Digital Technologies of the Self

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Edited by

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INTRODUCTION

FRED DERVIN AND YASMINE ABBAS

> I find, first of all, that I pass from state to state. I am warm or cold, I am merry or sad, I work or I do nothing, I look at what is around me or I think of something else. Sensations, feelings, volitions, ideas – such are the changes into which my existence is divided and which color it in turns. I change, then, without ceasing. But this is not saying enough. Change is far more radical than we are at first inclined to suppose.
>
> For I speak of each of my states as if it formed a block and were a separate whole. I say indeed that I change, but the change seems to me to reside in the passage from one state to the next: of each state, taken separately, I am apt, to think that, it remains the same during all the time that it prevails. Nevertheless, a slight effort of attention would reveal to me that there is no feeling, no idea, no volition which is not undergoing change every moment: if a mental state ceased to vary, its duration would cease to flow. (Bergson 1911, 1-2).

Though we had common intellectual interests and were living in "neighbouring" countries (Denmark and Finland) when we put together this book project, we have never actually physically met. Nor, with one exception, have we met the authors of the chapters that compose this volume.

Our interaction during the editing process of the book and its French companion (Dervin & Abbas, 2009) took place via "plugged-in technobodies" (Turkle 1995, 177) and several technological devices, often on the move, rushing between various professional obligations in our respective countries or in far-off places and spaces. Whatever the nature of our disembodied encounters, we *know* each other in the sense that through the many and varied "tethering devices" (or our "identity accessories", Turkle 2006, 223) we have used for direct (Skype, Twitter, etc.) or indirect (website, blog) interaction, we have created an often-shifting picture of who we are — *representations* we want to come forward as "auctors" (authors/actors) of our lives (Bauman 2008, 52) who "create and shape things as much as… [we] might be a product of that creation and shaping".

This may not be surprising to the reader, as millions of people interact daily through such technologies, without relying on physical cues to interact or even having spoken to each other.

This book is about people like us and, in a way, most hypermodern individuals (Aubert 2004). Its title is inspired by the "technologies of the self" theorized by Michel Foucault in the early 1980s that seem to fit well with the investigation of the contemporary "living webs" (i.e., the internet and all the technologies attached to it). According to the philosopher, these technologies "permit individuals to effect by their own means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection or immortality" (Foucault 1988, 18).

Dealing with their usages during, among other periods, the Hellenistic age, Foucault (ibid., 27) explains how writing about the self was an important aspect of taking care of oneself. Writing was used in "taking notes on oneself to be re-read, writing treatises and letters to friends to help them and keeping notebooks in order to reactivate for oneself the truths one needed" (ibid.). Without wishing to engage with exaggerated comparison, the link with the possibilities of interpersonal spaces created by web 2.0 and 3.0 technologies is clear, as more and more people (rich and poor, female and male, educated and non-educated…) take care of themselves with these technologies.

These technologies enable the individual's self/selves to emerge publicly and to be worked upon with its/their "disciples", be they companions in virtual worlds (Boellstorff 2008), readers (for example, of a blog), listeners (Podcasts), or viewers (YouTube, Dailymotion...). With high-speed internet access, omnipresent digital tapestries (Abbas 2008) and increasingly generous storage (portable computers, iPhones, USB keys, memory cards…), the opportunities for staging and transforming the self/selves have become nearly limitless — be they within or based on the technologies. What is important about these technologies is that they allow for multiple encounters and often "the promise of affection, conversation, a sense of new beginnings" (Turkle 2008, 125).

Questions of identities, which cannot be separated from taking care of oneself — the self being modelled by processes of identity creation — have never mattered more than with computers and the internet. Most researchers have now moved away from transcendentalist concepts of identity and dispelled the idea that identity is a given or an artefact. As such, in a book titled *The Plural Self*, Cooper and Rowan (1999, 1) assert that "the notion of a unified self begins to stand out like a relic from a

bygone era". The sociologist Michel Maffesoli (1988) refers to the same phenomenon when he calls for the end of "the fantasy of unicity" in our postmodern worlds (note the plural) and allow full plurality to emerge.

The concept of identity is now omnipresent in research. The issue of the plurality of the self and multiple identities is not actually new, however. Lewis and Todd (2004, 43) remind us that the question "How can the self be one yet many?" has tormented philosophers and writers for centuries. The two psychologists also add that "It is a question that bridges worlds as different as Buddhist meditation, psychoanalysis and cognitive sciences" (ibid.). Researchers face the tricky fact that identity is both a scientific concept (a researcher analyzes the construction of identities in discourse) and a daily experience for every human being (I define who I am and I am defined by others whenever I interact).

