern "living machine" organized around the pursuit of comfort and pleasure. For Le Corbusier, filing cabinets were chiefly devices where memories, with their "whole poetic of the past," could be concealed and kept at distance, saving "energy for the pursuit of the beautiful" and providing mental space where one could "formulate our most fundamental desires"(Le Corbusier, 1987, pp.71-72). However, expanding from work environments to private homes, index cabinets effectively protracted the workings of the "heroic, hypermale, hyperrational" modernist ideology built on the glorification of productivity and managerial efficiency into the dynamics of people's everyday lives. As Spieker concludes "by saving us time, the

61 This controversial move has been addressed by a range of media scholars and activists concerned with open access, such as the Constant, Association for Art and Media (as this subject exceeds the scope of this thesis, see Constant, n.d.)

card index and the filing cabinet allow us to focus on desires from which they aim to liberate us at the same time" (Spieker, 2008, p.103). Echoes of the rhetoric built on the belief in technologies of rational organization of memory and everyday life at the beginning of the twentieth century can be recognized in discussions on technologies today; especially in debates on smart homes, the Internet of Things, and the Quantified Self, when decision-making and responsibility for everyday actions are increasingly transferred to automated, technical infrastructures, a condition crudely described by some as an ignorant surrendering to the system in return for convenience (Mihai Nadin in Simanowski, 2016, p.196).

While affecting work and domestic realities, in the hands of artists same kinds of "paper machines" became the subject of aesthetic critique, subversion, and exploration, to often opposite ends. For the Surrealists they represented "haunting specters rather than models for the reasonable organization of life" (Spieker, 2008, p.103). Artistic activities, especially among avant-garde circles, often revolved around the bureaucratization of everyday life, and tended to incorporate material infrastructures, such as archival cabinets, index cards, folders, piles of documents, stamps, typewriters etc. For example, the artistic appropriations of the Dadaists and Surrealists aimed to disrupt dominant discursive correspondences imposed by generic index and filing cabinets by creatively devising alternative and highly idiosyncratic ways of classifying thoughts and memories. Their intention was to establish unprecedented connections between cards hosted in the cabinet, releasing knowledge, creation, and memory recall from the regime of dominant classifications and biases. Artistic endeavors such as Marcel Duchamp's chance-generated index systems for grouping snippets of information can be seen as forms of poetic disobedience amid the rationalization and imposition of rigid, mechanical formulas onto personal memory and everyday life practices. In Joseph August Lux's terms, such attempts to deliberately re-purpose technology of rationalization can be seen as a "weapon" against such a premise; a non-compliant attitude to a device is capable of questioning the disciplinary forces written into the technology and re-articulating its function to reveal its para-archival potential. This means recording not what is preconditioned, but rather hidden orders, unconscious rhythms, and peripheral patterns of modernity.

In the following decades of the twentieth century, index and filing cabinets began losing their relevance, gradually being replaced by other technologies, such as mechanized tabulating and computing machines. However, some spheres in which pre-digital index cabinets retained their mnemotechnical dimension are creative literary practices. Twentieth-century writers used customized index cabinets as both memory aids and generative devices to enhance creative thinking and generate new meanings. Among them, perhaps, the best known examples are the techniques developed by George Perec and Roland Barthes. The use (or de-

liberate misuse) of the index cabinet by the latter has been thoroughly discussed as an example of a creative memory aid (Krapp, 2006) and a creative media device, not just an archival device, but technology of invention (Wilken, 2010). The persistent use of obsolete index cabinets, as in the case of Barthes, might be seen to account for the devices' peculiar capacity to hold a condition for deeper perceptiveness, synchrony with the pace of private life, and the degree of reclusiveness and removal from society (required for the kind of work to which he was committed), and yet the possibility to generate dynamic and open-ended new meanings. On the other hand, these creative uses of index cabinets among writers and intellectuals inevitably remind us that these material facilitators of the art of excerpting historically stem from privileged, literate groups of people with access to education and knowledge.

The Fragmentarium as a Post-digital Practice

While Wilken described unconventional uses of index cabinets several decades ago in terms of pre-digital creative media practices (Wilken, 2010), today, in times when ubiquitous, digital technologies have become an increasingly normalized layer of day-to-day life, might a return to such an organizing device be considered in terms of a post-digital creative media practice?

Several years before the proliferation of smartphones, omnipresent computing, and the normalization of pervasive network media, Kim Cascone asserted that "the revolutionary period of the digital information age has surely passed. The tendrils of digital technology have in some way touched everyone" (Cascone, 2000). He used the term post-digital to describe this condition. Florian Cramer (2016) explains the post-digital in two ways. Firstly, it indicates a period when our fascination for digital systems and gadgets has become historical (we are no longer surprised or fascinated by digital technologies – we simply take them for granted). Secondly, he describes it as a "contemporary disenchantment with digital information systems and media gadgets,"prompted, for instance, by the Snowden revelation (ibid., no pagination). This second, more critical articulation of the term also prompts reflection on the material dimension of digital technologies. While for some, "post-digital" implies quotidian, increasingly imperceptible operations that we take for granted, for others it suggests something highly visible and tangible, such as the e-waste in under-developed countries (this explanation of the post-digital was often proposed during Transmediale in 2015, where several discussants pointed out the socio-material implications of both functional and dysfunctional digital technologies).

Overall, as Cramer has pointed out, the post-digital should not be seen in terms of a linear progression where post- is positioned against what it proceeds. Rather, the notion of the post-digital resembles such notions as

post-punk or post-feminism. In this sense, the prefix in post-digital does not imply a radical departure from the digital, but a constructive reflection on digital-media landscapes, enhanced by a critical acknowledgment of the pitfalls and failures that have occurred during their transformations of recent years. In this sense, Cramer suggests that the post-digital condition, in some instances, might be even seen as "a post-apocalyptic one: the state of affairs after the initial upheaval caused by the computerization and global digital networking of communication, technical infrastructures, markets and geopolitics" (2016, no pagination). If discussions on digital technologies have, until recently, often concentrated on positive narratives framing the emergence of digital culture, in terms of a step toward a more participatory, democratic, and horizontal organization of social and cultural life, the post-digital evaluates these postulates by also taking into account the disappointments, failures, glitches, deficiencies, and by-products, or what, with reference to Walter Benjamin, we might perhaps call the "ruins" of visions and dreams not entirely fulfilled as expected, and which, in some cases, have mutated into their opposites, establishing new aesthetics and experiences. One might say that a post-digital perspective allows us to see digital technologies or digital culture as neither democratic nor colonized territories (or one succeeding the other), but rather intertwined, both operating simultaneously, or one being inextricably dependent on the other.

Another important explication of the post-digital comes from the wide realm of the media arts. From this perspective, the post-digital is a situation in which the recent years of immersion in computational and digital culture (and the acknowledgment of both their pros and cons) is followed by a return to a more tactile relationship with the world, without entirely discarding digital technologies. In this sense, a post-digital work might question our reliance on digital technologies as most stable and durable media, through regenerating, re-conceptualizing, and reapplying non-digital ones (Ludovico, 2012, 2015). Art forms or cultural productions known as "mixed media reality" or "hybrid media," in which the digital and the analog are deliberately enmeshed, or in which the digital is converted into the non-digital in an anticipatory gesture, overcoming the inevitable obsolescence of the digital in the future, are other practical articulations of the term post-digital in the media arts. In this sense, the post-digital interrogates the succession of technology, and in so doing, forges an alliance with archaeological modes of inquiry into media histories.

The concept of the post-digital has not eluded appropriation by capitalist consumer culture, more specifically, the design, advertising, and consulting industries. Within these domains, the discussion on the post-digital seems to lack critical depth (Lund, 2015). The design industry has essentially integrated the post-digital as a consumer trend targeted at "digital natives" bored with the omnipresence of screen devices and

hence easily attracted by simple, material objects and manual gestures, all of which seem equipped with "magical" properties (Davies, 2009). The retro-aesthetic has for some years flooded the market, instigating nostalgic comebacks of pre-digital media and technologies like vinyl records, cassettes, and Polaroid cameras, to name only a few. In tracing the trajectory of the post-digital in design, Cornelia Lund indicates its mere affirmation.

Much as how, in post-industrial times, we have less foregone than embraced the consequences of industrialization, she suggests that in the post-digital era, the design industry has not reflected on the consequences of the digital, but simply refined the market to meet the challenges raised by digitization (Lund, 2015, p.6). Much in line with this observation, Alessandro Ludovico (2015) points at several instances of this affirmation, appealing to what he calls the "vanity" of digital consumers. An example here might be a range of services and apps enabling "webprinting." There are several services on the market (such as the nearly identical Bookapp, Tweetbook or TweetBookz) offering to "archive your Twitter feed into a beautifully printed and bound book." To this direct example of what might be called a marketization (and stimulation) of people's sentimental perception of the pre-digital, I would add post-digital services that do not directly materialize the digital (physical print of digital content), but, in a broader sense, attempt to reconstruct, repackage, and resell certain qualities of living in pre-digital times. Apart from instant photo-filters putting layers of glitches and random flaws onto a digitally constructed image, one finds a range of mobile apps that algorithmically simulate analog aesthetics, ambiguity, uncertainty, and serendipity, in different ways and to different ends (for example, mobile apps that confuse one's orientation and compute a sense of being lost in urban space, such as *Derive*, or also more experimental projects such as *Delete by Haiku*. The latter attempts to restore the meaning of selectiveness and forgetting by turning the act of deleting personal digital data from a mobile phone into a synthesized poem).[62]

Keeping in mind these various uses and abuses of the term post-digital (which, as Cramer suggests, "sucks but is useful"), it is important not to see it as signifying another stage in the trajectory of technological development, naturally following the digital revolution; nor as a radical renunciation of the legacy of the "digital revolution." In this thesis I see the post-digital as a reflective and critical concept suggesting that we have all been affected by the digital, and the need arises to (re-)harness and (re-)invest our attentive, critical capacities to strategically (re-)compose our everyday lives with technologies as such. Thus, I approach the term as inspiring, or even provoking us to reflect upon capture culture on a small scale and in relation to individual decisions and motivations for using

62 Source: http://www.mobilelifecentre.org/content/delete-haiku, accessed: 16.05.2017.

technologies. The post-digital as practice can be seen as a constructive processing of a disenchantment with the "go-all-digital" mnemotechnological practices, composing alternative, parallel media-technology milieux and configuring relations between digital and non-digital technologies and techniques in everyday life. In the following sections, I approach the post-digital as an inventive method in which continued, hands-on work with media technologies of capture and archiving helps trigger further reflection on capture culture, as well as speculation on possible departures from mainstream practices toward alternate modes of para-archiving. Overall, the strong focus on materiality, performativity, temporality and media technological hybridity seem to allow us to establish a link between para-archiving and the post-digital, which will be further explored in this chapter.

Regarding my motivation, I perceive the fragmentarium as primarily a creative media project involving steady organization and preservation, but also open-ended experimentation with digital and non-digital products of my ongoing para-archival projects. The device is at once a work station and repository, a process and artifact, or a bundle of intertwined media-technology processes and artifacts. In a technical sense, the fragmentarium is a wooden cabinet holding a selection of products from the various pieces of the ongoing project (Figs. 9.3-9.6). It is a direct physical transposition of the digital framework. Each box in the digital structure, inspired by a physical, square-shaped notebook, is materialized into a drawer. Files selected from the digital database of the on-going project (a scan of a collage, photograph, video clip, sound recording, GPS visualization) are transposed onto paper cards of 14 cm width and height. For example, video files are represented by a single initial frame or a sequence thereof. One-minute field recordings from the minuting project are represented as visual graphs of the volume, GPS records of selected daily itineraries, as explained in the previous section, are converted into simple visual traces and intentionally stripped of any geographical meta data.

The wooden cabinet was constructed in collaboration with carpentry students at the technical college in Żywiec, a small town in the south of Poland, where part of my family comes from. I continually develop various parts of the cabinet different times and at irregular intervals, depending on the rhythms of other day-to-day activities (and also visits to my family house, where it is presently located). Selected cards are printed personally or with help of a printing house. To ensure the longevity of the cards, I work with acid-free paper and pigment-based ink, which allegedly extends the life of the material by about 300 and 100 years, respectively. The name fragmentarium, quite literally, a space for fragments (the Latin ending -ium indicates a setting where some activity takes place, in this case the organization of fragments from my para-archival work). An important conceptual inspiration for the name comes from the term lapi-

Figure 9.3: Fragmentarium, a hybrid media archival cabinet and working station

Figure 9.4, 9.5, 9.6:
Details of the fragmentarium

darium, discovered indirectly via Polish reporter and journalist Ryszard Kapuscinski's fragments from his diary written between 1980 and 2006, later published under the same title. Lapidarium (from the Latin iapis, meaning stone), is a place for gathered fragments of historical monuments, architectural pieces such as columns and tombstones. Lapidaria are usually set outside museums and memory institutions. These eclectic fragments are often of unspecified historical origin and no description. They cannot be easily fitted into indoor collections, typically governed by specific curatorial rules and logic. Kapuscinski explained the term as follows:

> A Lapidarium is a place (a city square, a castle courtyard, a patio in a museum) containing a collection of stones, pieces of sculpture and fragments of buildings — here a bit of a torso or a hand, there a piece of a cornice or a column, in a word, parts of a nonexistent (already, still, ever) whole, posing the problem of what to do with them. Maybe they will remain as testimony of the past, as a trace of trials, as signs? Or maybe in our world, already so outgrown, so enormous, and ever more chaotic and difficult to grasp, to order, everything is moving toward a great collage, toward a loose collection of fragments, and so — toward a lapidarium? (Kapuscinski, 2007).

This liminal quality, simultaneously fitting and not, organized and chaotic, in and out, at once comprehensive and ambiguous, treasure and trash, at the physical boundaries of a memory institution, and yet beyond the scope and capacity of its organizing and curating forces, spoke to how I thought of the fragmentarium. In sum, just like a lapidarium, the fragmentarium is a place where different materialities and temporalities neighbor each other, calm and yet resistant to be fit into a single unifying logic.

Ambling Between the Analog and Digital

As said above, the content of the archive comprise essentially two major media: paper cards and digital files available via a network accessible in the vicinity of the cabinet.

There is no strict criteria for selecting which records from the entirety of the on-going practices are to become transposed into index cards. However, as mentioned in the earlier chapter I tend to prioritize observations and experiences which I intuitively feel might carry some broader meaning and reflection on contemporary everyday life, beyond merely my personal memory, feelings and concerns. For example, the third drawer dedicated to the sound-excerpting practice of minuting contains a selection of such sonic moments that might potentially invoke a recollection of concrete places or local phenomenon (human voices reverberating at the Pantheon in Rome, the cracking of the ice at the water-lock in Stock-

holm, a hum amassed of numerous conversations at flea market in the Jewish district in Kraków, the rushing water at the commemoration site at ground zero in New York), specific events (catholic procession in Boston's North End, prayers by the Wailing Wall in Jerusalem, political unrest on the streets of Istanbul) acoustic phenomena symptomatic to contemporary urban spaces (steady hitting of a pneumatic hammer at a construction site, rhythmic ringing of a traffic signal), or instances of specific confluences of human and non-human actors whose presence might not be visible but gets revealed through the sound (the high pitch signal of a garbage truck taking over birds' chirping characterized by a similar pitch).

Figure 9.7: A visual trace from one minute audio recording nr. 2712 taken at a former airport Tempelhof in Berlin, June 2016.

For example, the card presented above comes from a visit to Berlin in May 2016 (Fig. 9.7). The graph, which is a result of converting the sound into an image through Ffmpeg, a free software that produces libraries and programs for handling multimedia data, represents the volume level of a one-minute recording taken during a stroll along the airstrip of Berlin Tempelhof Airport, no longer in use. While it certainly holds a strong personal significance, evoking specific details of my visit, this sonic memory is also a wider-scale observation. As the annotation on the back reveals, my impression at the time revolved around the forces of nature conquering this industrial and military setting, which was reflected in the sonic aura of the site. The noise produced by jet engines has been replaced by sounds of a species of birds that migrates here and uses the site for nesting. Upon viewing this card again, I might append what is written with

another association inspired by a conversation with an acquaintance several weeks after that walk. This association relates to the site's current use as a transitory shelter for refugees, whose migratory patterns, unlike the birds', are subject to regulations imposed by other humans.

Another example of a card with an annotation is a one-minute recording from San Francisco, made while walking down the street in a popular tourist area. The sound of visitors making it to a famous cable car combines with a melancholic and fragmented tune played on harmonica by a local Vietnam-war veteran. The annotation accompanying this recording revolves around the multiple temporalities that converge in the sonic aura of that moment: the rush of the tourists, the regular cycle of the cable car marking its departure with the ding of a bell, and the persistent presence of a Vietnam-war veteran, for some, a difficult remnant of the darker side of recent American history. (Now while reading through this card, I might add few extra lines of observations from my recent visit to Belgrade, and an encounter with the head of an independent veterans' association. This thought revolves around the authorities' indifference toward veterans, seen in some contexts as troubling evidence of the country's unjustifiable involvement in the genocide that took place twenty-five years ago).

As discussed in the previous chapter and the section on minuting, not all of the sounds are accompanied by such reflections. Similarly, not all of the sounds transposed to physical cards are furnished with written impressions. Though carefully selected from several thousand field recordings made so far, in some cases, the link to the place or event they were recorded is not as clear as in the above cases. In such instances, despite evincing no association with a particular space or event, the sonic qualities might be intriguing enough to make me include the recording in the repository. While working primarily on an affective level, such unaffiliated sounds might stimulate unconstrained associations, rather than stirring an interpretation, leading to a more accurate recall.

The two above examples point at what can be seen as two, yet interrelated functions of the fragmentarium. On the one hand, it is a para-archival repository that promises a high degree of stability for mediated memories. On the other (a closely related feature), it is a dynamic work station, providing conditions for the ongoing work of tending to mediated memory, reflecting on memories' wider significance, and thus consciously curating what we might call a post-digital legacy.

As indicated earlier, besides having an archival potential, cards that make it into the cabinet also play the role of an interface. The hand stamp on the flip side and the accompanying annotation (the name of the practice and number of the entry) indicate the exact location of the corresponding digital content in the database integrated into the cabinet (Fig. 9.8).

Figure 9.8: A front and back of the index card representing one of the audio recordings from the practice of minuting.

The digital database, which only slightly differs structurally and stylistically from the framework outlined in the previous section, is hosted on a memory drive incorporated into a small router, a networking device enabling the wireless transmission of data (Fig. 9.9). The router is embedded in one of the notebooks placed in the cabinet and powered by a rechargeable battery (or plugged directly to the AC socket). The router provides access to the digital database through an open network named *Ongoing Project*. It appears on the list of available networks. The network is open and everyone with a wireless digital device, such as tablet, smartphone, or laptop, can easily connect to it, provided that he/she is within the vicinity of the cabinet. The signal from the networking device covers the space of a medium-size apartment. In order to connect to the ongoing project network, one must disconnect from all other networks. After

opening the web-browser and typing the name of any website, one is redirected to the ongoing project landing page, and is temporarily disconnected from the internet.[63] From then on, one can only browse the archive. Since the log-file of the offline network system is disabled, browsing the content is anonymous and leaves no trace.

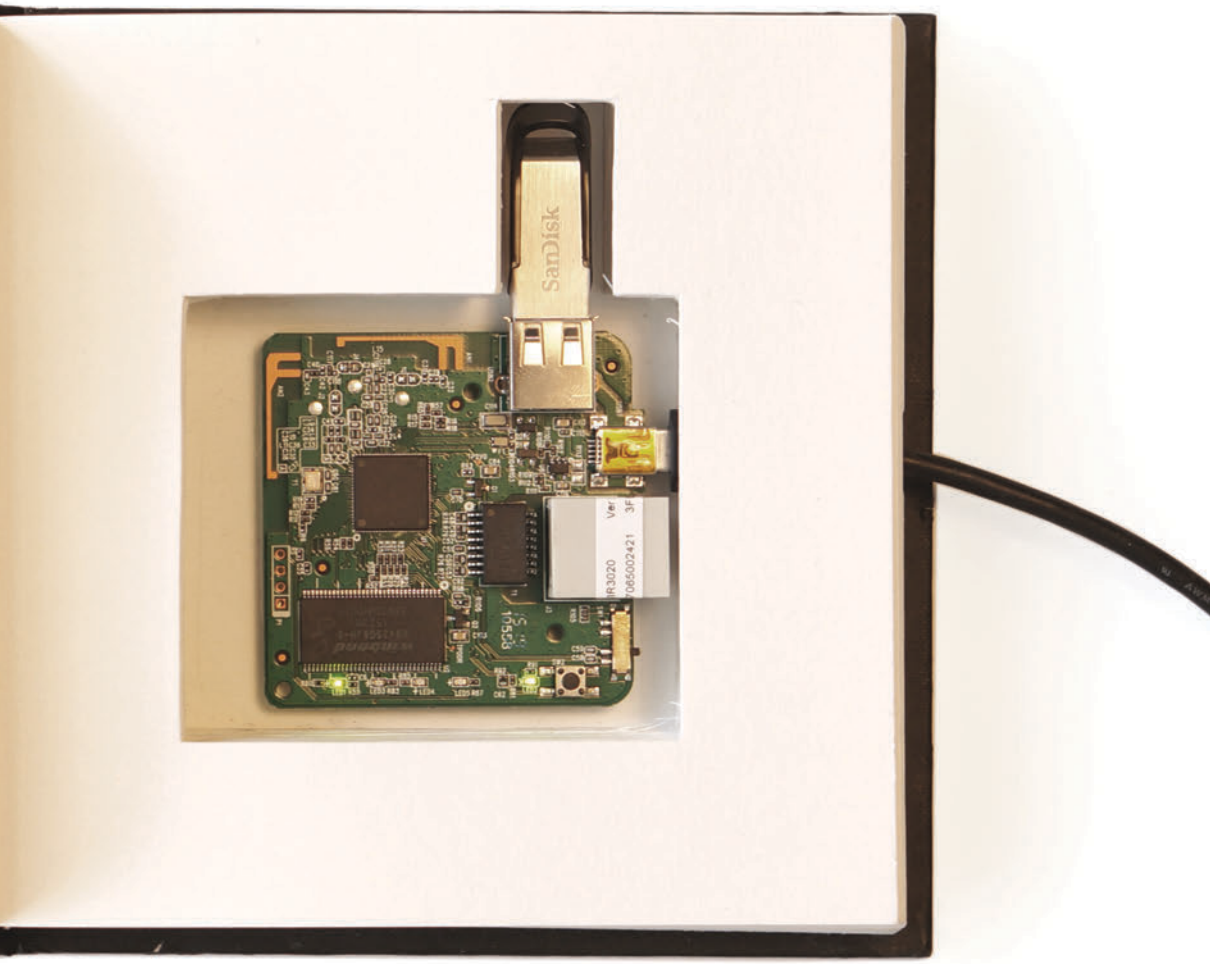
This post-digital dynamic, a composition of relations between the non-digital and digital, is afforded due to *PirateBox*, a do-it-yourself anonymous offline storage, file-sharing and communications system composed of open source software and inexpensive off-the-shelf hardware.[64] PirateBox is part of a growing culture of shadow archiving infrastructures developed with to craft alternative and autonomous solutions for storing and anonymously sharing digital content. There is a growing number of similar projects building on PirateBox, such as Library Box or FreedomBox open source, portable digital file storage and distribution tools for those seeking to operate off the grid. Another example of such a para-archival development, often compared to PirateBox, is Aram Barholl's USB dead drop project. This is a network of USB memory sticks, wall-mounted in various public spaces, which people can directly plug into their computers to share and download content previously uploaded by others. This is an example of a simple but powerful response to the lack of anonymity in network society, a tactical reaction to the pervasive control of and monopoly over personal data aggregation and circulation by large corporations. Alessandro Ludovico describes this culture as based on a peer-to-peer model of distributed archiving and "a free and shared model of preserving culture, as opposed to both the centralized bureaucratic public institution on one hand, and the equally centralized, quick and efficient commercial corporation on the other" (2012, p.128). Tackling both the corporate controlled digital cloud culture and bureaucratic public institutions, PirateBox offers a cheaper alternative, allowing people to construct independent infrastructures for anonymous communication, storage, exchange, and preservation of files.

To some extent an artistic provocation, PirateBox, as the official website suggests, is also used to facilitate political and cultural actions; besides entering artistic contexts (studios, exhibition halls, hackathons, etc.), PirateBox has also been quite widely used as an alternative archiving solution by teachers, librarians, writers, and also musicians (in the last case not only to keep music independent from commercial cloud services, but also to allow it to be shared directly with their audiences on various occasions).

63 Ideally, the ongoing project network should be initiated automatically upon connection. However, mobile devices often prevent this automatic redirection, to avoid the involuntary download of the unsecured content.

64 PirateBox was founded in 2011 by David Darts, a professor at the Steinhardt School of Culture, Education and Human Development at New York University, and its development has been maintained primarily by Matthias Strubel, programmer and developer.

Figure 9.9: The repurposed router embedded in the notebook hosting the digital archive available in the vicinity of the fragmentarium.


SanDisk

In order to configure PirateBox on a router, it suffices to follow the simple steps described in the manual online. The process requires basic technical and programming skills and results in the installment of an alternative operating system called OpenWrt. This open-source programming environment allows one to reconfigure the device's firmware and default settings installed by the vendor, and thus to customize the device, as the website says, "in ways never envisioned."[65] From that point, one can install a simple interface through which the network can be set up to function as an access point to the archive. It also lets one communicate with other users connected to the network at the time, and to upload files onto an integrated USB memory stick. My intervention went one step further: it involved reconfiguring the landing page so that it connects to the index page of my digital database framework, while retaining the possibility to upload and share files.

In the fragmentarium the router is released from its function as a passive and invisible internet provider. Through a simple repurposing of its software, and an installment of the "local code," to use Felicity Colman's term (2008), the router is alternately purposed, facilitating a significantly different mode of engagement with the digital content. Instead of functioning as a regular internet access point, it transforms to acquire the opposite function: it deliberately disconnects one from the distant, imperceptible data clouds, reconnecting with what is in the near proximity: the content of the archive embedded in the physical device. This voluntary disconnectedness and recall of the successively obliterated necessity to be physically present at a site in order to engage with the archive, while keeping content in a state of a relative protection from data surveillance, also improves conditions for a more reclusive, focused, and uninterrupted experience, quite different from engaging with the display of mediated memories through popular, cloud-based, and network dependent services (consider the disruptions caused by automatically launched adds, alerts from other services, or simply the ever-present possibility to switch one's attention to another piece of information).

In the fragmentarium, externalized memory gets broken into several components: the paper card with a visual mark (for example a photograph, drawing, or graph), possibly a contextual annotation on the flip side, which can be successively supplemented whenever revisiting the trace and the digital file to which the card directs the reader (for example, an audio recording, video, photograph, or a scanned collage). This is where the hybrid aspect of the fragmentarium is manifested quite literally. Yet, hybridity goes beyond these material aspects of the content. As demonstrated above, it can also be seen to be expressed in the versatility of modes of interacting with the content (e.g. consulting the paper card, annotating it, using a mobile device to access the digital database).

65 Source: https://openwrt.org/, accessed: 12.07.2017.

This breaking of the memory unit down into several types of materialities and temporalities introduces an extra grade of effort, difficulty, and complexity (in relation to both constructing and accessing content). Echoing the previously discussed multi-phase and decelerated approach to constructing a digital trace (discussed in the last chapter, especially in relation to crafting the digital framework), this elaborate approach might also exacerbate feelings of frustration and impatience (again, in both accessing the archived material and contributing new content). Yet as in that previous discussion, the acceptance of this resistivity and difficulty can be seen to facilitate reflection of the excess of mediated memories being produced, and by implication, their significance and function in one's life (and beyond). Thus, I like to see this diffraction of a memory unit into several interconnected strata in terms of constructing a lasting material state that encourages operating at a slower speed; at a different pace than the popular services for mediating records of everyday life (Figs. 9.10, 9.11).

As Pamela Lee suggests in her piece on "the ethics of slowness" (2004), slowness:

> Facilitates a process of imagination impossible for the observer in real time or accelerated time to grasp. Slowness reveals the fissures and gaps within duration that may otherwise appear without incident (2004, p.121).

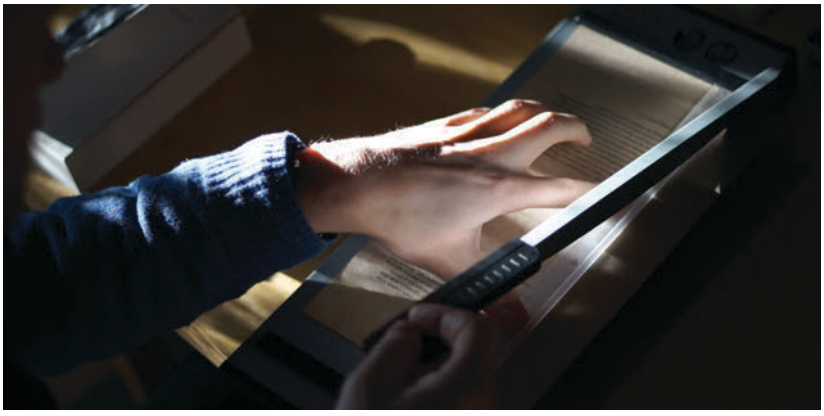


Figure 9.10: Making of an index card.

The paragraph below from my notebook, generated on 07.04.2016 while working on some of the cards for the cabinet. It contains a similar observation:

> I am cutting my prints, making them equal in size. I use a cheap paper-cutter bought for 200 SEK at Kjell and Company [a Swedish store that sells electronics and home and office supplies]. It serves its purpose perfectly. The ruler on top is exactly 14 cm wide, which is the width of the card I am using in my cabinet.

> I have several hundred cuts to make, but the prospect of the rather menial work ahead of me is not daunting. I actually enjoy it. I would say that the repetitiveness of the manual work allows me to concentrate more. I feel connected to and disconnected from what I am doing at the same time. How so? I feel like I almost entirely control the process, yet as it does not require much intellectual attention, I can think of something else. Processing the cards allows me to actually connect with what they represent and think of the process that led to them. This making of the cards reminds me a bit of a process of developing analog film and then producing the photographs. When you look at the image that slowly appears, you feel as if the memory was gradually returning. You reconnect with it as it gradually appears on the photographic paper.

Despite its nostalgic tone, the metaphor of analog photography, I would argue, is quite telling here. It highlights a productive role of an extended period of time needed to establish (or re-establish) a connection with one's record, in other words, the time necessary to take care of one's memory practice. In her critique of network technologies, Claire Colebrook has written about the lack of conditions for such "delay" moments, which she asserts are a prerequisite for a deeper mode of engagement in the world and construction of subjectivity (Colebrook, 2014). This delay, she argues, establishing an implicit link with Stiegler, has been replaced by "a single circuit of relay," an ongoing circulation of an affective glut (ibid., p.84). She argues that bombardment with ever-new intensities has been so magnified by media technologies that space and time for engaging in in-depth decoding, and consequently forming a subjective relationship to the world, is radically shrunk. In the context of mnemotechnologies, when such a sensory bombardment stops or is delayed, this naturalized state of continuous exposure to sensory data calls for even more input:

> What appears to be operating today is a high degree of digital distinction and accuracy, precluding the need for interpretive delays. Digital culture would include not only computer digitalization in the narrow sense, but a culture of speeds whereby stimulus circulates without translation or transfer, where there is a single circuit of relay. This would begin to explain why attention deficit is actually the need for more stimulus—precisely because there is increasingly less delay or depth that requires decoding. We are at one and the same time constantly bombarded with new intensities, and yet the simplicity of the codings enables quick consumption, and then the demand for more (Colebrook, 2014, p.78).

In light of these thoughts, I like to see the fragmentarium as a deliberate construction and cultivation of a fissure, an intentional broadening of a moment of delay in the accelerated rush of memory production and consumption pervading in capture culture. What allows this delay and deceleration is the deliberate hybridization of media technologies and

techniques incorporated into the process. The production of a card, for instance, happens across several different technologies. It might involve a scanner, computer software, printer, manually trimmed and cut paper at the end (Fig. 9.11). Simultaneously, the digital file is processed in several software tools, exported into a memory stick, and reinserted into the router. In other words, distributing the practice over various media characterized by differences in their material and durational qualities seems to help (re-)generate possibilities for attending more closely and attentively to the products of personal memory, as well as reflecting on their potential meaning beyond the scope of an individual life. In this light, the fragmentarium becomes something of a strainer that, due to its intentionally "protracted" nature, filters out the excess and disengages from participation in mainstream modes of capturing and consuming mediated memories as offered by the market.

Figure 9.11: Stages of making the index card including manual collaging, scanning, digital processing and print.