This introduction is intended to propose reflections on identity, selfhood and new technologies. A review of the literature on identity is beyond our scope, especially as it seems that most scholars or researchers in the humanities and the social sciences have dealt directly or indirectly with the notion: Zygmunt Bauman, Pierre Bourdieu, Anthony Giddens, Claude Lévi-Strauss, Michel Maffesoli, Paul Ricoeur, Charles Taylor and more.[1]

Just over a century ago, the French philosopher Henri Bergson published one of his most famous works, *Creative Evolution* (1907). The book, whose main message was that *everything changes*, clearly set the tone for the idea that identity and the self evolve all the time: the concept is now labelled "social constructionism" (Berger and Luckmann 1966). For Bergson, states of being undergo change every moment and are not separate wholes. In this book, identity will be also considered as changing in a permanent construction process and thus plural and highly changeable.

However, we do not see identity as a "free from all" activity; hence the chapters in this book attempt a move from "soft constructionism" (we all have a limitless freedom to be who we want to be) and will not follow the procedure of starting out "'knowing' the identities whose very construction ought to be precisely the issue under investigation" (Kulick 1999, 6). We need to bear in mind that many elements external to the self represent a "coercive force" on identity construction and may thus orientate the self towards an undesirable/unstable identity (Brubaker & Cooper 2000, 1). This force is embodied by the physical, mental and

[1] The *Oxford Handbook of Internet Psychology* (Joinson et al., 2007) and *Self Identity and Everyday Life* (Ferguson, 2009) are good companions to the points made in what follows.

dialogical presence of others when we interact, be it directly or indirectly. Besides, the situation and context of interaction play a vital role in the construction of the self/selves and of the other (ibid, 14). We agree with Ewing (1990, 258) that what emerges from acts of interaction and the "forces" represented by these elements are "new selves from their available set of self-representations" — and representations only. These representations may mean, willy-nilly, having to "solidify" one aspect of the self (Bauman 2004; Hermans 2004), as will be explained *infra*.

In 1995 Sherry Turkle wrote a seminal book, *Life on the Screen: Identity in the Age of the Internet*, which will allow us to link the notion of identity with digital technologies of the self. For the MIT Professor, digital technologies represent "objects-to-think-with for thinking about postmodern selves" (Turkle 1995, 185), i.e., they allow us to explore and invent multiple selves rather than discover *a* self (Bauman 2004, 15). Digital technologies of the self in the "expressivist turn" of the living webs (Allard 2007) seem to contribute to the daily experience of (invisible) multiple identifications by allowing them to "expand" and to be "validated" (Turkle 2008, 128) beyond the limits of the individual's space-time.

In our era of high uncertainty, one composed of multifaceted, complex, ambiguous and unpredictable moments (Hermans and Dimaggio 2007), the web represents a utopia where change is allowed to occur "without ceasing" (Bergson 1911) through unlimited possible contacts with billions of individuals who can help each other to construct and invent new selves and reinforce old ones. According to Hermans (2004, 305), digital technologies of the self can also "mediate between us and ourselves, in this way transforming the content and scope of our self-dialogues". For example, when a blogger writes about her/his daily life or thoughts, just like in Hellenistic times when writing to a friend or oneself, she/he transforms her/himself through dialogues with their own selves (especially if they reread their entries and the comments left by their "co-constructors").

New technologies of the self add more to this process of multiple self-discoveries than mere letter-writing to one interlocutor. Anonymity is one important difference. In her work on "multi-user domains" (MUD), Turkle (1993, 185) was one of the first to show how anonymity "provides ample room for individuals to express unexplored parts of themselves" more easily than in face-to-face interaction. "Super-selves" can be invented (Jauréguiberry 2004), allowing individuals to boost their projected identities: "The plain may represent themselves as glamorous; the introverted can try out being bold. People dream the dreamhouses in the

virtual that they cannot afford in the real. They plant virtual gardens. They take online jobs of great responsibility…" (Turkle 2008, 125).

Just as physical travel "affords fantasy because it entails escaping the gaze and expectations of home communities" (Gillespie 2006, 63), digital technologies of the self can contribute to self-disclosure (revealing secrets, confessing…), transvestism (trying on new identities to test the self and the other), fantasising, etc. The fact that most of the others that we encounter online are anonymous, unknown or invented characters creates a "strangers on the train" effect (McKenna et al. 2002) that facilitates all these phenomena.