Although seemingly different, the acts of producing the index cards and programming the digital component are comparably labor-intensive. The manual work put into composing, printing, cutting, trimming, and labeling the index cards does not differ substantially from the slow, open-ended development of the offline network component. Thus, the process of programming and refining the code can, again, be likened to the act of handicraft and sculpting. In order to be tested and verified, every intervention into the re-purposed firmware of the device needs to be reset and reloaded, which takes up to several minutes. This long process resembles a long sequence of steps, back and forth, in and out, from the deep layer of the code to the experience and verification of the overall result and the functionality of the framework (as if one were approaching a sculpture, artifact or other hand-crafted object). The process seems indeterminate, never fully finished. Since it is irregular, occurring at different moments and in the gaps between other day-to-day activities, effort and time-commitment are also required to recall the series of interventions leading to the current state (such as through consulting the notes, either written by hand or embedded in the code as lines of text, subsequently commented on).

While working on the digital strata of the cabinet, I have regularly taken advantage of the PirateBox forum, another instance of what I earlier described as a digital guild. Besides its founders, numerous other contributors actively help each other with technical problems related to setting up an autonomous framework for storing and exchanging files. Thus, it is not only the limited range of programming skills, but also this reliance on the members of the community, and respect for the rhythm of their day-to-day lives, that make the process of developing the framework of indeterminate duration. It might take several days to receive an answer to a query that one cannot tackle alone.

This inevitable but constructive unhurried working pace corresponds to the overall ethics of slowness written into the ongoing project and aligns with its long-term focus and organic embeddedness in the currents of day-to-day life. In other words, like the para-archiving practices that make up the ongoing project, the creation of the digital component of the fragmentarium, responsible for hosting and organizing digital material, is not limited by a strict time schedule, nor the requirement to meet a specific deadline that radically determines or constrains the pace of the work.

This open-ended nature of the project, intentionally kept in the state of becoming, can certainly be seen as both an advantage and disadvantage. The advantage is that, not being rushed by any necessity to achieve a state of closure, the work can be performed at its own pace, following the dynamics of my para-archiving practices, as well as other currents of my everyday life. The disadvantage is in the fact that, while having no such clear limitations, this solitary work can easily overshadow other daily duties and make one at times unintentionally fall into the trap of continu-

ously perfecting one's work. This might mean occasionally getting bound to the computer screen, losing control over time spent in front of it, which means, paradoxically, acting against one of the important principles of this post-digital phase of the ongoing project, which is to delimit engagement with digital and network media, or, put differently, to balance it with a commitment to a non-digital, more manual kind of practice. As echoed in this thesis, Stiegler states that every technological device has the inherent potential to cause a whole range of effects, from toxic to beneficial. The fragmentarium is no exception here. This awareness has to be retained, so that the intentional detachment and reclusion from the pervasiveness of mnemotechnologies does not cause an unintentional detachment from other dimensions of personal, family and collective life

As seen here, work on the fragmentarium has, to a large extent, been a solitary endeavor, woven into the flow of my day-to-day life. However, as an extension of this practice, I have been simultaneously working on a mobile version, facilitating other ways of opening the para-archival practices up to other people and contexts, to practically and conceptually explore and inspire other modes of living, working, and thinking with capturing and archiving technologies. Given that the para-archival cabinet, as presented above, functioned exclusively as a stationary device for solitary work, reflection, and organization of hybrid media traces, the mobile version (while retaining these same functions) was also intended to play a more specific role as an inventive method in this research. Thus, below I describe and analyze a couple of ways of approaching the fragmentarium as a methodological instrument to address modes of adopting capturing and archiving technologies other than the dominant ones in capture culture.

In each case the mobile cabinet was used in a slightly different way; sometimes more literally, and at other times abstract and indirect. In dialog with other practitioners, the physical presence of the fragmentarium worked as a trigger to generate reflections on mainstream and minor modes of living with techne in capture culture. In the latter case it was not the cabinet as such, but a selected portion of its content, which is to say, one practice that inspired the development of a collective para-archival initiative.

9.1. The Fragmentarium as a Dialogical Device

The mobile version of the cabinet is a repurposed traveling case typically used for transporting musical instruments and technological equipment (Figs. 9.1.1-9.1.4). Inside, its structure is like the wooden cabinet and the digital framework. The drawers, here made of cardboard, contain a selection of index cards along with extra materials, such as snippets of newspapers (ready to be collated and scanned), results of various experiments with the collected material, such as prototypes of booklets, self-released

CDs with soundscape recordings, and occasional publications. The mobile version is much rougher and flimsier than the stationary cabinet, and weighing about twenty-three kilograms, it is only slightly lighter. It is constantly being transported, and much more susceptible to damage. This means each trip affects its appearance and stability, requiring regular repairs and renovations. Some repairs, such as the reattachment of a wheel that fell off while the cabinet was dragged along a cobblestone pavement, are made on the go. With no tools at hand, I would, for example, have to adjust my itinerary and find a local bicycle workshop. Considering the weight and size of the cabinet, each travel requires extra time and planning.

The cabinet slows down my movement or occasionally brings it to a halt. Because of its cumbersome weight, the noise the case makes while rolling, and how it attracts people's gazes (especially in the crowded pubic transport), one is continuously reminded of its presence. In these trips alone, these basic physical attributes, restored in this reverse-remediated archive, evoke several thoughts revolving around the mutations that memory practices have undergone on a material level alongside developments in digital and network technologies. The simple gesture of gripping the handle of the cabinet while rolling its weighty content restores a degree of connection to and control over digital memory practices and their products. The self-contained nature of this vehicle prompts thoughts on how digital memory is being deterritorialized and scattered spatially, horizontally and vertically, spanning enormous distances, bound to licensing fees, cell-phone plans, and complex systems of devices, servers, and internet access points. Light portable digital devices like smartphones are technically in close, almost intimate relationships with their owners, yet are mere interfaces, behind which heavy infrastructures operate at a distance, unperceived and uncomprehended. The user, meanwhile, is beguiled by the immediacy with which the devices react and respond to the needs of the moment. The necessity to occasionally repair the cabinet and the possibility to meddle with its physical structure at will also brings to mind the planned obsolescence of contemporary devices. This material deficiencies of the cabinet amplify a sense of the dwindling possibilities of self-repairing digital technologies; it highlights the ease with which technologies are presently replaced when they seem (technically and socially) incompatible with ever-changing standards.

With some exceptions, I have traveled primarily to people whom I knew to be committed to various aesthetic practices involving the documentation of everyday life. Sticking to the theme of this thesis, I was particularly interested in practitioners who combine digital and analog media to create their own constellations of media technologies and devise hybrid techniques for documenting various subsets of everyday life. My network of creative practitioners has been a primary source for finding dialog partners. Some of them were old acquaintances I met at various occasions,

and with whom I have remained in touch. In the context of this thesis I have seen them as "critical friends," which is to say, dialog partners offering reflection, critique, and feedback on the matter, seen in terms of their own work (Costa and Kallick, 1993). Others with whom I spoke to were suggested by these earlier acquaintances or encountered at different events that I attended while researching and writing this thesis. The conversations took place between late summer 2016 and early spring 2017.

Some of the dialog partners describe themselves as artists, while others engage in artistic practices on the side, alongside other activities and professional occupations. Without planning so in advance, in time I realized that the main medium that the dialog partners engaged with in their own work was quite different in each case. The range included painting, programming, drawing, photographing, sound-recording, writing, but also a unique combination of book-binding and programming. The majority of these practitioners have a rather ambivalent relationship with digital and network technologies. Several have deliberately withdrawn from or significantly limited their use of mainstream web services, social media, and smartphones. The variety of media through which they construct accounts of the world certainly influences their individual way of reading the fragmentarium, as well as their way of departing from it to speak of their own work and more broadly comment on technologies of capture today.

Each conversation had a semi-structured dynamics. It revolved around three main components, (i) a discussion of impressions that the content of the fragmentarium had invoked, (ii) more general set of observations about digital media and personal archiving in the context of capture culture (iii) as well as a reflection on one's own archiving practices in relation to the former points. However, as it occurred during the conversation, the strict division into these three sections has not been followed too closely. Discussions tended to move across these sites and subjects in a quite fluid way.

There emerged another layer to these encounters which was an exchange of actual traces from para-archival practices. It is at this moment that I added an extra drawer to the digital structure, enabling the upload of a digital record (sound, visual, text) from the practitioners' private repositories. This mixed-media archive compiled during conversations (in some cases including analog media, such as print-outs, books and catalogs) inspired a future exhibition, workshop, and publication of post-digital archives as a mode of disseminating this part of the research and opening it up further to a wider group of practitioners.[66]

65 Following a small exhibition at InterArts Center in Malmö in 13-19 September 2017, the self-published series of multi-modal contributions responding to the theme of post-digital archives is planned to be launched successively from November 2017.

Figure 9.1.1, 9.1.2, 9.1.3: The mobile version of the cabinet.

Figure 9.1.4: The mobile version of the fragmentarium as set up at Jenny Soep's workplace.

Figure 9.1.5: The mobile fragmentarium set up at Olle Essvik's workshop.

It would exceed the scope of this thesis to include a detailed analysis of each conversation. Instead, I am providing a set of key observations noted during selected dialogs, in which such aspects of capturing and archiving technologies and modes of living with them as materiality, performativity, and hybridity came to the fore. These observations will be followed by a concise reflection of the productivity of the method.

Modes of Access and Performativity

There were a few situations, especially towards the beginning of conversations or presentations, where the cabinet inspired confusion. This was either caused by my failure to introduce its role in a clear way, or the dialog partner's lack of deeper familiarity with my work (however, most of the practitioners with whom I spoke knew my work, or at least its basic premise). One dialog partner (a scholar unfamiliar with my work) only upon hearing me introduce the project and its concise, visual presentation immediately categorized the artifact as an artistic sculpture whose motivation like the historically pervasive, "masculine" ambition to erect a monument to oneself. The idiosyncratic structure and the appearance of the archival cabinet, which is certainly incompatible with how we typically regard personal archiving and memory today, made him describe the project as exclusive, undemocratic, and inaccessible, especially when compared to social media platforms, which, in his opinion, facilitate one of the basic human acts, which is sharing memories with others. After a longer conversation and explanation of the critical and reflective incentives of the project, this confusion dissolved and a more constructive conversation followed. In that conversation I had to underline that the cabinet had never been intended to be appreciated as an autonomous art-piece, nor was it constructed as a pedagogic instrument and literal instruction for approaching memory practices today. Nevertheless, this initial and rather curt reaction made me annotate at least two observations.

One observation, already outlined in several places in this thesis, was that in the context of today's ubiquitous capture and mediation, personal memory has turned into an entity that is expected to be unconditionally and immediately exposed and shared with the others (as in the superficial mantra of Egger's semi-fictional social media tycoon, Circle, who incessantly claims that "sharing is caring"). A second observation extends this first one. The normalization of total disclosure and sharing of everything, or, in other words, one's enslavement to this logic pervading the public opinion and vastly stimulated by technological corporations, makes individual attempts to resist or complicate this state (as in the case of my reverse remediation) appear not as partial and deliberate reclusiveness (or alternatively, controlled inclusiveness), as was my intention, but a product of exclusiveness. This incompatibility of one's intentions with the expectation of the majority satisfied with the dominant norm has

been expressed by Bauman more broadly in relation to the consumerist culture. Writing about the erosion of the aesthetic and ethic dimensions of the art of life Bauman defends the idea of a deliberate *nonparticipation* saying that:

> Despite all the joys and blissful moments it [an impoverished art of life in liquid modernity] promises and time and again delivers, quite a few people do not view this life as life that they themselves, given genuine liberty of choice, would wish to practice. It is often said of such people that they are indifferent if not downright hostile to freedom, or that have not yet grown up and matured enough to enjoy it. Which implies that their nonparticipation in the style of life dominant in the liquid-modern society of consumers tends to be explained by either ideologically aroused resentment of freedom or the inability to practice it (Bauman, 2008, p.138).

The encounter described above reveals something of the performative or even dramaturgical nature of the fragmentarium, in how it has not only been composed, assembled, and lived with, but also how it appears, is read and interacted with by others.

When visiting my dialog partners and installing the cabinet at their houses or workplaces, my intention was usually to avoid direct suggestions on how to go about exploring it. This lack of a prescribed way of navigating the archive was intentional, and allowed for a range of unexpected modes of engaging with the material, or as in one case, leaving the device unattended. As this person, Jenny Soep, a Stockholm-based illustrator explained, this was because of what she considered to be the cabinet's highly personal and precious nature; she needed my companionship to feel more comfortable in interacting with and interpreting its contents. Her relationship to the fragmentarium balanced between it being "a coffin," a "time capsule," and "a conversation piece." In other words, Jenny's approach the device seems to have accommodated three different modes of experiencing the content: as a dead artifact accounting for the past (a coffin), a temporarily stabilized account of the present awaiting future inspection and examination (a time capsule), and a trigger of observations, stories, and speculative associations requiring the physical presence of another being at the present moment to be activated (a conversation piece). Jenny's multiple ways of defining the fragmentarium can be seen to point to the device's processual, transitional, and elusive nature. What at first sight might seem to be a strict catalog of discrete events to be interacted with in a procedural way, given time and attention it transforms into a setting ready to accommodate multiple ways of performing (with) its content.

In the majority of the cases the overall ambiguous character and unspecified role of the fragmentarium was revealed. In order to be grasped, at least partly, interaction with the cabinet required extra time and com-

mitment, which for some was a real challenge due to other obligations and busy daily schedules. I suspect that some of those I held dialogs with and whom I knew rather well felt obliged to go through the cabinet's drawers with care. Others deliberately concentrated only on a selected practice, usually one that closely corresponded to their own interest or medium of preference. Some would start with and remain focused mostly on the digital component, while others would begin and stop at the analog part, without consulting the digital archive at all. These modes of engagement depended on the type of work performed by the dialog partners. For example, Soren Gauger, a writer and translator, was more keen on reading through the cards containing written snippets of comments, dreams, and short descriptions of people encountered on a day-to-day basis (scribbling), practices that others would find least interesting because of their more personal aura (compared to the other projects), and which for an outsider could, understandably, be hard to identify with. While Peter Cusack, a field recordist and sonic journalist whom I visited with the cabinet in his Berlin apartment, saw the fragmentarium as a form of an unconventional cartography due to his interest in creative methods of representing space, Soren sought subjective depth to reveal something about the way the author tends to perceive and reflect the surrounding world. Even the written accounts which Peter found highly subjective, for Soren lacked that kind of density and were described as bit too dry and factual. The dissonance between these two approaches to the content might point back at different premises organizing the ways these two practitioners attend to their own work. If for Soren text offers deeper possibilities than any other medium in terms of recording and expressing one's life, for Peter it is sound that holds potential to encapsulate what no other medium can. Peter expressed the superior role of sound in relation to visual representations in particular:

> Visual representations can not tell you how alive places feel. In Chernobyl, if you listen to the dawn chorus, the bird singing in the spring time it is phenomenally loud and very species-rich which tells you that Chernobyl has become very important wildlife zone rather than an exclusion zone. You won't get that from a photograph. You might get people talking about it, but to actually hear it even if it is a recording, gives you the strongest impression of what that really sounds like, what it really means.

As the contextual information about the individual entries, such as geographical location, is patchy and ambiguous, for Peter it is temporality that became the key stratum of the fragmentarium. Peter described the cards in terms of a gradually accumulating record of a life-time broken into discrete moments. Because of the absence of links between them, these moments can be reconfigured into any order and constellation, complicating the chances for a satisfactory interpretation. He underlined the fact that, in contrast to the cards, the digital structure provided him with a

much different and more sequential, chronological, and organized understanding of time. However, to make the personal archive more accessible to the external viewer (or posterity), he recommended introducing at least some number of links between cards in separate drawers. These connections, as he suggested, could be based on individual associations (which are already written on some of the cards) or more generic, taxonomic kind of information, such as geographical location.

Some of these observations were echoed in a conversation with Ronda Bautista, a teacher and painter committed to the systematic, cross-media para-archiving of guerrilla interventions performed in public spaces. Insisting on remaining alone, Ronda spent most of her time with the fragmentarium browsing the content of *interpreting*. Interpreting is an archive of short video sequences of accidental assemblages of different fragments of material culture (abandoned objects, trash, misaligned billboards, partly dysfunctional public screens, shop windows, repurposed parts of architecture in public spaces, etc.), which evoked spontaneous thought and reflection on society and technology and forced me to pause in my commutes. Ronda described the randomly launched sequences of these short video clips as an example of a "versatile" approach to experiencing the everyday, where unexpected and evocative situations can always be discovered amid the mundane and repetitive moments. While the contingent character of the fragmentarium (revealed in its deliberate absence of punctilious, contextual, and clearly spelled out interpretative information surrounding its content) might have irritated other dialog partners (expecting a curated delivery of a message or specific information as in a conventional archival structure), for Ronda it was stimulating.

The contingent character of these para-archival traces, the ambiguity in their place of origin, as it was partly intended by me, opened room for reference to the viewer's own memories and feelings. As Ronda pointed out, "it is good to play with both having some textual interpretation and intentionally omitting it, to facilitate the viewer's own associations." In this sense, the gaps in meaning, interpretation and context are no longer mere deficiency. They do not appear as errors and oversights but acquire the productive role of an invitation to enter and fill them with the visitor's capacity to form subjective associations. Certainly, just as these intentional gaps leave room for the emergence of productive associations, they can also carry the risk of misinterpretation and confusion. But as expressed in several places in this thesis (and as the term para-archiving suggests), my work on the fragmentarium has not been motivated by a desire to create a coherent, accurate, and seamless form to represent contemporary everyday life. By embracing qualities like ambiguity, performativity, nonlinearity, fragmentation, open-endedness and media-material hybridity, the fragmentarium evades becoming representative or emblematic in one intended way. It can be said that the risk of misinterpretation is inscribed in it and belongs to a wide palette of modes of interaction with the con-

tent this para-archive enables. This permanent state of being inchoate and tendentiously unfinished aligns with how Walter Benjamin perceived the role of montage and how Lev Manovich debated the Russian Constructivists' cinematographic experiments (such as Dziga Vertov's *Man with a Movie Camera*) as less representing an image of the time than poetically articulating the elusive sensation of living in, operating, and being part of a bundle of dynamic processes that constitute modern life. In this sense, the fragmentarium can be said to present the viewer with a multiplicity of components, ingredients, and entry points (some more wide open and comprehensible, others more cryptic and encoded) from which one composes an always individual articulation (not representation) of contemporary everyday life.

As Ronda suggested, if someone approaches the fragmentarium from the outside without knowing what to expect, the collection of fragments it comprises reflects various facets of the period in which it is being constructed, while also allowing for an identification with an individual who pursues this construction despite his presence being deliberately obliterated from the record. She described this fragmentary account as simultaneously very subjective and "leaving a chance for others to identify with it," simply because these idiosyncratically internalized fragments of the public sphere are also an irremovable "part of other people's time, era, life, and place." As she suggested, the personal dimension, if one wants to seek it, becomes reflected in non-intended and indirect ways for example in the very aesthetics of images as in the case of Streetsampling project (the record of buskers). While some images are well arranged, sharp and focused, the others, blurry and imprecise reveal a state of being pressed by time which adds a personal tint to them.

Time, Obsolescence and Media Hybridity

While visiting Olle Essvik, Gothenburg based net artist and book-binder who in 2006 after series of disappointments with digital software decided to commit himself to non-digital media, one of the main themes brought to the fore was the materiality of the archive. Olle, spent a relatively long time on interacting with the physical case, examining its material properties before delving into the content (Fig. 9.1.5). His first impression was that the cabinet looks quite minimalist, generic, industrial, even unwelcoming and so it risks to obscure its personal dimension. On the other hand he saw a possibility of this quite formal and cold look to transform into much more personal artifact over time. Scratches, layers of patina, random smudges, spots, dirt, fingerprints that began covering the case, were described by him as a specific imprint of time, a particular record of moments spent on constructing the archive, travelling with it and exposing it to the others. Olle perceived this combination of unintended marks as another archival stratum where time and space become recorded, al-

though in a much more abstract, indirect and evocative way if compared to the deliberately constructed content stored inside. Noticing these qualities, as he noted, made him realize how much these material facets of memory and time are abstracted from contemporary digital devices and storage services. As opposed to analog records, the ageing of digitally mediated memories is not as random and irregular. It is rather even. As he noted, digital artifacts do not get old as separate entities in their own terms and with their own rhythms, but rather as certain bundles and enclosures inseparably bound to a given piece of software and hardware.

Despite their uneven degeneration, for Olle the paper cards were overall seen as a much more stable media than digital files. Even though they gradually wear, fade, are punctured and stained, in fifty or a hundred years they will still provide the same exact interaction. As paper works as simultaneously a memory's "carrier and a display" (Ludovico, 2013, p.153) to be retrieved it does not call for any special operating software. This integral relationship allows for a much more durable persistence than the digital file storage, which is much more vulnerable to degeneration. This is mostly because it is dependent on other technical elements, infrastructures, software, and hardware, which need to be frequently updated.

Despite the fragmentarium's highly reduced complexity in the way it handles digital material, it is still dependent on the operational system of the device for retrieving and viewing it. It depends on a network of other mutually interdependent programs, protocols, software components (e.g. the type of a browser, java script files, codecs, to name only a few). Consequently, the digital part of the cabinet, as Olle asserted, will in the long run metamorphose into only partly functional a "technical remnant," time capsule enabling, perhaps, a merely nostalgic glimpse into the present moment in the longer history of technological developments. In this light, breaking down the content into digital and non-digital appeared even more strongly as a strategic decision helping to overcome the possibility of a complete loss of the archived content.

Time, duration, tangibility, and care were important aspects that the fragmentarium brought to the fore in the discussion. One project that Olle brought into the dialog, as his response to the presence of the cabinet, was a 100-year calendar and diary (Fig. 9.1.6). This is a concept book he assembles and binds during workshops organized for different occasions (festivals, school courses) and various communities (the elderly, students, youth). Each workshop, he stresses, results in customized diaries that everyone can take home but is also an opportunity for discussion on contemporary, digital technologies. Examples of the issues raised by the participants in such events often include duration, data excess, and obsolescence:

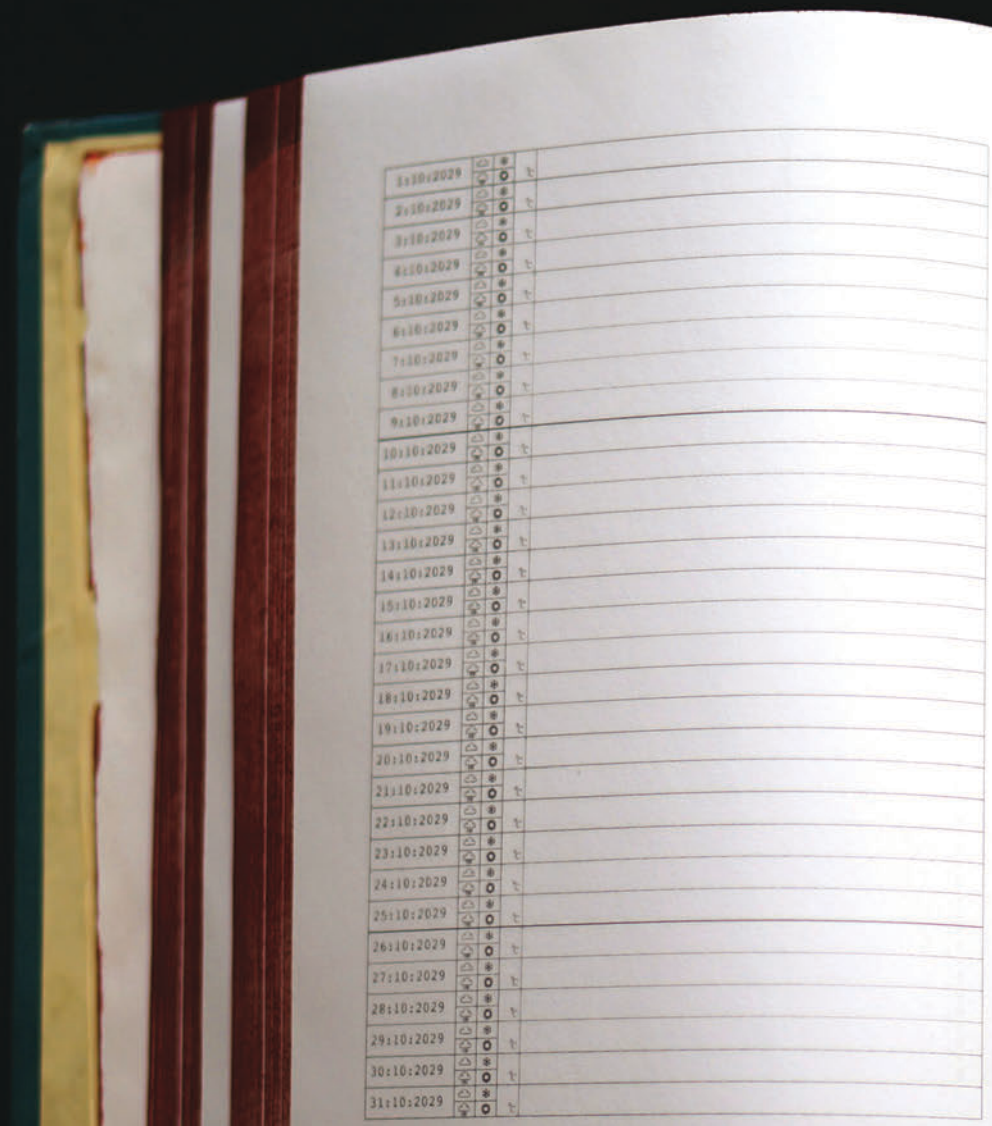


Figure 9.1.6: Olle Essvik's diary for 100 years, a result of computer programming combined with manual book-binding.

> Things that you type in your device will be stuck there. During your life-time, you will probably have about twenty different ones. And because of the technological obsolescence one day they will be gone. In this case you just have one thing.

Unlike services facilitating digital storage of mediated memories, it is probable that these simple, hand-made diaries, in which the accumulated entries of a lifetime are strategically reduced to one simple, analog carrier not requiring external, sophisticated software or hardware for the content to become accessible and readable, while remaining unaffected by technological transformations, might outlive their authors. This post-digital turn to manual journaling (post-digital, as the layout is produced through digital devices and algorithmic processing) also opened space for pondering such issues as long-term orientation, care for and value of one's digital legacy. As Olle proposed, bearing in mind the longevity of these mnemonic devices, they are to be passed on by family members or friends, and then actively extended and interacted with for a period of 100 years. Thus, in contrast to today's digital devices for capturing memory that remain fully functional for a few years, at the most, these manual forms are trans-generational vehicles. One might say that the physical look and form of these solidly hand-bound books reveals the mnemotechnological developments' extreme vulnerability and improvidence. It raises their owners' awareness of a significantly extended longevity of the content they might write, and consequently, leave behind in these books. In other words, the precious character that comes with the materiality of these the hand-bound notebooks seems to inspire one to pay extra attention while constructing written entries (on the other hand, in the times in which mnemotechnological systems promote shortsightedness, the same attributes might be seen as discouraging, aggravating and blocking from such a form of engagement).

Whether or not the project is functional or merely speculative, what seemed to me its most important dimension and where I found a close connection to the fragmentarium was its processual and durational qualities. To Olle, workshops and conversations raising awareness of how digital technologies work, affect our everyday lives and memory practices are much more valuable than actual artifacts, which may or may not be later incorporated into people's everyday lives. Here we both found a strong link between our projects. Both tend to value a prolonged commitment to crafting, or as Olle pointed out (using the exact term I tend to use to describe an attentive approach to technologies), "curating" our lifetimes in relation to digital and network technologies. Instigating temporary conditions they let us (and others) "go offline," at least temporarily helping resist participation in capture culture on dominant terms and recalibrate relations to its forces and rhythms. This discussion also revealed another potential way of thinking through the term post-digital. If the term digital (and digitization) connotes efficiency, effortlessness, and result-orienta-

tion, then post-digital could be seen as a ballasting force that recognizes advantages in long term, process-orientation. These benefits are not to be associated with mere utilitarian ends (sharper memory, faster and more accurate capture and recall, better managerial power over one's memory, etc.), but rather durational and aesthetic qualities, such as space for reflexivity, long-term motivation of one's digital practices, care for the kind and quality of legacy one constructs, and hence, care for posterity (on a small, family scale, or larger, cultural and trans-generational one).

The conversation with Jenny Soep, who was introduced earlier and who creatively combines manual and digital sketching techniques to document everyday life situations, focused on the beneficial side of hybridizing one's approach to recording technologies. More specifically, the meeting between the fragmentarium and her practices inspired a conversation on the transformation of haptic qualities that happens when people migrate from manual to digital and increasingly screen-based technologies. While going through the content of the fragmentarium, due to her interest in illustration, Jenny was particularly drawn to my practice resulting in hand-drawn depictions of various relationships people form with their mobile devices, typically perform while on my daily commutes by public transport (Fig. 9.1.7). I draw passengers whose attention seems to be dissociated from their immediate, transitory environments in favor of the milieux provided by their digital, mobile devices. As their attention is drawn to the screen, they are often unaware of my drawing (occasionally I make a contrasting sketch of a person with no device, instead taking a nap, looking through the window, or engaging in a manual activity, such as knitting. In the series, these depictions are in the minority, which only amplifies the sense of the pervasiveness of the former ones). Each drawing is accompanied by a rough note of the date and stations between which the drawing was commenced.

Facing, as I call the practice, is my unsophisticated form of limiting the use of a mobile device and instead populating the re-harnessed time with a manual practice that allows me to feel more in touch with the present moment and place. In other words, this simple deployment of a paper notebook and a return to a manual skill of drawing has become something of a personal, tactical activity which while yielding a growing record of a particular aspect of contemporaneity, helps me withstand my attention getting reluctantly captivated by mnemotechnological services (for instance checking social media updates which I used to do before I eventually gave up my smartphone). If for Stiegler, the implications of mnemotechnologies, in some instances, are that people's consciousness and attention become „access points" for industries so they can captivate, stimulate and condition their ways of desiring, perceiving and imagining (Stiegler, 2009, p.70), this manual mnemotechnique can be seen to hinder the working of that access point and instead constitutes another kind of an access point, in this case facilitating a subjective connection with the

here and now (and perhaps, considering this practice's para-archival aspect, an access point to then and there for the others). Certainly, I do not want to imply that every engagement in mnemotechnology in such transitory situations as taking public transportation is inherently worthless and reduced of any quality. In my witnessing of the situation in which a stranger engages with his/her mobile device I am not interested in the quality of that engagement (which in any case is inaccessible to me). Similarly, for the viewer confronted with the result of my sketching, such knowledge is equally disguised. Facing is hence not about facing individuals but facing instances of a broader phenomenon of capture culture as a specific, techno-epistemological momentum, in this case manifested through various forms of entanglements of people and their screen-based, network devices, social media, and a non-stop connectivity and exposure to the working of mnemotechnologies in public spaces.

Figure 9.1.7: An example of a card from the practice of *facing* depicting people drawn to their electronic devices while commuting by public transport.

Jenny's observations with regard to this practice, primarily stemming from her own work, focused on the differing degrees of attentiveness that non-digital and digital technologies afford. In her work, she regularly switches between screen devices (Ipads) and a customized set of crayons, pencils, watercolors, and brushes (Fig. 9.1.8). While digital media let her edit the content of her drawings on the go, tracking and undoing the traces almost endlessly, moving back to the point of departure,

they simultaneously and radically reduce the role of the accidental. While hand-drawing, Jenny suggests, she is much more aware of the external circumstances. She takes into consideration all elements of the scenario: the warping of the paper, weather conditions, the pulse in her veins, and the micro-gestures that affect her gestures, all forming an environment, which we could join Stiegler in calling associated mnemonic milieu.

Manual drawing allows her to "cultivate the atmosphere of absolute attentiveness," whereas digital technologies often invite carelessness and a sense of always being able to retrace her steps. While refraining from describing one kind of technology as better than the other, she advocates mixing the best properties of both. She describes working with such a conscious hybrid media approach in terms of "cross-fertilization." It is healthier, she explains, "to get genes from different gene pools as opposed to one source. Similarly, it is good to have a multi-layered approach but also keep simplicity." This is why her overall strategy is to always carry both digital and analog tools.

Figure 9.1.8: Jenny Soep's assemblage of non-digital and digital tools.

This strategic setup means she can negotiate between one or the other technique depending on circumstances and often the amount of time she has at a moment. She much prefers manual techniques when she documents live, spontaneous, and social events. The limited time-span allows her to connect with the moment and record it without considering it in terms of an "artistic representation," but more a "visual summary of the moment," as she prefers to call it. This visual summary incorporates spontaneity through random strokes, and traces of being, for instance, accidentally pushed by someone in the crowd or exposed to the rain. Thus, she perceives the quite limited time for her "extreme drawing," as she alternatively describes her work, as a positive factor that does not disturb her sense of presence, but rather reinforces the feeling of being and recording the momentary. In this light, the simplicity of the result is not a shortcoming.