But this is not always the case. Anonymity can be relative. In Turkle's discussion of the "tethered self" triggered by new technologies (2006), she explains how the omnipresence of relational artefacts such as mobile phones is pulling down boundaries between social roles, allowing individuals present in the physical space of their use to witness mishmashing or disclosure of multiple identities: Turkle gives the example of the professional who answers the phone to her daughter in front of her colleagues — and thus revealing an identity that others may not be aware of (e.g., "I heard her talk to her daughter; her tone was very unpleasant"). The same can go for the internet: for example, IP addresses can often be identified[2] and force the mask to drop. Moreover, clues can always lead to the auctor's physical identity. In a February 2009 article published in the English newspaper the *Daily Mail*, a blogger indicated that she regretted writing some of her posts for this reason: "It's impossible to remain anonymous once you've disclosed your approximate location, your profession, the number, age and gender of your children and the nationality of your husband. I was 'discovered' by friends who found out that I had a blog and when I refused to give them its address, they simply put in a few relevant search words on Google and there I was".

Though (re-)inventions, confessions and multiple identifications are made easy online, certain practices of digital technologies of the self can also have a negative impact on one's identity construction. First of all, the internet in itself is full of identity "thieves", spammers, spies, attackers and rumourmongers who can spoil, confiscate, or transform somebody's identity. Secondly, the new technologies can serve as a platform for the building up and strengthening of "solid identities" (Bauman 2004). Hermans (2004, 315) makes clear that the internet has the potential to reduce identity and rid it off its (potential) complexity. An example from

[2] Check for instance, http://www.find-ip-address.org/

the Finnish context will illustrate this point. In January 2009 a nationalist anti-immigrant hate group created a site requesting the eviction of refugees from Finland in the social networking community Facebook. More than 15,000 web surfers joined the community and were led to enact a solid Finnish identity, as opposed to the solid negative identity imposed on refugees by the "community leaders".

The many and varied facets of new technologies of the self resemble a lot what is taking place in the "real" world. Actually, the dichotomy between the "real" and the "virtual" worlds seems increasingly to be losing its grip on reality. In his book on virtual worlds, the anthropologist Boellstorff (2008, 29) goes in that direction when he tells us that "forms of selfhood and sociality characterizing virtual worlds are profoundly human". Moreover, what takes place in the living web necessarily must "rework the virtuality that characterizes human being in the actual world" (ibid.), i.e., the inherent multiplicity and changeability of each individual. So whatever actions, discourses or emotions that one discovers on the web cannot be separated from the "real world" or discarded as having no influence whatever on the individual. In the complex identification processes in which we are all involved (with more or less freedom), our presence "out there" plays an increasingly important role. Going back to Bergson again: "There is no feeling, no idea, no volition which is not undergoing change every moment: if a mental state ceased to vary, its duration would cease to flow" (1911). Digital technologies also contribute to this.

The goal of this book is to explore the various aspects of how technologies contribute to the expression, (co-)construction and enactment of identitie(s) of mobile individuals involved in short-term (expatriates, businessmen, trainees, exchange students…), long-term (migrants, refugees, exiles…) and inter-/intra- and/or transnational mobilities. "Hypermobility", which intertwines the physical with the digital, causes the multiplication of encounters and narratives about others and the self. Migrants, refugees, intermittently mobile individuals, virtual residents use technologies ranging from the simple phone call to recorded and exhibited sound, images, videos and writing to testify of their being, and assert a sense of belonging to places and communities. For this reason, we have invited researchers from different disciplines to tackle from various angles the question of co-creation of identity and to analyze several platforms and behaviours in these digital technologies of the self. The compilation offers a comprehensive analysis of how people that are mobile, mentally, physically and/or digitally co-create their identity.

Responding to the call for proposal for the book cover, Daisy Ginsberg, a master graduate of the Design Interactions department of the Royal College of Art (UK) submitted a photograph from her project *Microbe Controllers: Biological Landscaping at Home*.[3] She writes that:

> Microbes are being genetically engineered to create biological computers, infiltrating the previously grey technology of silicon with a new green dimension. Microbe Controllers considers a domestic landscape where engineered microscopic organisms are cultivated to perform useful tasks in the home. Aware of this microscopic landscape around us, will our attitudes to what we accord "living" status change?

Her project inspired us to think that bio-engineered technologies relate to digital technologies of the self. This book, starting from the cover, is meant to inspire a multitude of reflections on identities and their co-construction.

The volume is divided in four sections. In the first section, "Surveillance and Identity", the authors investigate how power and knowledge operate between physical and digital worlds. In the second, "Digital Political Identity", we examine how identity is a tool for engagement in the realm of politics in virtual worlds. The third section, "We Surf Therefore I Am", explores how the focus on the self occurs from an introvert perspective (videogame immersion) and an extrovert one (blogs and podcasts) and always involves the other in its construction (for better or worse…). The last section, "Identity Gathering", examines how our collection of digital artefacts, places and friends participate in the construction of our identity.