In the context of today's abundance of high definition technologies of capture, Jenny's "low definition" and non-literal approach to recording the momentary, as she argues, gives more agency to people "to attach their own feelings, emotions" and bring their own "heritage of experience to fill the incomplete depiction out." This observation resonates with that of Ronda's in how it recognizes the value of ambiguity and concealment in recording personal memory. Her point is that "the more realistic something aspires to be, the more people disagree about it." During our conversation, she pointed out that the experience of devices like Ipads taught her a great deal about the generative side of manual drawing, for all its alleged limitations. Set against the possibilities for expression provided by Ipads and proprietary services, apps and accessories, simple, manual drawing lets her remain aware of the boundaries and limitations and seek value and creative potential within them. Digital tools such as the Ipad, equipped with a number of properties that radically expand manual capabilities (the aforementioned back-tracking or zooming in/out), as she noted from her experience, might introduce a certain sense of a perpetual incompleteness, a thirst for constant improvement, and often, as a consequence of satisfying this thirst, a visual and sensory overabundance and exhaustion.

From Jenny's work we might learn that not subscribing to a single kind of capturing technology, but instead dynamically navigating between various kinds, seems to enable a more attuned and perceptive relationship with one's surrounding. This technique (which also resonates with my earlier discussion on self-assembled bundles of software products for processing recorded memories) also helps avoid submitting to one homogenizing solution, and thus can be seen as a way of controlling the degree of immersion in network culture (and hence a resistance to its underlying, impalpable extraction of techno-value).

Discussion and Summary of the Section

In the section above, I introduced a synthesis of observations and reflections whittled from often very lengthy conversations with practitioners who engage on a daily basis with different digital and non-digital technologies. Used in its mobile version, the fragmenterium was intended to help elicit reflections on existing modes of living with technologies in capture culture and explore other practitioners' modes of deploying technologies for para-archival practices. In these cases the traces of my on-going projects materialized and organized in the cabinet served as a trigger of thoughts and a mediator between each interlocutor and me.

Overall, the method of working with the fragmentarium as a dialogical device, or conversation piece, proved to be productive – at least to a certain degree. Sometimes the fragmentarium conditioned the currents of conversation, and other times, it sat unobtrusively in the background

as the exchange of experiences and thoughts meandered elsewhere. The presence of the physical cabinet has facilitated not only verbal dialogs but also other forms of responses. As mentioned earlier, almost every dialog partner brought along an artifact to exchange with me after each conversation. This enabled me to gather a range of physical and digital samples, or excerpts, from the practitioners' personal archives, which with their consent might form material to be showcased in future workshops and exhibitions in order to inspire other inventive concepts and modes of para-archiving.

Since this case study took place, I have temporarily suspended the use of the fragmentarium as a dialogical device. However, I have placed selected cards, accompanied by the digital database embedded in the physical notebook, in a much smaller box to carry with me. On different occasions, whether among friends or new acquaintances, I engage in conversations about personal archives and digital technologies. In this light, the initial research method can be seen to have extended into another kind of daily practice that attends more specifically to questioning how we communicate and disclose our memory and archives in the context of ubiquitous technologies.

Evgeny Morozov described the web 2.0 and its services as agents of what he called "a tyranny of the social" (2012). By this he meant that an increasing number of individual gestures mediated through network technologies is designed to appear as a social activity. Notions of openness and visibility are conflated with the social, but the fact that users' decisions become mediated and visible to others certainly does not render them social. Hence, what should be problematized instead what might be seen as an unreflective overuse of the terms social and shareable and consequently mutation (if not a depletion) of their significance to which network services, such as social media, might be contributing. According to statistics, the average time people spend on Facebook as of 2016 is about 50 minutes per day (Stewart, 2016). This amount has not grown much over the last year, yet if compared to the average four minutes spent daily on direct participation in social events (mentioned in the same statistics), it certainly raises questions about the impact of mnemotechnologies on what it means to be social (or sociable) today.

Thus, in light of the questions concerning communication, openness and sharing, I also see the fragmentarium as a specific technique of controlled disclosure and sociability. The fragmentarium has always involved a limited number of people (usually, just one dialog partner) making the experience a qualitative type of micro-social event, in contrast to the macro-scale self-disclosure onto a large quantity of "friends", "followers" and the flux of their mediated memories that exist on established social media platforms. The performative, convivial and durational aspects of interpersonal exchange of worldviews can be seen as other important qualities that the use of the fragmentarium illuminated, consequently provoking

questions about the condition of these very aspects (or rather significant lack thereof) in the context of capture culture.

The topics of mass surveillance, power relations and infringement of privacy in capture culture were not extensively explored in conversations. Even if introduced, they were usually seen as quite marginal and did not gain much purchase in the discussions. Just as with many regular media practitioners, the specialists I spoke to seemed generally unconcerned by the involuntary capturing mechanisms that pervade contemporary technologies. This, however, does not indicate complete ignorance or lack of any awareness of this matter. While in some circles these issues are rendered (rightly so) as burning questions of living with technologies, in other spheres, such as the group of practitioners concerned with durational, creative media practices with whom I spoke, they appear to have secondary importance. This can, perhaps, be explained by the fact that the majority of my dialog partners do not engage frequently in network social media (or do not even possess a smartphone). It is their strategic choice, not because of the awareness of the implications of capture culture, but because of their higher priority commitment to other, parallel recording practice.

Some of them, like Peter, who has been actively working with recording technologies for many years, is aware of the pace with which they transform. From the conversation with him I could deduce that he treats the current technological condition as only one stage in a longer series of inevitable transformations. Consequently, he does not take strong stances in relation to the current state of technological development. A long-term, strategic commitment to his practice and his deeper knowledge of technologies allow him to avoid complying with prevailing opinions. Ingold discusses this kind of sensitivity in terms of a process of active following and "going along" (2013). It means learning while giving priority to one's curiosity and interest, as opposed to taking for granted opinions and theoretical views. In a similar manner Peter emphasized that prolonged, empirical immersion in the subject of concern (and the know-how drawn from this immersion) need to be considered seriously and approached as an equally valuable asset, not only substantiating, but also correcting and fine-tuning theoretical views and rational judgements concerning technologies and performed by, as he called it, "brain power."

Peter's use of network technologies and mainstream services such as Google Maps is tailored to the overarching principles of his practice. He uses it to display and communicate the results of his site-specific sound archiving (while recognizing limitations of this service, he says that if a better online service arises, he would consider switching, provided that it follows his project's objectives). In his view network media are foremost communication, not archival, devices, and thus, to do his work justice, he puts much more effort into mixed-media, performative lectures, CDs and book releases, where the way that the content of his archive is curated,

delivered, and received, is much more controllable, tangible and thus appreciated than, for instance, the generic looking display on the Google Map. Similar can be said about Jenny's approach to social media, which she uses regularly, though primarily as a means for communicating her illustrations and drawings, which she develops outside of this framework.

One limitation of the dialogical mode of working with the fragmentarium as presented here is the scope and character of dialog partners. One could ask why the majority of conversations were held with creative media practitioners and artists, rather than regular media practitioners and consumers in capture culture? As the reader may recall, the point was to gather insights into practices from individuals united (with some exceptions) by a similar incentive, which is their commitment to a long-term, recording practice that concerns a hybrid-media approach. I have been aware that each of these practitioners presents a rather particular standpoint. As the creative practice often occupies a central place in their lives, the perceptiveness in relation to the world and techniques they develop to negotiate these relations are given large doses of attention, time and energy. They might seem privileged if compared to other media practitioners whose lives, for many reasons, might be more intensely exposed to structural forces that prevent them from carving out enough time to cultivate consistent, alternative media practices and hence impede them from developing subjective worldviews, opinions and attitudes to the surrounding environment. But this alleged privilege, I would argue, is afforded primarily thanks to their diligent prioritization of these practices, certainly not their social position or economic situation, which, at least for a few dialog partners, has been rather precarious if not difficult. It can be said that this, often very simple, reprioritiziation of values, motivations and goals – reclaiming intentionality in using media, creates a resistant shield against one's captivation in short-circuits systematically facilitated by mnemotechnological "systems for capturing psychopower" (Stiegler, 2013, p.54) that hegemonize people's time and energy and which the discussed practitioners seemed to have re-captured and re-oriented towards alternative ends. As I tried to argue using my on-going practices, just as life in capture culture is inherently fragmented (both in the way it is experienced and registered), the practice of para-archiving can also be fragmented, distributed in time, taking place in between spaces and temporalities, taking advantage of short-term experiences by internalizing them cumulatively in accordance to one's "pharmacological framework", as opposed to mnemotechnological, "industrial conditions" (Stiegler, 2013, p.116).

Considering the limitation, a possible future elaboration of the fragmentarium could take the form of a device, setting or event that raises awareness about different implications of living in capture culture among broader types of practitioners (for example, youth or so-called digital natives). During my research I made some attempts to arrange

such workshops, but the institution I was in touch with at the time could not accommodate it within a reasonable time-frame. In the future, if such a possibility arises, the fragmentarium could work for broader groups of practitioners as a temporary para-environment for re-assembling thoughts and attention to, as Lori Emerson advised, look again at technologies of capture (digital media, their relations, infrastructures) as opposed to passively, through them (2014, p.130).

9.2. The Fragmentarium Club

The fragmentarium club is the result of another form of opening the archive to others. It is an informal platform for people interested in listening, recording and para-archiving soundscapes of everyday life. It branched out of minuting, one of my previously discussed regular practices.

Augmenting and diminishing the archived

An important moment, or a turning point in opening up the practice of minuting in a form of a listening and recording club was a small exhibition entitled *Reality backup*, taking place at the Stockholm Detroit gallery in the fall of 2015.

Attempting to stay close to the processual nature of the work, and following my interest in hybrid modes of externalizing memory, I remediated my field recordings into a spatially distributed, mixed-reality installation. "Mixed reality" here means merging physical and virtual qualities, resulting in a setting where digital material is entangled with a physical space, landscape, or artifact (Milgram and Kishino, 1994; Farman, 2009).

The presentation featured three hundred carefully chosen and chronologically arranged visualizations of one-minute field recordings from a period of last five years. The images formed a horizontally evolving axis. Each waveform in the axis functioned as a trigger image for the corresponding sound sample. For accessing the sounds I used Aurasma, an augmented reality (AR) application for mobile devices that allows the user to assign dynamic content to a given image, such as a photograph, logotype, or other graphic symbol. By pointing the lens of a mobile device at the image, one retrieves the content, be it a video, sound, text, website or another image. Aurasma has lately become one of the most popular augmented reality applications and is used mostly within the commercial and entertainment sectors. Although projects have recently emerged that attempt to explore the possibilities of Aurasma and other AR applications in an artistic context and in the cultural heritage sector, such efforts seem to require more in-depth interrogation (see Kozel et al., 2014).

In collaboration with the curator, Alina Abdullayeva, three hundred sounds were manually selected from the repository that had by then gathered about 2500 one-minute recordings in total. Visitors were invited to

capture the axis from whatever point they wished. While disrupting the seemingly linear character of the display they could experience the sonic archive at their own pace. To listen to the sounds, most visitors used their own mobile devices and headphones (Fig. 9.2.1). Some devices were available on the spot. While some visitors approached random parts of the axis, most seemed drawn to stronger, unusual-looking shapes. Sometimes visitors would listen to the sounds not through their earphones, but through the built-in speakers of their devices. Effectively, this way of interacting with the content created an impression of a mobile, spatial, sometimes noisy, cacophonous and antagonistic, though lively multichannel soundscape. Different fragments of recordings from various places and contexts occurred simultaneously in different parts of the gallery, evoking a sense of a chaotic, heterogeneous space articulating the multi-faceted nature of contemporary everyday life, never entirely structured and controllable, but inherently built of micro-temporalities and fragments continuously competing for attention. In this way, instead of having only a single narrative, the display was intended to facilitate a multitude of potential stories emerging through the visitors' unscripted interaction with the sonic material.

Figure 9.2.1: Minuting presented in a form of an augmented reality experience at Stockholm Detroit Gallery in November 2015.

The criteria for selecting the material was, on the one hand, the semantic diversity of the recordings (such as sounds from religious rites, political riots, various instances of silence recorded in nature, the din of traffic, the shouts of street vendors, preachers, and musicians) and on the other, their technical compatibility with the requirements of the image recognition capacities of this AR application. The image has to be strong and

distinctive enough for the application to link it with the dynamic content. The louder and more diverse the sound sample, the stronger and more complex its visualization as a waveform. By implication, the more refined and softer the recording, the less distinctive its trace. Softer traces (for example recordings from nature) tend to confuse the application, often making it recall a random recording instead of the intended one. In this case, a short fragment of a sample is recalled and immediately followed by another, evoking the impression as if the software was continuously refining its own recall process. If this unexpected technological glitch might have been distracting (causing both frustration or laughter), it also constituted an intriguing metaphor, perhaps a more telling representation of the dynamics of human memory, never accurate or able to fully reconnect with the past, but always permeable, generative, and capable of making unexpected, contingent associations.

One critical observation that arose while working with this coupling of personal archive and augmented reality was that the recall of the intended content is highly dependent on the impact of the visual mark and optical resolution of the smartphone lens. This, one could argue, suggests that AR technology chiefly reproduces the logic of ocularcentrism, a bias that places vision above the other senses, in this case, sound. Consequently, in this display of minuting the sonic was made inferior to the device's optic capacity. By implication, instead of "disappearing" from the visitor's scope of vision for the benefit of his/her ears, the smartphone screen arguably became even more present, and to some degree, even obtrusive. In some cases, the mobile phone had to be precisely aligned with the visual tag to trigger and sustain the sound. As such, the device took control over physical postures and gestures, constraining them even so that a deeper experience of soundscapes might have been hindered.

Overall, in this experiment with opening the archive by the means of AR, the technological complexity seemed to have taken over the experiential part. The technical layer became the major aspect of the setting; it was drawing much attention of those who came to participate. Instead of conducing to a rich experience and creating space for reflection and discussion on listening and sonic para-archiving, the technical infrastructure, unintentionally, constituted the focal point of the display.

What this experiment revealed is that while deploying a relatively new kind of a technological solution (AR), the risk might be that it might unwittingly become a central point at the stage, effectively captivating participants' curiosity and attention or significantly redirecting it from the main subject of concern. In this light, what became augmented was not the content but the presence of the technological intermediary and effectively the audience's interest in the technological solution, its deficiencies as well as potentials. Consequently, the feeling that accompanied me at the time was that this heavy reliance on the technological application made me appear as not only someone advocating for inventive approach-

es to the way we attend to technologies of memory capture but also an agent of the technological company that stands behind this AR development (and perhaps, by implication, an agent of smartphone brands on which these application works the best). In other words, after this experiment I became much more aware of the fact that while engaging other people in a work that relies on proprietary technological solutions, even though I might not have such an intention, I might be implicitly promoting a certain choice, option or brand over the other. Following this line of thought, by making the archive available in that specific way, I also became aware of the extent to which the assumption that majority of us owns a smartphone has today become taken for granted. In this sense, despite its experimental nature, the installation foregrounded a certain normative thinking in relation to contemporary technologies.

One other observation concerned the character of the very site where the event took place. My intention was to use the artist run gallery space to partly recreate the very character of the process through which the practice has been performed outside, in my everyday life. This was expressed through the spatial character of the display. Walking through the space, using intuition and devices to trigger the sounds, to some degree reflected the process through which the sounds had been recorded in public spaces. However, despite the processual character of the display, this setting of the experience in between the white walls of a gallery space made the project inevitably appear as somewhat too sterile and engineered an artistic installation. There was a sense of unnecessary sanitariness, order and closure to it which did not seem to correspond to the open-ended, spontaneous and messy nature of the practice.

This resurfacing of the technological strata (initially anticipated to withdraw to the background as to augment the sonic experience) as well as the seemingly neutral space of the gallery (in reality becoming somewhat disruptive) helped invoke (and augment) a series of critical insights to be included in the following attempts in communicating and inspiring inventive thinking around personal archiving in capture culture. These insights inspired thoughts on, for example, engaging participants in the process of the actual ear-witnessing of soundscapes as opposed to witnessing the already generated para-archival material. Other realizations revolved around the augmentation of senses and memory without resorting to technologies or through a highly limited and poor use thereof.

The history of AR technology developments is rather short. Developments available today are precarious as they depend on the rapidly changing dynamics of tech-industries and markets and continuous developments in mobile technology. This taps into a larger problem of technological formatting, compatibility and obsolescence, touched upon in the chapter on capture culture (but also in some of the conversations, such as the one with Olle Essvik). Small-scale, experimental open frameworks where one is given some degree of control over the way that the material is processed (and

where it gets to be stored) might get eventually purchased by larger companies and become discontinued or constrained by proprietary regulations and licence fees. It was precisely during the work on the display that Aurasma, the application I relied on, was bought by Hewlett-Packard.

Amateur Clubs and Ear-witnessing

The findings from this AR experiment prompted the development of the fragmentarium club, in which the aim to mediate results was replaced by efforts to open up the processes of listening, recording, and para-archiving, while keeping the technology involved to a bare minimum. In this sense, the fragmentarium club can be seen as another instance of reverse-remediation, or perhaps demediation, as the intention is to assign priority to how one perceives and records an experience through the senses, before consciously armoring them with recording equipment.

In terms of a historical reference, the fragmentarium club to some extent reverse-remediates practices emerging in the first half of the twentieth century as a constructive response to the proliferation of personal recording technologies. As mentioned in the chapter on capture culture, inexpensive cameras at the beginning of the previous century, and tape recorders a few decades later, launched debates on the archival potential and historical significance of amateur practices. Amateur clubs, survey movements, and what we could call para-archiving initiatives emerged to promote the use of personal recording devices for such archival and cultural purposes. One of the best known examples is Mass Observation, a social project aiming to create an account of everyday life by five hundred volunteers invited to document various aspects of their surroundings in the UK in the 1930's. Ben Highmore describes the project as not only an alternative mode for producing archival value, but primarily "an act of transforming the everyday by being attentive to it" (2002, p.109). He also describes this consistent archiving as a method to "alter practically the experience of everydayness" (ibid., 110).[67] With regard to sound technologies, one such historical example was the London Tape Recording Club, an informal group of sound enthusiasts that emerged in the UK in the 1950's. This club gathered sound recording amateurs, often from working-class and lower-middle-class families (typically men), who documented and then discussed everyday soundscapes in the context of the transforming urban environment. Besides the para-archival value that the

67 An array of controversies arose around the project. Some early criticism came from the scientific community, for whom Mass Observation was highly arbitrary, informal, and insufficiently rigorous, and thus incapable of providing scientifically relevant insights. Borrowing from experimental techniques such as collage and montage, participants viewed reality as a fragmentary and eclectic assemblage of effects and impressions. On the other hand, Mass Observation has also been criticized for its invasion into private lives (Crain, 2006). Participants not only reported on their own lives, but also their neighbors and friends. This led to an atmosphere of distributed surveillance, or co-veillance, as one would call it today.

group's members created by recording various facets of their everyday life, there was also a strong sense of personal and collective empowerment emphasized by the members of the club.[68]

Another significant reference that the initiative draws on, and which is often brought in during discussion following the walks, is the tradition of soundscape studies as pursued by the members of World Soundscape Project. The World Soundscape Project (WSP), an initiative set out by Raymond Murray Schafer, a Canadian composer affiliated at the time with Simon Fraser University, was a group of sound scholars, environmental acousticians and sound enthusiasts. Their work focused on developing ways and methods for understanding, analyzing and archiving soundscapes. By the term soundscape, Schafer and his group understood sonic features that form the way we hear our environments (1977, p.9). Their turn from the notion of the landscape toward the soundscape is a way of restoring the significance of the sense of hearing, a practice of listening or as Schafer describes it alternatively, ear-witnessing. However, Schafer's concept of soundscapes has been also a subject of critique. For instance Tim Ingold who argued against objectification of sound and approaching soundscape as somewhat a fixed sonic phenomena representative to a given space, which can be discovered, witnessed, described, analyzed (and potentially improved). In his view, soundscape could instead be defined as a process of "immersion" and "commingling" with the world (2007), and thus an experience that is actively constructed through the listener's active presence and perceptiveness in space.

Soundwalking

Echoing this critical iteration of the soundscape as a process, of particular interest for the fragmentarium club is a soundwalk, a method used by the members of WSP but also carried on beyond that framework of the project to practically engage in experiencing and possibly recording the sonic dimension of space and its on-going transformations in time.

Hildegard Westerkamp, one of the members of WSP, defined soundwalk as "any excursion whose main purpose is listening to the environment. It is exposing our ears to every sound around us no matter where we are" (1974). Jean Routhier, other member of the project has been dedicated to promoting soundwalks by inviting wider groups of those interested in sound. Routhier's soundwalk is a collective act. It has less to do with a scientific approach than experiential and aesthetic attendance to soundscapes and overall an encouragement of sonic perceptiveness in a day to day life. Beyond the said uses of soundwalking as an exploratory and aes-

68 An enthusiastic assertion of members of London Tape Recording Club was that the exchange of field recordings on an international scale between like-minded clubs could create cross-cultural empathy, and thus achieve more for the world peace than the efforts of diplomats (London Sound Survey, n.d.).

thetic practice, the concept has been also employed in the cultural heritage sector as a form of mediating historical narratives, in entertainment, as well as in a more experimental way in art. Such soundwalks often include a use of complex technological infrastructures, devices, locative media applications or GPS-responsive systems. By adding a layer of audible information to the existing space such technologically aided soundwalks can be problematized as techniques of spatial augmentation. This links them to the concept of mixed media and augmented reality discussed earlier. However, the idea behind soundwalking deployed in the fragmentarium club is different. As mentioned above, the point is not to augment one's listening capacity by adding an extra layer of information, but to reduce the exposure to the minimum, and to prioritize sensory perceptiveness. In other words, the augmentation of space and the everyday happens through the reduction of technological complexity to the minimum.

Above all, the fragmentarium club was conceived to function as an informal zone for sharing an interest in alternative approaches to experiencing, documenting, and reflecting upon fragments of contemporary everyday life, and sonic fragments in particular. It temporarily tampers with the visually dominated realm of everyday life, creating conditions for both solitary and group reflection on and recording everyday sounds.

The initiative takes the form of casual meetings in different places and at different times. At times they are arranged as to coincide with festivals, conferences organized around similar subjects or in relation to special occasions such as World Listening Day taking place annually on the 18th of July.[69] In most cases however they happen spontaneously, or simply at an occasion of my travelling to another town (regardless whether it is a work duty, family visit or leisure related purpose). In such cases, few days prior to my visit I would inform a friend or colleague of mine about the initiative and ask for a little help in sharing the call. The information would then be spread by word of mouth at times attracting a dozen of people and other times only few. I would also set up a Facebook event with a more detailed information about the concept followed by practicalities such as time and place of departure. In such cases, Facebook is used solely as a communication channel and a scheduling tool, the initiative has its own, self-developed website where the collected material and reflections are stored. The content from the soundwalk is also backed up locally in the cabinet as the extension of the minuting project.

Most of those who attend meetings share some interest in sound, public space and (sonic) archiving. While the group in many instances tend to comprise my friends and acquaintances, these also bring along their friends and acquaintances. Consequently people with various backgrounds (students, economists, psychologists, scenographers) join

69 Since its inception in 2010, World Listening Days have been organized globally by individual actors and various organizations. One of such is the World Listening Project. See http://www.worldlisteningproject.org/

the walks successively expanding the diverse character of the club.

The main incentive of the practice is to engage in collective walking, listening, and possibly audio recording. Sound becomes the guiding actor. We meet at an agreed place to walk for approximately 45-60 minutes. During the walk the sound-walkers are asked to remain completely silent. Participants are also instructed to switch off their mobile phones, unless we all agree to use them as sound recording devices (Fig. 9.2.2). The silent and technologically reduced walk is the most common activity; we do, however, occasionally try other modes that include the deliberate use of technologies, such as smartphones and portable networks like the one used in the hybrid media cabinet. After connecting to the network I usually carry with me, all phones are disconnected from the internet and linked to the portable archive via the router. Through this portable archive, during or after the walk the phones can be used as speakers, amplifying the sound streamed from the database. This portable archive also allows for the upload of material if recording was done during the walk.

This simple strategic decision to reduce communication (both verbal and via network devices) is intended to induce a keener sensitivity to the surrounding sound. In the most frequently performed type of walk, each person is welcome to conduct part of it until s/he discovers a sonic situation worth a moment's special attention. We stop for a minute and listen. From that point the role of a conductor is passed on to another person, or rather, her/his ears. The walk continues until all the participants have had a chance to take the lead. My role is to initiate the first phase of the walk, to demonstrate the rule in practice. My other function during the walk is to record one minute of each soundscape discovered by the participants. Just as I do every day while conducting my solitary soundwalks, I use my portable audio recorder and a pair of binaural microphones to document the sounds from the collective walk. I usually take the recording with me, so the sound-walkers can remain focused on listening. After the walk, or sometimes several days or weeks, I contact them and ask them to annotate their soundscapes with a short comment. In doing so, I aim to expand the process of listening, or, as Pauline Oliveros would have it, to turn it into deep listening.

This audio-documentation is then uploaded on a simple, self-designed website that stylistically borrows from my minuting project. The recordings of soundscapes, represented as simplified depictions of the volume levels, are chronologically aligned into an evolving axis (Fig. 9.2.3). Locations where soundscapes were experienced and recorded are obscured. The only geographical information provided is the name of the town where the soundwalk occurred and its starting point. As such, the project is not about accurately mapping the soundscapes and then archiving and tagging them in relation to precise locations. In moving away from the idea of a cartographic representation, the idea is to communicate a process of experiencing soundscapes as they unfold while moving in space.

Figure 9.2.2: Soundwalking in Palma de Mallorca (photo: Ronda Bautista), Stockholm/Hammarby Sjöstad (photo: author), Stockholm/Kungsholmen (photo: Brett Ascarelli), and Newcastle (in collaboration with Tim Shaw, photo: author). Permission to use the images was granted by those whose faces were depicted.

Each axis is a record of a collectively negotiated, unique itinerary orchestrated through the sense of hearing. Besides initiating one of the recorded minutes, clicking on one part of the axis calls up a short reflection from the person who noticed the sound at the time. Besides functioning as a material record from soundwalks, the website has also a section where longer written reflections can be uploaded.

Notes and Reflections

In the following section I propose a set of observations from several walks of the fragmentarium club facilitated in different cities between the summer of 2016 and 2017. After each soundwalk all sound-walkers are invited to gather in one place, outdoors, in a park, or in a cafe, to discuss their impressions and findings. Occasionally we listen to recorded soundscapes, although the main point is to trigger memory recall with no reference to the recording. In some cases, after making sure that no one objects, I would record the conversation. In other cases I take notes or try to memorize key points, to later pen them down in my notebook.

The initial, overall impressions on the soundwalks are usually very similar. The participants are surprised at how many more details they can register by simply remaining quiet over a longer period of time. They often underline the simplicity of the practice and how little or no technology is needed for a rich experience and a sense of augmented space. Even though it involves quite sudden shifts of attention, movement, and exposure to unexpected situations, taking a soundwalk is often described in terms of meditation, contemplation, or, as one participant described it, a "release of one's ego." By this he meant an openness to the outside world, in contrast to the usual preoccupation with one's own problems and concerns when traversing a public space. Initial observations often have a philosophical and phenomenological tint, then followed by more pragmatic observations and descriptions of particular, material characteristics of the space explored. For example, after a walk in Oslo, one person started the conversation by saying: "I felt like I was observing humanity. I was out of time observing the world being itself. From outside but with senses, a group and an individual at the same time." As some participants expressed, the usually fast pace of everyday life does not let one pay sufficient attention to the details of their surroundings, particularly through listening. Given that people's reception and experience of public space is often limited to it being a passive conduit, serving merely to connect points in space (like discrete nodes in a database), what happens in between, including soundscapes, becomes a secondary layer, if not entirely ignored. From this angle, the time dedicated to soundwalking is something of an exceptional and, as some soundwalkers emphasized, even exclusive temporality, enabling connection with and reflection on what often remains inaccessible, transitory, and imperceptible in everyday life.

A similar observation was made by Julio, a soundwalker in Palma de Mallorca. Julio pointed out that, during the walk, which in one moment took us across a crowded neighborhood filled with cafes and outdoor restaurants, it was hard not to eavesdrop on people's conversations. As I could not follow Spanish or Catalan, and generally during soundwalks tended to pay more attention to non-human sounds than human voices, the buzz of people's conversation was more pleasant and innocuous to me. For Julio, who recently moved back to Palma, the short excerpts of conversation he overheard, despite their fragmentary character, revealed a larger picture of the current local situation, pointing toward the crisis on the job market, a certain frustration with the political situation, and disputes between people. In other words, what was for me background noise against which to notice other kinds of sounds (such as fragments of tiles being tossed at renovation sites, reflecting the gentrification that the city has been recently undergoing), for Jose became not only an intelligible source of information, but also a force he would not avoid witnessing, even if he wished to.

This observation also connects to a point made by Joe, a local inhabitant who attended a soundwalk in Newcastle (this walk was part of "Returning the Ear," an ongoing collaboration with Tim Shaw, a British sound artist and field recordist. Besides silent soundwalking, this collaboration included a field recording session preceding the walk and a performance based on the collected material afterward).

After this walk, Joe told me that to him the soundwalk "depoliticized" the public space. The enduring focus on sonic qualities radically shifted his attention away from visual traps and obstacles in the form of advertisements, towards the sonic, which is usually subdued by this media. When I asked him to elaborate on what he meant by the "depoliticized" space, he said that during the thirty-minute walk he felt like the visual and textual dimensions of the space were no longer assaulting his senses as they normally do. Textual and visual information printed or digitally displayed on advertising boards were temporarily irrelevant and blurred, making room to experience and register the space through its sonic dimension. I found it hard to fully agree with Joe's suggestion that the act of listening involves depoliticization. I would argue instead that listening can be seen as actually doing the opposite, which is to say, highlighting the political dimension of the space and making one aware of it. It is certainly negotiable to what extent Joe was actually aware of the visual assault of billboards prior to the event, and to what extent this deliberate relocation to the sonic "para-environment" helped him realize it. But, as he said, the temporary shift of attention from the visual to the sonic certainly let him perceive the way he used to experience the public space before this perceptual shift more sharply. Thus, it could be that while a political awareness emerges during the walk (to some extent involuntarily), its fuller enunciation is made possible only upon returning from

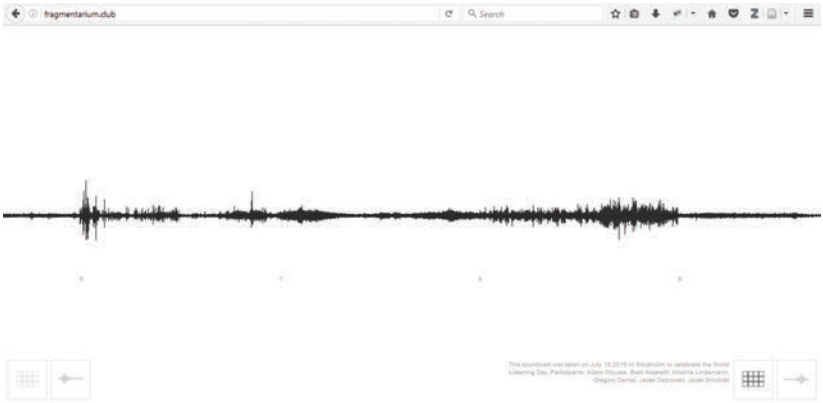


Figure 9.2.3: Screenshot from the website www.fragmentarium.club that hosts documentation from each collective soundwalk. Clicking on the image initiates the corresponding sound and triggers a display of a short reflection or comment. Each contains credits with the names of participants as co-authors.

this para-environment. This would suggest that the soundwalk provides conditions for a partial withdrawal, not from the (inherently) politicized character of the public space, but from a sense of living under its effects, in this case a sense, a visual assault. With the disappearance of the temporary shield provided through the temporary foregrounding of the aural dimension, the awareness of these effects becomes much stronger.

As seen in this example, beyond initial, common impressions, each soundwalk raises a quite heterogeneous, sometimes contradictory set of reflections. These reactions often depend upon the degree of prior familiarity with the explored space. Perhaps surprisingly, for local inhabitants it might be more difficult to find a sonic situation of particularly exceptional value than for foreigners. Familiarity might become an obstacle. One practitioner expressed this by saying that "if you do not know the city you improvise, you are curious. If you know the city you start with the brain." In other words, the prior familiarity with the space can make one operate according to the tried and tested patterns, in relation to the mental image of the space engraved in one's memory.