1. Surveillance and Identity

In the first chapter, Katja de Vries explores how ambient intelligent (AmI) devices that anticipate the needs of users affect the ways in which one constructs his/her self. AmI objects that individuals use are endowed with memory and differentiate users in subtle manners. These objects are part of a larger network, and the data they collect are at the mercy of marketers and manufacturers. If the object transforms according to a person — i.e., individual — the self is subject to easy profiling, and this paradoxically participates to a certain unification of identity.

[3] http://www.daisyginsberg.com/projects/microbecontrollers.html

In the second chapter, Jed Brubaker examines the non-persistent subject through the survey of about 10,000 craigslist advertisements in the San Francisco, New York City and Washington, D.C, metropolitan areas. Brubaker writes that individuals leaving online notes (that are more likely to result in a "missed connection") "engage in practices of self-description, balancing disclosure and anonymity in these public posts". They construct an ephemeral identity. As Saul Alinsky writes, it might just be "a desperate search for personal identity — to let other people know that at least you are alive" (Alinsky 1971). However, Brubaker examines how, in the new spaces between the physical and digital, power and knowledge operate.

2. Digital Political Identity

In the first chapter of this section, Mutlu Binark and Günseli Bayraktutan Sütcü explore "Turkishness" through looking at online gamers. Basing their work on an analysis of *SilkRoad Online*[4], the authors focus on the virtual identities and community practices of Turkish players in relation to international political agenda, such as the rise of xenophobia and ethnic nationalism. They show how players internalize and are made to resort to an ethnic nationalist ideology through building up an invented *superself* in online guilds.

The second chapter reveals how politics is enhanced through the use of technologies and can help to creation identification. Both Barack Obama's blurred identity — neither black nor white — and his innovative use of social networking during the 2009 U.S. presidential campaign inspired Yasmine Abbas to elaborate on the interrelated concepts of mobility, identity and space. Participants in the mobilization during the 2009 campaign co-constructed their identity as well as that of the candidate. The author elaborates on how today's political mobilization is about "identity-sharing" or "peer-to-peer identity".

3. We Surf Therefore I Am

In the first chapter of this section, Olivier Mauco addresses the notion of the "second self" in investigating avatars (representations of the self in videogames and virtual worlds). According to Mauco, avatars are more

[4] *SilkRoad Online* is a well-known "massively multiplayer online role-playing game".

likely to be a crossover between the local social determinism and the technological constraints. So contrary to postmodern thinking, play introduces a focus on the individual.

In their chapter, Fred Dervin and Tanja Riikonen talk about "ego-casting" and demonstrate how the presence of others online contributes to the dramatization of the self and the other. Looking at three podcasts recorded by individuals who have "in-between identities" (or so-called "bi-national/bi-cultural"), the authors examine how a theory of the dialogical self (i.e., the insertion of many and varied voices in one's own discourse) can help to reveal the complexity of the identification process which is taking place online, and to which the potential presence of millions of unknown people can contribute in acts of reflexivity on the self/selves.

4. Identity Gathering

In the first chapter of the last section, Cati Vaucelle investigates a new breed of collectors: the collector of digital artefacts and information, brought about by neo-nomadism (Abbas 2008). The digital world can tie the object of the collection to an infinite number of features, the metadata; yet it enables the collector to strengthen her/his narcissism; the practice of online gift giving participates in defining the identity of the collector.

Finally, Michael O' Regan elaborates on the place/couch collection through social networking practices. This particular act of mobility, travelling from couch to couch and its preparation through Internet technologies, enables to stage the self and perform dwelling. The online presence (blog, social networking sites) corroborates a physical reality (the couch), increasing the complexity of concepts such as reciprocity, reputation and locality in the process.

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SURVEILLANCE AND IDENTITY

CHAPTER ONE

IDENTITY IN A WORLD OF AMBIENT INTELLIGENCE

KATJA DE VRIES

1. Things That Think

Why limit the information society to a closed circuit of interconnected computers? With expanding wireless network connectivity and the miniaturization of computer chips we can envision a new informational revolution wherein *things* are endowed with intelligence. It was in 1988 at Xerox in California that the scientist Mark Weiser articulated a vision which he baptized "Ubiquitous Computing" (Weiser, Gold and Brown 1999) — a vision of things that function like silent and calm butlers in the background:

> microwave ovens that download new recipes […] toys that are ever refreshed with new software and vocabularies, paint that cleans off dust and notifies you of intruders, walls that selectively dampen sounds […]. (Weiser and Brown 1997, 78)

Crucial to Weiser's vision was that our relationship with such smart devices would be one of *dwelling* — something that fundamentally differs from the *interactions* we have with a contemporary personal computer:

> If you are only interacting with your spouse the relationship may be in trouble. We dwell with nature, and roommates and anything that we let enter us, and we it. Dwelling with computers means that they have their place, and we ours, and we co-exist comfortably. (Weiser 1996)

After Weiser launched his vision it began to proliferate at a fast pace, as the basic theme — "bringing the Internet and computing power into the world of physical objects" — turned out to be a fertile ground for endless variations. To trace all the instances of where and how the notion of

ubiquitous computing (ubicomp) emerged and transformed is impossible, so I will restrict myself to some salient moments. Worth mentioning is, for instance, the founder of the MIT Media Lab, Nicholas Negroponte (1995). Elaborating on Weiser's vision, Negroponte contributed to its dissemination and laid the foundations of MIT's becoming one of the leaders in the field. In 1995 the Things That Think consortium was brought into being, later followed by project *Oxygen* at the MIT Artificial Intelligence Lab and by many more specialized research groups such as the *Tangible Media Group*. The movement spread to innumerable other universities. No self-respecting large company in communication, electronics, or information technology could stay behind: Motorola's *digital DNA*, Hewlett-Packard's *CoolTown*, Microsoft's *EasyLiving* and Philip's research at their *HomeLab* are just a few examples. Next to ubicomp, strongly related and overlapping notions like the "internet of things", "pervasive computing" and "ambient intelligence" popped up. All partake in a fair share of characteristics like pervasiveness, adaptivity, the capacity to anticipate, embeddedness, mobility ("everyware": Greenfield 2006), context awareness, personalization, and being turned "on" permanently. Meanwhile, a more general public had also acquainted itself with Weiser's vision. Ubicomp has found its way beyond the walls of the engineering groups and into other domains of academia, provoking legal (e.g., Wright et al. 2008), ethical (e.g., Albrecht and McIntyre 2005; Phillips and Wiegerling 2007) and geographical (e.g., Crang and Graham 2007; Thrift 2003) reflections. Moreover, today's interested layman will find not only plenty of popular scientific readings on the new developments (e.g., Greenfield 2006), but also has the possibility to acquaint him or herself with prototypes for smart fridges (keeping track of which products have been used up or are past their due dates) and smart laundry machines (automatically choosing the right program and amount of washing powder) in show houses such as the *Living Tomorrow* Pavilions in Brussels and Amsterdam, or in the accompanying glossy advertisement material (De Moor 2004).

For the philosophically inclined there are many paths one could explore in this protean field. One of the compelling issues on which I will focus in this chapter is how the permanent *identification* by smart environments might affect our experience of who we are, i.e., our *identity*. After all, the fact that ubicomp might be more than a hype and that in the decades to come a whole new category of things — which will recognize us, know who we are and anticipate us — could be brought into being, makes one wonder how the identification-based interaction (or "dwelling", as Mark Weiser (1996) would have described it) with these smart objects

will compare with the interaction with more familiar beings such as friends, family, pets, governments, and organizations. Of particular interest are, of course, objects that are both *personalized* and have the capacity to *anticipate*. Because these two characteristics seem to be associated slightly more strongly and frequently with ambient intelligence (AmI)[1] than with the other similar concepts mentioned before, in this chapter I will stick to this particular notion, though more for the sake of simplicity and clarity than for dogmatic reasons. However, before turning to the question regarding how personalized anticipation could be realized in AmI devices (section 4), I will first (section 2) take a closer look at the processes that constitute our personal identity: what makes us who we are? Although this question could be addressed from many different philosophical positions, this chapter will take up the position of Foucault's later investigations into what he baptized "technologies of the self", as they can be applied in very elucidating ways in the context of AmI.

2. Identity

The notion of personal identity is full of ambiguities and misunderstandings. Either *identity* is understood as something very elusive and transcendental — becoming almost synonymous with "soul" — or it is understood in such a narrow sense that every connotation to selfhood is lost. Take for instance the modern buzzword "identity theft" (e.g., http://www.identitytheft.org.uk/) — even though the term may sound for the uninitiated as a magical bereavement of one's soul, in fact it only refers to the fact that a crime was committed by means of a fraudulently intercepted *identifier* (e.g., a credit card number). Thus, before addressing the question of how an AmI environment could affect personal identity, I will first have to unravel some of the conundrums that surround it. It will be argued that identity is fundamentally relational (section 2.1.), that it is a mechanism of iteration that — when practiced at the limits of ourselves — allows for self-transformation (section 2.2.), and that identity construction is a practice which can be induced by technological supports (section 2.3.).