However, a substantial level of familiarity can also be productive when it comes to tracing soundscape changes over time. Being attached to the place for a longer period of time, local inhabitants had the benefit of comparing the present moment to the past. For instance, during a soundwalk in Oslo, Petr, one of the walkers, expressed his boredom with having to walk through a place he knew so well. Nevertheless, the reflections he retained and shared with the rest of the group at the end of the walk were very informative. He referred to two situations in particular. The first was a very vital conversation of taxi drivers at the underground, communal parking lot in the center of the city. The very clear sound of Arabic, the

language the drivers spoke, was what triggered his attention. While for me this situation was exceptional because of a relatively small amount of such situations in the center of Stockholm (where I have recently lived), for him it was indicative of a larger socio-cultural change that Oslo has been undergoing. He recalled his city from fifteen or twenty years back, when, he said, hearing any language other than Norwegian, especially in the center, was quite an unusual experience (here it should be stressed that his opinions were not in any way judgmental. He has a foreign background himself, and considers the growing presence of foreign cultures in public spaces in Oslo to be a positive phenomenon). The second situation he mentioned in our discussion was also related to the changes in Oslo's soundscape over time. Our soundwalk ended at the waterfront overlooking the bay. There we encountered ferries, motor- and sailing boats, though we could barely hear them, not to mention the water. The reason was a background din of traffic. Right next to the coastline, a wide road has been recently erected. This radically reconfigured the overall soundscape of this area. Petr was able to recall times when sounds of the water were much more prevalent compared to other sounds, but now got almost completely overwhelmed by the traffic noise, along with the ongoing construction work in this area.

In the majority of the soundwalks organized so far, the groups that were formed happened to be fairly heterogeneous (in terms of gender, ethnicity, background, and the degree of familiarity with the space, being locals and foreigners). This heterogeneity usually induces a variety of observations and insights for discussions that follow the walk. In other words, multiple ears and various degrees of familiarity with the space enable the production of a diversified and multifaceted understanding and record of the space. As one person mentioned (and some others confirmed), there is a kind of "a silent communication" between the walkers, and a tacitly negotiated "sense of connection." However, just as the kinds of observations, reflections and sensitivities to sounds differ, so do, occasionally, attitudes toward being simultaneously in a group and on one's own while performing the soundwalk. While some sound-walkers have no problem remaining quiet next to a stranger for an extended period of time, others find it occasionally distressing. For example, on one of the walks, a woman who realized that her shoes were making too much noise intentionally remained at the rear of the group, and eventually left.

On another occasion, the group used mobile devices to play pre-recorded material in selected places. By connecting to the portable archive they initiated random sound files from a pre-selected set I previously composed, effectively performing a spatially distributed piece that corresponded to the real-time sounds of the space. After the walk I was curious about the participants' opinions with regard to this use of mobile devices. Based on some previous experiments with interaction in capturing technologies during the walks, my assumption was that the devices

would be obtrusive to the otherwise unmediated experience of listening and recording. The majority of the walkers did not seem to think so, and one of them even declared that the opportunity to use her mobile device helped her deal with the awkward situation of being in such close proximity to a group of strangers for an extended period of time. Moreover, she perceived these semi-scripted moments that allowed interaction with a mobile device as emergency exits, or temporary gaps, enabling her to regain her balance and endure the otherwise overwhelming and rather uncomfortable condition.

This observation can be read in two ways. On the one hand, it points to the normalization of a mobile phone as, perhaps, one of the simplest and quickest ways of disengaging from the immediate context and/or escaping uncomfortable situations, such as the close presence of a stranger. On the other hand, this reflection reveals the practice's radical nature, despite being simple and seemingly innocuous. One might say that, in the context of everyday life pervaded by technological devices and the capability of turning to them at any moment, for some the silent, technologically reduced walk might be a highly disruptive experience. Thus, one could say that this "rationing" of access to mobile devices (operationalizing them at certain moments) might allow something of a healthy balance to be established between being immersed in what I would call today's normalized state of technological pervasiveness and withdrawn from it through controlled and temporarily reduced use of technology.

This observation leads us indirectly to some ethical matters that occurred during the walk, which involved elements of field recording. During a soundwalk in Venice (Fig. 9.2.4), one of the participants stopped by the window of a house where a conversation between a man and woman was taking place. Even though we could not hear any details, we had an overall sense of being witnesses to a domestic conflict. Following the project's stipulation of recording one minute of sound each time we stopped to listen, I also made a recording of that moment. However, I intentionally took a step back as to ensure that the conversation was not too clear. Overall, it was the atmosphere of the place we were interested in witnessing and recording, certainly not the content of the conversation (due to different levels of the familiarity with the language, some of us could inevitably understand parts of what was being said, while others could not). After the walk, we spoke about this situation, touching upon its ethical dimension. The reflections were that the compact character of the Venice's architecture blurs boundaries between the public and private sphere to the extent that in this city, it might sometimes be inevitable that portions of people's private lives leak out and become part of a public soundscape. It was assumed that the inhabitants, at least to some extent, were aware of this. But does this realization legitimize the capturing of such a situation? This is where the concept of phronesis introduced in the Part II might again become useful. To briefly recap, phronesis is a term

describing an ethical approach to decision-making. It widens the scope of ethical consideration beyond a fixed pool of values (formal rules and laws established by experts and acquired by others through reading), taking into consideration the combination of the specific situatedness in which moral judgments and decisions are to take place and recognizing one's earlier heritage of experience with regard to the subject of concern.

Since we remained within the boundaries of the public space, according to law there was nothing wrong with us recording the sound from where we stood.[70] But the private and emotional character of the conversation, which is something that one senses intuitively in a given moment rather than identifies in relation to the established law, called for a re-evaluation of this judgment and for an application of practical, situational wisdom. It can be argued that the abundance of capturing technologies and practices in public space (coupled with the automation, immediacy, and overall ease with which the surrounding world is recorded) immunizes one from the necessity to engage in such case-specific, moral considerations.[71]

Discussion and Summary of the Section

This section presented the fragmentarium club as another mode of inviting people to participate in activities around the hybrid media cabinet and specifically focused on the outcomes of minuting, my para-archival practice based on soundwalking and audio recording of everyday life situations in the public sphere.

As I demonstrated, the fragmentarium club evolved as an open concept and platform intended to facilitate a reflective, critical relationship to the surrounding soundscapes, as well as to promote attentive use of capturing technologies for recording sonic excerpts of everyday life in

70 The rules that control the use of audio-recording equipment in public context , although might differ depending on the country and context, generally are similar to these concerned with (street) photography. This subject exceeds the scope of this thesis, but it should be mentioned that as long as the audio recording takes place in a public space and is intended to document events, architecture or other phenomena that take place in the public context, technically there are no restrictions. The problems occur in situations where the boundaries between the public and private are blurred. Today, for example, many shopping centres or newly-built squares, plazas, parking lots are private zones. In such places the owners have a right to ban any form of recording (photo or audio). However, just as taking a picture of a private building from a public area can not be prevented, so can not the audio recording of sounds leaking from a private zone into the public. A longer discussion on that subject was proposed by London Sound Survey, a project concerned with archiving sounds of everyday life in London initiated and led by Ian M. Rawes (Rawes, 2013).

71 An extreme example of that is Shahak Shapira's project Yolocaust in which the author explores the ethics of selfie culture. Shapira juxtaposes selfies taken by people at the Holocaust memorial site in Berlin downloaded by him from various social media platforms with the archival footage from Nazi-German concentration camps. The selfies present people smiling, doing yoga or juggling pink balls while standing on or between the architectural elements of the memorial site. While on one hand Shapira's montage points at an erosion of ethical boundaries in regard to how and for what reason people use today capturing technologies it also reveals an inevitable collision of practices of capture culture with older conventions, norms and modes of participating in public life. Source: http://yolocaust.de/, accessed: 26.01.2017

Figure 9.2.4: A GPS recording of the soundwalk that took place in Venice, 18.11.2016. The trace is constructed by five sound-walkers over a period of about 50 minutes. Enjoying the richness of Venice soundscapes, in this particular case, the sound-walkers decided to take the leading role twice. The trace is additionally corrupted by glitches resulting from a weak satellite signal occasionally lost entirely due to the complexity of the urban layout of the city.

an era contaminated by screen technologies and ocular-centric media – and generally dominated by visual techniques for observing (Crary, 1990; Pallasmaa, 2005). The minuting branch of my solitary practice is still in a relatively early phase, thus as the material grows, more critical and ethical reflection will be needed.

The initiative has had an exploratory and aesthetic character with no will to gather specific data. For instance, the participants and I have not been concerned with improving the quality of soundscapes in the city, creating accurate representations of spaces, or methodically tackling problems related to sound pollution. While technologies of capture are increasingly used today to harvest (personal) data so that they can be processed for commercial benefit and/or used to optimize some dimension of public or private life, the club purposefully reorients capturing technologies away from such aims. The strategic reduction in the use of

technologies intends to re-activate and re-prioritize the role of senses and attention, so these human faculties themselves gain the status of mnemotechnical and para-archiving devices. Despite the growing abundance of technologies of capture and sensory captivation, augmenting one's experience of space, time and the everyday might, as I have attempted to demonstrate, be a matter not of just applying additional technologies but of radically stripping them away.

The soundwalks highlighted two key aspects: attention and, more specifically, sonic perceptiveness. They seem to have provided the possibility to actively negotiate between two states of attention, as described by Katherine Hayles (2007). Hayles argued that the pervasiveness of digital technologies has contributed to a shift from what she called deep attention to hyper attention. The latter is characterized by "switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom" (ibid., p.187). Deep attention is, to some degree, a luxury, as it requires the construction of a stable milieu with a limited amount of external stimuli competing for one's attention. The prolonged exposure to digital media and technologies, as Hayles argued, affects people (in particular digital natives, meaning those born after the pervasiveness of digital technologies became a norm) to such a degree that their cognitive processes become significantly reconfigured, at times even acquiring characteristics similar to these very media (for example, the pervasiveness of hyperlinks and fragmentation of information into data sets resulting in the shortening of one's attention span and a constant shift of focus). However, she argued that hyper attention is not inherently worse than deep attention; one does not exclude the other. In an evolutionary context, hyper attention developed first and is still more useful in unstable and ever-shifting kinds of environments, where, in order to survive, one often needs to switch attention continuously between multiple events happening at once.

Drawing on the experiences of indigenous people and their relationship to nature, while discussing soundwalking, Westerkamp made a connection to this affirmative dimension of divided attention. Indigenous people, whose particular relationship to their natural environment, like forests, operates in precarious and unstable conditions. This is what Westerkamp was interested in. In such unpredictable milieux, even a subtle grain of sound, if approached with attention, can potentially reveal information of critical importance (useful for hunting or safe navigation). Drawing on such examples, Westerkamp suggested that in order to orient oneself in the contemporary world "we must listen to our cities as the indigenous people listen to their forests". Just as for Benjamin, a deeper comprehension (erfahrung) of the contemporary, technologically polluted world can be achieved only through careful attendance to and reflective accumulation of the small individual moment (erlebnis), which is like "a crystal" reflecting the "total event" (in his case modernity), ap-

proaching the city as an assemblage of sonic grains, fragments and sensations (not by skimming through them, but by paying attention to them) might be a way for building a deeper, more reflective comprehension of the larger milieu in which one functions on a daily basis. The aim of the fragmentarium club can be viewed as creating conditions for such a perspective, which can even be adopted further on an individual, day-to-day basis.

The parallel aim of collective soundwalking is to record the moments when we stopped and listened. These recordings are cataloged and presented on the website. There, each entry stands for a disparate experience of ear witnessing as a collective act. Since the meta-information for these entries is kept to a bare minimum, those who directly constructed the traces of these walks, i.e. the participants in the soundwalks, likely have a fuller comprehension of the material (and may be able to recall what the recordings stand for) than other visitors to the website. For external listeners, accompanied by their own fragmentary thoughts and impressions, the recordings might invoke only indirect, partial apprehension of the spaces in which they were made. Thus, one can argue that because of this quite ambiguous character, the project yields no wider historical value in a traditional sense. But perhaps, if the practice is to be sustained regularly and in a similar form, the cumulative effect might result in the emergence of historical value. For now, the historical and archival potentials of the project remain unknown. Consequently, it can be said that the present value of the project is located in its attempt to re-articulate the experience of the everyday and perhaps, as previously described, to initiate the impulse to individually or collectively rethink – or refrain from – the day-to-day use of capturing devices.

The documentation from the walks displayed on the website makes each individual soundwalk appear as a rather fragmented and short-term experience (the audio documentation from each walk usually totals only a few minutes). However, soundwalking as an experience is much longer; followed by a conversation, a soundwalk might last a couple of hours or longer. During these non-recorded conversations, described by one person as the "I remember moment", the issues discussed also branched out and drifted away into numerous directions and domains, not always directly of interest to this thesis or the project's interest in soundscapes, recording and technology. Thus, the silent soundwalking that has preceded these conversations can be seen as a conduit to a specific micro-social zone, by which point the "retired" sound-walkers might find common interests and connections well beyond the subject that had initially brought them together (in some cases participants brought their own beverages and stayed out at the site of sonic exploration a few hours after it was concluded).

So far, the use of technology in the fragmentarium club has been limited, and after the lessons from these technologically poor but experien-

tially rich walks, the plan is to gradually reintroduce recording technologies in order to experiment with future phases of the club's development.

Similarly, the next steps will involve a more hands-on approach to creative modes of field recording. These developments might take the form of workshops dedicated to audio recording technologies, as well as thematic soundwalking and field recording sessions focused, for instance, on a concrete location, phenomenon or some social, cultural, environmental happenings (for instance, the process of gentrification in a given neighborhood).

In this summary I also want to highlight that the fragmentarium club has not been intended to promote any specific political or ideological agenda. This does not mean that it has no political potential. Predicated on a simple and powerful mode of constructing and experiencing the sense of space through being silent, listening and walking collectively, its very form can already be seen as political, to some degree. In the summer of 2017, hundreds of people marched in silence around Grenfell Tower in London, to commemorate the victims of a blaze that had spread through the residential building because of inadequacies in the fire safety system, long known to the management. The deliberate silence in this particular case, besides having a commemorative function, was also a politically charged statement against the authorities responsible for cutting expenses related to fire safety. The silent protest around Grenfell Tower can also be seen as a soundwalk, though it was clearly not so much about listening as about collectively demanding to be heard.

In the case of the fragmentarium club, political awareness sometimes arises on an individual level during the course of the walk but is expressed only afterwards through the dialog. While for some participants these soundwalks become forms of soft disobedience and resistance to the visual and technological excess pervading daily life, to others it appears as a rather unsophisticated way to secure a moment for a contemplative pause from the use of network technologies and social media. For example, one person who attended a walk in Stockholm, described the event as the only way she could temporarily withdraw from the overwhelming flow of news updates on a terrorist attack that had taken place in her hometown the day prior.

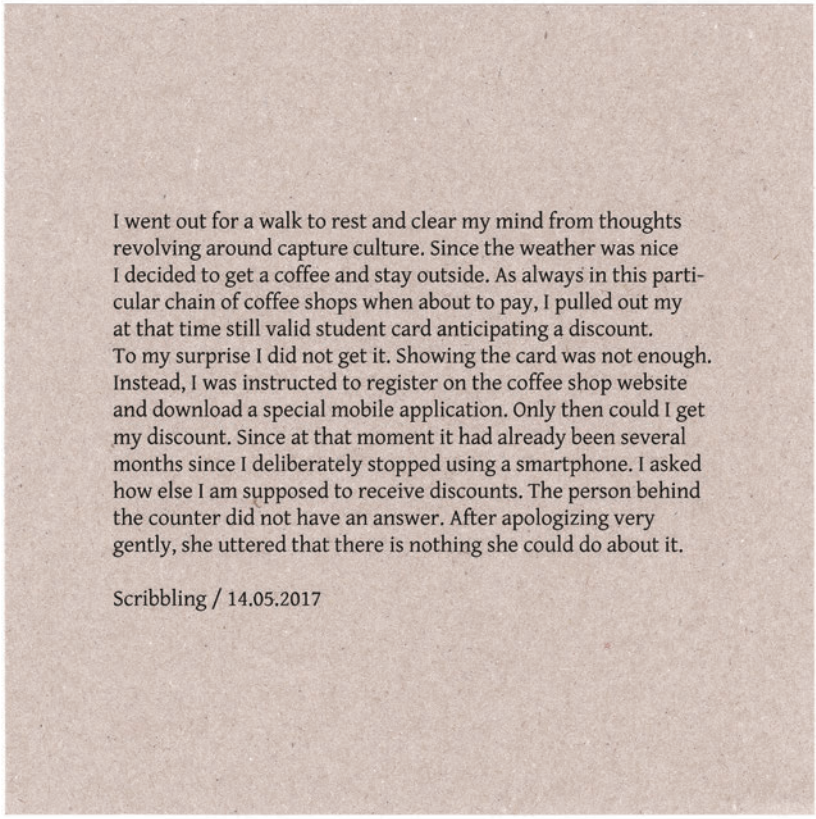
In relation to the methodological extension of the media practice approach, the fragmentairum club can be seen as a particular instance of reverse remediation which reconnects with the historical concept of amateur, survey clubs and the tradition of soundwalking as, for example, conceptualized and performed within the World Soundscape Project. However, the fragmentarium club is certainly not motivated so much to reconstruct these concepts and practices in a direct sense as to re-connect with selected incentives and attitudes characterizing these approaches to experiencing space and everyday life. By this, I mean a thoughtful hybridization of one's sensory capacity to listen with a carefully re-calibrated at-

tendance to a recording device as to record that act, which perhaps not at the given moment, yet in the future might engender a distinctive account of and access point to the here and now. But this reverse remediation can be also read differently, in a more dramatic sense as not only a move to some defined moment in the history of technological developments, but also as a deliberate diminution of the role of the technological in accessing the world, for the benefit of a "demediated" sensory experience.