2.1. Identity — a Relational Notion

One of the biggest fallacies about identity is the idea that one could

[1] An expression launched in 1998 by Philips; see for more details Aarts and Marzano 2003; Weber, Rabaey, and Aarts 2005; Wright et al. 2008.

have immediate access to who one is: "Even if I would have been born on a desert island and raised by wolves, I still would be an emancipated woman — because I feel that this is what I truly am!". Far from being a Cartesian *immediate* and transparent first-person intuition, identity is always an artifact constructed through words, tools and interactions with other beings. *Self*-understanding, according to Ricoeur[2], is never an "immediate intuition of the I" but always involves mediation by a "long detour through objectification, making reflection an interminable Odyssey" (Ricoeur 2008, 143, transl. *KdV*). Attributing communist ideas to a pre-Columbian American or a gay lifestyle to an ancient Roman is an anachronistic fallacy: even though from the present-day perspective we might identify a certain ancient Mayan as a communist *avant la lettre*, it is exactly in the necessity to specify this identification as *avant la lettre* that the anachronism becomes clear. In this way even the most private sense of identity is relational because it only exists insofar as it resonates with a world, i.e., insofar as it has the ability to function as a meaningfully differentiating shibboleth. Thus, when your credit card is stolen this might have disastrous effects for your financial situation but leave your identity as a credit card holder unaffected; however, if one would wake up one day in a world where nobody would have any idea what a credit card was ("An interesting piece of plastic — what is it for, sir?") this *would* affect one's identity. Identity is not a mine-ness in terms of property ("my credit card") but the difference that is produced in a relational facticity ("The war showed the cowards from the heroes"). Thus, from the macro-perspective the relational character of identity formation points toward its mediated nature and its co-constitution with a world. However, how then do we understand the phenomenological experience of identity as the preservation of self over and in time?

2.2. Identity at its Limits — a Moment-to-Moment Awareness of Oneself and Self-Transformation

One of the pivotal questions in the work of Foucault during the eight

[2] In his thinking on identity the French philosopher Paul Ricoeur greatly admired the "subjectivist' turn in Foucault's later works (Ricoeur 1998, 79): "It is to the extent that Foucault distanced himself from himself with his last two books that I felt closer to him". Even though explicit references to Foucault in Ricoeur's *Oneself as Another* are scarce (however e.g., Ricoeur, 1994, 2: "[…] *le souci de soi* (care of the self) — to borrow Michel Foucault's magnificent title") Foucault's ideas are present in the background.

years before his death in 1984 was how a relational understanding of the self could leave room for self-creation and self-transformation instead of implying that we are merely passively constituted by forces from the outside (Foucault 1985, 1986; Martin, Gutman and Hutton 1988). In fact, at first glance the word *identity* seems to be the absolute opposite of transformation because one's identity can only arise from a specific openness toward time and space wherein one experiences oneself as *identical* with oneself ("I am the same as I was yesterday") and with others ("We are the same: I am a woman like you"). As is nicely illustrated by its Medieval etymological ancestors, i.e., *idem* ("the same") and *identidem* ("time and again") (Groebner, Kyburz, and Peck 2007, 26-27; Ricoeur 1994, 2 and 115 ff.), identity involves the ability of subsuming oneself under a certain aspect (e.g., "myself," "my character" or "female") as being the same. However, what is crucial here is that an identity is not a passively accumulated sedimentation of pre-given sameness (the memorization of repeated identifications by others as "such-and-such") in a particular body, but that it is a *relation* which needs to be *enacted* over and over again. Identity is not a hidden entity that simply has to be memorized and deciphered in a hermeneutic practice: "If I will just keep digging in my soul, one day my true identity will come out". Even though interacting with people suffering from severe dementia makes one realize how memory is a necessary constituent of personal identity, memory alone is not enough. A person with a detailed recollection of what happened forty years ago who is not aware of himself living in the present has lost an ability that is constitutive for identity construction, i.e., the ability of activating one's memory in the *now*. Identity is constituted by memory — not memory understood as an epistemological gaze but as a mechanism of iteration that — when practiced at the limits of ourselves — allows for self-transformation. Or as Deleuze puts it, reformulating Foucault:

> Memory is the real name of the relation to oneself, or the affect on self by self. […] The inside condenses the past (a long period of time) in ways that are not at all continuous but instead confront it with a future that comes from outside, exchange it and re-create it. To think means to be embedded in the present-time stratum that serves as a limit: what can I see and what can I say today? But this involves thinking of the past as it is condensed in the inside, in relation to oneself (there is a Greek in me, or a Christian, and so on). We will then think the past against the present, […] that is, by making the past active and present to the outside so that something new will finally come about, […]. (Deleuze 2000, 107 and 119; referring to Foucault 1985, 9)

The difficulty in Foucault's work of the 1980s on self-transformation is that it is easy to misread him as slipping into an exalted account of individualism and free agency (see Paras 2006). Yet Foucault does *not* endorse a naïve voluntarism when he writes about self-transformation. Instead of radically rejecting the given facticity of relations that constitutes who we are (e.g., "I am fed up with my macho lifestyle — let's erase my memory and move to a desert island"), Foucault proposes a reappropriation at the *limits* of ourselves (e.g., "This macho lifestyle of mine — I have to trace exactly how it works, to which aims it moves me, what it makes me do, how it makes me do that and what it operates upon"). Such "work done on the limits of ourselves" (Foucault 1984c, 46) can be understood as a tinkering *within* one's facticity: "a pragmatics of transformation that demands nothing less than a moment-to-moment awareness of the virtual nature of ourselves" (Varela 1999, 75, expanding on Foucault). However, it should be clear that many "technologies of the self" do not promote such a pragmatics of transformation but instead induce a pre-given kind of constitution of the self. Foucault disdainfully dismisses, for instance, the Californian "cult of the self" in the 1980s wherein one aims to decipher psychoanalytically one's "true self" (Foucault 1984a, 362) as something completely opposite to the transformatory pragmatics of life he envisions:

> The art of living is the art of killing psychology, of creating with oneself and with others unnamed individualities, beings, relations, qualities. If one can't manage to do that in one's life, that life is not worth living. (Foucault 2001a, 1075; transl. by Paras, 2006, 129)

2.3. The Materiality of "Technologies of the Self"

When Foucault uses the word *technology* in relation to the "self" (e.g., "the self is nothing else than the historical correlation of the technology built in our history", Foucault 1993, 222) the notion of technology should not be understood in the sense mechanical hardware, but in the sense of a "technique": "techniques of the self" and "technologies of the self" are used by Foucault as synonyms (Foucault 1993, 203). Foucault repeatedly underlines that in his famous notion of "technologies of the self," technology should not be understood as "hard technology, the technology of wood, of fire, of electricity" but as a kind of "practical rationality governed by a conscious goal" (Foucault 1984b, 255-256) or, to put it in other words, as a certain type of

> …practical reason […] which permits individuals to effect by their own

> means or with the help of others a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality. (Foucault 1988, 18)

Yet even though this practical reason is not a "hard technology" in itself, it cannot be separated from the materiality — "its material instance" (Foucault 1977, 97) — that gives rise to it. Foucault stresses that the self-transformation an individual performs upon himself should be understood in terms of constituting oneself as a work of art or artifact:

> From the idea that the self is not given to us, I think that there is only one practical consequence: we have to create ourselves as a work of art. (Foucault 1984a, 351)

And:

> This transformation of one's self by one's own knowledge is, I think, something rather close to the aesthetic experience. Why should a painter work if he is not transformed by his own painting? (Foucault 2001b, 1355)

In the same way as the work of an artist is co-constituted by his material (e.g., not only would *Guernica* have looked quite differently if Picasso had used glass-engraving tools instead of paint and brushes, but without any material there would be no *Guernica* at all), technologies of the self, too, are co-constituted by their material instance. Take, for example, the way the experience of oneself, described by Foucault, "intensified and widened" (Foucault 1988, 28) in the first and second century A.D. The emergence of this novel way of experiencing oneself in the Hellenistic period — constituted by a technology of self-vigilance Foucault identifies as "care of the self" (*epimeleia heautou*) — can be understood in relation to the spreading use of a certain kind of notebooks for administrative and personal purposes. These material memory supports, which allowed for mental exercise and inspection of oneself, were called *hypomnémeta*[3] (Foucault 2001c; 1984a, 363-365):

> This new technology was as disrupting as the introduction of the computer in private life today. It seems to me the question of writing and the self must be posed in terms of the technical and material framework in which it

[3] For an elaboration on the material base (*hypomnémeta*) of different "technologies of the self" and the effect of contemporary audio-visual mass media ("*analogue hypomnémata*", Stiegler 2008, 314), see: *idem*, 257 ff.

> arose. (Foucault 1984a, 363)

Even though Foucault emphasizes that techniques of the self do not necessarily require a lot of "material apparatus" (e.g., the little "voice" in your head telling you that you should be a good wife and stop flirting with others is not a "material' technology) and will often be "invisible" (Foucault 1984a, 369), it is clear that new sorts of *hypomnémeta* could facilitate the emergence of new ways of relating to oneself. A contemporary example of how new media allow for new forms of self-monitoring is for instance "Moodjam"[4] (http://moodjam.org/), an online tool to visualize one's moods as a palette of colorstripes tagged with a word to express the mood. After having accumulated enough records one could start discovering trends in one's own "inner palette" and those of others, thus in fact possibly creating a new way of relating to oneself: "I feel so blue-yellow striped today — but it is quite normal it seems in this period of the year". Or as the artist Jill Magid puts it:

> Self-surveillance is a way of seeing myself, via technology, in a way I could not otherwise. In self-surveillance I use a system or a technology as my mirror. The type of reflection I face is specific to the tool I am using. Who I appear to be in that reflection is unfamiliar. The process of coming to recognize myself as I appear there is what I call my work. (Magid and Lovink 2004)