Besides the overall, performative character of the practice, this intentional impoverishment of technological complexity as to enhance the sensory experience inspires a possible future elaboration in light of such concepts as "paratheater" and "poor theater" developed by the late theater innovator and researcher Jerzy Grotowski (in Richards, 1995). Proposed as a critique of so-called "rich" theater, poor theater was a call to radically reduce theatrical trappings and technological resources that tend to build boundaries between actors, the audience and the space they temporarily cohabit. Consequently, one can ask whether and in what way an interplay of Grotowski's concepts with other "theatre-related" concepts and metaphors appearing in this thesis (Kember and Zylinska's media scholarship as "theatre as it could be" and media archaeological excavation of the memory theater) might further inspire discussions on para-archives and other post-digital forms of living with technologies?

10. FINAL REMARKS

I was not sure how to begin when drafting these final remarks, however, a random, everyday life event suggested one way.


I went out for a walk to rest and clear my mind from thoughts revolving around capture culture. Since the weather was nice I decided to get a coffee and stay outside. As always in this particular chain of coffee shops when about to pay, I pulled out my at that time still valid student card anticipating a discount. To my surprise I did not get it. Showing the card was not enough. Instead, I was instructed to register on the coffee shop website and download a special mobile application. Only then could I get my discount. Since at that moment it had already been several months since I deliberately stopped using a smartphone. I asked how else I am supposed to receive discounts. The person behind the counter did not have an answer. After apologizing very gently, she uttered that there is nothing she could do about it.

Scribbling / 14.05.2017

The anecdote described above concerns a very banal situation, but it exemplifies an increasingly unquestioned norm in capture culture and the cost of disobeying it, even slightly. Clearly, missing out on a tiny discount is negligible when compared to, for instance, a requirement to own a smartphone in order to get a job at a construction site. This happened to my friend, who, in order to be eligible for work on one of Swedish construction sites, had to install a special application, so the owners of the company could monitor his presence at the site and how much time he spent there. Just as in my case, registering my credentials on a particular website and using the mobile app would transform me into a legitimate customer with the right to discount, so would the data gathered via au-

tomated protocols from my friend's mobile phone render him either a good or bad worker. One could say that trust is no longer something that emerges and is negotiated directly between human beings, but is constructed through the agency of capturing mechanisms. These examples certainly exceed the scope of this thesis and the way capture culture has been problematized here. However, noticing such cases has inspired an idea for another para-archival project, concerned more specifically with a record of such moments, preceding an age where such occurrences will, perhaps, no longer be detectable and negotiable – or, differently put, will turn from a dream (for some) or nightmare (for others) into a mundane reality.

In this thesis my intention was to provide an account of an experience of living in a technologically saturated moment, described as capture culture, and to demonstrate a range of inventive ways of negotiating its forces and effects. As I argued more specifically in the second part of the thesis, in the context of the increasing pervasiveness of digital and network media technologies, everyday life cannot be easily separated from mechanisms of capture and involuntary archiving. In technologized societies today, numerous mechanisms and practices of digital capturing and archiving have become deeply ingrained in day-to-day life. At the surface, voluntary engagement with contemporary mnemotechnnologies appears as a realization of the empowering and remedial nature of technology, echoing the early rhetoric around the benefits that developments in network and computational technologies, such as the web, brought with them. On the other hand though, after acknowledging their always specifically oriented ontological, economical and political programming, the same mnemotechnologies reveal to us various poisonous effects that, today, directly or indirectly concern increasing numbers of everyday media practitioners.

To shed light on these mnemotechnologies and their effects I turned to Bernard Stiegler's writings on technological transformations and his deliberations on the structural impoverishment of attention, care, memory and basic know-how for living with technologies today. I articulated these effects as a reconfiguration of aesthetic, material, performative, agential and temporal dimensions of the ways everyday life memories are registered and mediated. Moreover, as I attempted to demonstrate, while dominant technologies of capture and archiving build extensively on automation, instantaneousness, excess, efficiency, ease and calmness (making them ever more normalized attributes of contemporary memory practices), they simultaneously eradicate space for developing a historically conscious sensitivity and critical reflection on the purpose of these technologies. The on-going transformation of mnemotechniques into large scale technical systems results in the ever less frequently questioned sensation of living in a perpetual moment. This, as argued, is much for the benefit of the producers of the dominant mnemotechnological enclo-

sures. Designed to intensify the sense of the perpetual now, these enclosures are underlain by deep archival strata. There, the affective flux from the surface gets captured and broken into discrete units providing not only unprecedented insight into people's everyday lives but also further economic benefits. Despite individual acts of tactical disruptions or class action mobilizations, this lopsided, transactional dynamic has become an irremovable module of the media technological landscape.

The examination of mnemotechnological developments was followed by a pro-active response. I discussed various creative, tactical forms of counter-acting pervasive capture and involuntary archiving. As my contribution to these lines of practical responses, I proposed the concept of para-archiving. What formed its theoretical underpinning were concepts of strategy and tactics and their mutating relationship, especially in today's context of pervasive technologies of capture. This underpinning, inspired by Ben Highmore's return to de Certeau, was that these two forms of cultural techniques are inseparable, and it is within the field of strategic forces that one constructs tactical modes of operating which then do not necessarily fight the strategic but might evolve in parallel to it. I substantiated the concept by pointing out historical examples (Mendel Grossman, Zofia Rydet). Although operating within radically different contexts and constraints, what united them was a particular way of incorporating a recording device into their everyday lives. This specifically motivated adoption of the technological added an auxiliary layer of meaning to their lives, allowing them to construct and secure a specific, parallel record of a given moment in time - a para-archive.

In the third part of this thesis, I further developed the concept of para-archiving in the contemporary context by discussing and elaborating on my long-term on-going practices concerned with a regular, multi-modal record of various aspects of the surrounding world as it unfolds from the perspective of my everyday life. To support this case study, I expanded on a media practice approach proposed earlier in the thesis and articulated it in terms of an inventive methodological assemblage concerned with practical approaches to researching media. This methodological assemblage enabled a specific, inside-out perspective on the issues of living with technologies. It helped balance what could have been sensed in preceding sections as a macro-scale orientation towards capture culture and its effects.

In the following chapters I traced the development of my practices from a manual notebook through a set of digital practices to the latest, post-digital phase that combines non-digital and digital technologies to organize and mediate outcomes of my ongoing projects. While discussing these different stages of remediating the practices (and reverse-remediating, as in the case of the latest, post-digital phase), I have also been posing them in relation to dominant mnemotechnologies. These juxtapositions allowed the foregrounding of contrasting aspects, espe-

cially at material, agential and performative levels. Consequently, while discussing my practices, I pointed at a series of conceptual, material, and performative shifts in weaving technologies into everyday life that, arguably, equip them (and by implication this very life) with para-archival attributes.

One instance of a conceptual and material shift concerns devising individuated conduct to govern one's use of a given technology. The inner workings of proprietary technologies are becoming increasingly invisible, opaque and sealed off, making it more difficult to directly access or manipulate them, but appropriation does not have to take place at the material level. It might instead be enacted on an auxiliary level by introducing a personal modus operandi, for example, through adopting a given technical device in accordance to specific, self-tailored motivations, incentives or styles.

In times characterized by all-encompassing, mnemotechnological systems, one other instance of a material shift conducive to the emergence of a para-archival mode involves a conscious distribution of one's memory exteriorization and processing across a tailor-made assemblage of several existing software products. I called this way of working a digital craft, understood as a form of carefully establishing relationships between diverse components and functions of existing, software, freeware tools, services and programming regimes, in contrast to relying on one unifying tool.

In response to the dominance of visual memories and the programming of dominant mnemotechnologies to intensify their production, one material and performative move regards a transition to the less exploited medium and technique (e.g. sound) or appropriation of already existing representations (e.g. through assembling and collating excerpts of the found printed material). Such techniques allow to veil one's personal memory, establishing a degree of its protection. Yet, as these excerpts derive from the public sphere and are situated in a specific historical context, others might also identify with and extract meaning from them (presently or in the future).

An instance of performative shift, which spanned across several practices and became especially evident in the work on the hybrid media archival cabinet, recognized the value of a slow pace: a deliberately decelerated approach to processing and curating one's mediated memory. Achieved through hybridizing the types of media in use (analog and digital), but also by balancing digital computation and automation with a return to tactile and sensory relationships with technologies, this state of delay was debated as conducive to a temporal zone for not only critiquing the excess of mediated memories in capture culture but also, or, perhaps primarily, for practically taking responsibility for one's (post-)digital legacy and its significance beyond the present moment.

This return to manual techniques allowed the establishment of a closer connection with the concept of the post-digital. Alessandro Ludovico de-

scribes proponents of this concept as "neo-analogue media practitioners" and the strategic turn, or "ethical shift" towards non-digital technologies, as he names it, as a constructive form of resistance to the "go all digital" trend. By implication, a partial return to analog technologies helps resist the "non-stop surveillance of network technologies" (2013, p. 155). Para-archiving shares this skepticism and resistant attitude towards the "go all digital" paradigm and its promotion of "a completely digital life, getting rid of as much physical belongings as possible and relying only on a laptop and a mobile phone filled with digitized materials" (Ludovico, 2013, p.154).

This move towards slower modes of engaging with technologies, achieved through a decreased reliance on digital technologies and/or a partial return to non-digital and manual techniques of recording, aligns with the way tactics were proposed in this thesis. In contrast to the dominant articulation that points at the tactic's instantaneousness and short-term orientation, here, tactics connote long-term commitment. In other words, as opposed to disrupting the dominant techno-cultural condition, tactics (and by implication tactical media practice) involve lowering the intensity of one's immersion in it as to re-delegate this energy toward a parallel, long-term project. Paraphrasing the words of Michel de Certeau that began this thesis, while there might be no escape from the constraints of the pervasiveness of capture culture, the para-archivist deliberately weakens his/her concerns with its efficacy. He/she does so for the benefit of a parallel project that allows for the rectification of the experience of living within this condition, while potentially securing meaningful outcomes that might outlive its temporal boundaries.

The ethical shift also takes on a different meaning here. As I argued in this thesis, the increasing tendency to automate and ease processes of personal memory capture and archiving erodes conditions for moral consideration and deeper apprehension of an event that one voluntarily or involuntarily captures. Slowing down the process of capture, mediation and accumulation of one's memories by re-instating delay, friction, and resistivity might help re-introduce room for such moral reflection and, potentially, recalibrate one's relationship to capturing technologies.

In sum, para-archiving, as its very name suggests, happens in parallel with other acts of capture and archiving that may be deliberate or not. It is based on a continuous, inventive negotiation of relations with the technological possibilities, technical devices and systems that constitute irremovable nodes of capture culture. However, against the excessive preoccupation of current technologies of capture with the now, momentary and short-term, one crucial and distinctive incentive of para-archiving is a restoration of a long-term consciousness and sensitivity to the way technologies of capture are embroidered into and deployed in daily life. While motivated by a long-term vision, and thus providing certain stability, para-archiving nevertheless is constituted in a series of vital and

consciously curated transitions between various technical milieux, temporalities and materialities. Following this thought para-archiving can be said to be emerging in a sustained state of in-betweenness: between the personal and public, formal and informal, procedural and performative, significant and insignificant, intelligible and ambiguous, visible and invisible, fleeting and stable, tactical and strategic, sensory and technological, analog and digital, and lastly, the dream and the nightmare (or technophilic and technophobic) with which this thesis began.

Just as the concept traverses these various sites, qualities and temporalities, taking into consideration different fields and theoretical perspectives, I propose to see it as not belonging to a single discipline but rather as something charged with a cross-disciplinary potential to inform several fields simultaneously: media and communication studies (as an example of creative media practice, and a specific tactical mode of living with media technologies of capture), archival sciences and studies (as an example of an alternate orientation from which a singular, minor account of possibly historical weight can be formulated), philosophy of technology (as an instance of subjecthood formed through actively negotiating one's inherent entanglement with the technological) as well as cultural studies (as an example of an everyday, cultural practice which while being tightly interwoven in the quotidian, simultaneously creates an account of it).

The specific contribution to media and communication studies is a methodological assemblage that I came to define as "media practice approach". In this assemblage, media practice is simultaneously a primary object of analysis and a practical, interventionist and performative mode of critique and invention. I have argued that in today's highly technologized world in which we all, to some degree and for different purposes, practice media, research into media practices, especially those concerned with everyday life, requires reflection from inside-out, which is to say from within one's own life with media technologies. The term "approach" regards not one, but a multiplicity of orientations. Besides the inside-out perspective, one other orientation regularly adopted in this thesis concerns examining other people's media practices, both contemporary and historically. Thus, one important way of working with this assemblage has been through regular, historical references to media practices. Consequently, and much in line with the media archaeological mode of inquiring into the past, I have attempted to identify connections between our technological contemporaneity and some historical moments.

Such lurking in the "deep time of the media" (Zielinski, 2006) did not merely intend to account for challenges and dramatic implications brought about by the proliferation of recording technologies at given historical moments. It also served as a conduit for voices that, at some points in the past, attempted to conceptually address the challenges brought along with the arrival of new technologies (for example Joseph August Lux), or attend to them in a way that would reveal their beneficial side,

despite the most constraining conditions (for example, Grossman). Another reading of the term approach could mean an orientation towards the outside of the mainstream media and cultural practices that endorses various solitary, creative, subversive, individual actors and actions as important and productive voices in debates concerned with media technology practices. Lastly, another orientation that this thesis covered was the outside-in perspective, meaning other media practitioners (and their practices) reflected on the researcher's own work, such as through dialogs or collaborations.

One way of practically actualizing this methodological assemblage was through crafting the fragmentarium, the hybrid media para-archival cabinet. On a personal level, this method helped establish conditions for reflecting on digital and network technologies and their implications on personal archiving and everyday life. In relation to the cabinet's function as a dialogical device, it helped constitute a particular micro-social milieu for the circulation of thoughts and reflections on alternative techniques of personal archiving. Positioning my practices in dialog with the practices of others became a method that helped enrich the auto-ethnographic mode with a set of additional insights revolving around materiality, hybridity and performativity in engaging with technologies. Additionally, this exposition of my practices onto others facilitated an unanticipated exchange of para-archival traces. They are to be used in the future as triggers for identifying other media practices equipped with para-archival qualities or inspiring a generation of new ones through, for instance, more inclusive, hands-on, practical workshops.

This points at a limitation of this method as it was carried out in this research. Despite the productive role described above, the study revealed more avenues to be taken in the future, such as testing the cabinet in other contexts, among broader groups of individuals, not just practitioners already committed to creative practices. In other words, the use of the cabinet does not have to stop at serving primarily as a reflective and dialogical device; it could also take on a generative role inspiring other modes of para-archiving among wider groups of everyday media practitioners.

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Capturing and being captured, archiving and being archived are inevitable parts of living with media technologies today. Whether or not we wish it, almost every one of our interactions with personal media technologies results in various archival traces and repositories. The aim of this thesis is to examine and practically address this condition. The study traces historical and current technological transformations to reflect on how they have impacted various dimensions of practices for capturing personal memories, including aesthetics, materiality, agency and temporality. Building on those reflections through an experimental assemblage of practice-based approaches, the study seeks alternate modes of living with technologies, thus moving beyond polarized opinions in prevailing debates. The practice-based case study unfolds as an auto-ethnography of the author's personal recording techniques over the last decade. It traces the trajectory from a paper notebook, through a series of digital recording techniques excerpting various subsets of the surrounding world, to the post-digital, archival cabinet organizing analog and digital traces from these practices. As a result, this thesis puts forward a concept of *para-archiving*, a creative media practice presenting alternate ways of configuring a subjective position in capture culture, a departure from the dominant motivations for engaging with it.

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