3. *Please, Give Me Some Building Blocks to Tinker With!* Constructing One's Own Identity in between the Silent Operations of an *AmI* World

The troubles with privacy in an *AmI* world is that *AmI* technologies make the boundary between the public sphere and the private sphere — where one should arguably enjoy the right "to be let alone" (Warren and Brandeis 1890, 195) — less distinct. The public spaces in a world of *AmI* will no longer be places where one can dissolve in an anonymous crowd: both in and outside one's house one will be permanently recognized, identified and anticipated. The onset of this dissolution of the private sphere can already be experienced on the Internet.

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[4] Moodjam is part of the larger Technologies about the Self (http://self.cs.cmu.edu/) project at the *Human-Computer Interaction Institute* at *Carnegie Mellon University* which explores several new technological forms of self-monitoring.

> [T]oday the data bank of Amazon.com has simultaneous access to my most subtle preferences as well as to my Visa card. As soon as I purchase on the web, I erase the difference between the social, the economic and the psychological, just because of the range of traces I leave behind. (Latour 2007)

One of the ways to address the upcoming indifferentiation between the personal and public domain is to go beyond "the static conception of privacy as a right to seclusion or secrecy" and to redefine the right to privacy as "the freedom from unreasonable constraints on the construction of one's own identity" (Agre and Rotenberg 2001, 7). However, as was shown in the previous section, constructing one's own identity is not something we can decide upon as sovereign and autonomous individuals. While rejecting the naïve position of voluntaristic sovereignty in the creation of one's identity, a certain amount of creative transformatory power toward oneself might nevertheless be attained by a subtle tinkering within the facticity of one's life — at least, *if* one manages to create a moment-to-moment awareness toward one's facticity. Yet such awareness — what's more: any awareness at all! — might exactly be what is flagrantly lacking within certain forms of AmI technologies. AmI technologies are, for several reasons, intrinsically invisible technologies (cf. Hjelm 2005).

From the earliest beginnings, *ubicomp* founding father Mark Weiser stressed that the new smart technologies will have to function silently in the periphery of our attention, to enable us to focus on more interesting matters (Weiser and Brown 1996). Apart from these humanistic and ideological considerations, there might also be more practical reasons why designers would like to push the functioning of smart devices as far out of sight as possible. For example, users of a vehicle-navigation system that personalizes directions for individual drivers according to their driving style (inferred from data collected by discreet sensors and cameras) might like the directions they got, but would become upset about the infringement on their autonomy (see different results, however, in: Barkhuus and Dey 2003) when they were told about the personalization that had taken place:

> This suggests […] that contextual computing needs to be discreet: such systems are, in effect, judging people and trying to influence their behaviour. Systems that manipulate people […] may have to keep quiet about it to work. (Economist 2007, 22)

Moreover, a designer might justify the fact that he or she "keeps quiet"

about the identification and categorization which take place, precisely because it is "only" an intermediate step. Once again the rudimentary forms of this logic can be found on the Internet — when *Amazon* registers which books were browsed by a particular customer, the goal is not one of surveillance in itself, but merely a step in a process of "acting upon", i.e., discovering statistically significant patterns, making inferences and luring customers into buying more books by offering them statistically "personalized" selections of books. Such information technologies — which can function both on the Internet as well as in an "Internet of Things" — should therefore not be seen as a simple extension of the monitoring gaze of "Big Brother". What happens in "personalization" based on statistically inferred profiles is a moving away from a discourse of *seeing* toward a discourse of *acting*, i.e., from a discourse of "gaze", "surveillance" and "peeping into a personal sphere" (which can be both top-down or bottom-up; Haggerty and Ericson 2000) toward "operating upon actions", "manipulation by anticipation" and "freedom of identity construction". This new form of privacy intrusion is not an intrusive gaze looking for personal secrets but a vision enhanced with statistical algorithms, looking for "anonymous" patterns, which could function as the basis for a manipulative way of anticipation.

4. Identifications in a World of *AmI*

Not every smart device is a personalized device — especially not in the rudimentary forms of AmI devices now being brought to the market. For instance the "Ambient Umbrella'[5] anticipates the weather (the handle indicates when rain or snow is expected by glowing up in a particular light pattern) but does not adapt itself to any particular user. However, what happens when devices anticipate us in different ways according to how we are identified and profiled by them? What if the umbrella glows only for some particular people — people who are profiled as having a very low rain tolerance — when light drizzle is expected? To answer that question, two types of profiles need to be distinguished: unique user profiles and group profiles based on statistical inferences.

[5] See http://www.ambientdevices.com/products/umbrella.html