A BIOPOLITICS OF MEDIA ADDICTION

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Declaration

I hereby declare that no parts of this thesis have been submitted towards a degree at any other institution apart from CEU, nor, to my knowledge, does this thesis contain unreferenced material or ideas from other authors.

In memory of my beloved grandparents

Zékány Mihály, 1930-2014

Zékány Ilona, 1936-2016

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Abstract

What do we do with media technologies, and what do they in turn do to us? These questions underlie much of the philosophy of media and technology, and they provide the context in which this project wishes to situate itself. I aim to investigate the construction of human-media relationships in the biopolitical arrangements of postindustrial capitalism, in which the management of the somatic individual and the regulations of its various intimacies play a prominent role. I argue that contemporary media addictions, such as Internet and gaming addiction, exist as paradigmatic formulations of the way in which biopolitical subjects engage with media; more than that, media addictions are pivotal in sustaining the production and maintenance of a media-infused 'politics of life itself' (In Nikolas Rose's formulation). In order to support this argument, I will investigate some possibilities to reformulate the ontological basis of media-human relationships so as to re-read media addiction as a self-affirming and fruitful intimacy with the in/nonhuman, i.e. media technologies, based on desire, pleasure and drive towards alternative relationalities.

This project can be distilled into three main theoretical strands: the exploration of the biopoliticization of the phenomenon of media addiction one the one hand, a potential refiguration of media use as a form of intimacy with the in- and non-human on the other, and finally an investigation into the place of gender and materiality within media philosophy. The crux of the project is the proposition that the ontology of media, in the context of Western metaphysics, is in a perpetual oscillation between the poles of humanity and nonhumanity. Because of this unstable process, media technology is positioned as a threatening figuration that destabilizes the privilege accorded to the category of the human, while at the same time redrawing its boundaries. Contemporary Western biopolitics, the 'politics of life itself', relies precisely on the uncertain status of media in order to codify the character of the media addict as a paradigmatic figure of the contemporary climate, as a techno-somatic individual. The goal of the work is to understand the role of media within contemporary Western biopolitics, and to survey the dynamics between the various ontological states attributed to media in political and academic discourse, and the human users who engage with them.

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Introduction: Addicted in the technosphere

It is a truth universally acknowledged that a sly computer endowed
with an internet connection must be in want of slaves.
Tumblr user Fusronah, June 29 2016

Context and Questions

The theme of this work is the entanglement of embodied human subjectivity and the media technologies that these subjects are involved with on a mundane level. More specifically, this dissertation centres on the biopolitical construction of the phenomenon of 'improper' use of media by somatic subjects through the pastoral dimensions of power in Western postindustrial capitalism. The pastoral dimension of power, as theorized by Nikolas Rose, are exemplified by the psy-disciplines and medicine, and they embody techniques and principles of guidance, and rewarding and facilitating processes of self-monitoring, self-suspicion and self-decipherment (Rose 1997, 26). Pastoral power embraces the broad umbrella of various 'media addictions' in order to set up boundaries between media engagements that are proper, moderate, and above all, productive, and the excesses and failed subjectivations that come with an improper intimacy with media technologies, and are partially unfolded through a variety of ethico-medical discourses on media addiction which posit that the subject is in a permanent state of suspended danger. In other words, this work investigates the media addict qua biopolitical construct and site of tension between the demands of pastoral techniques, and the technological and socio-political requirements of postindustrial capitalism. I argue that both the pastoral techniques of power, as well as the subject herself are negotiating and managing their existence through appealing to various implicit modes of relating the categories of humanity and media technology, as well as onto-epistemological construction of the notion of media technologies. Pastoral renditions of media use, as well as the self-examinations and confessions of users themselves, rely on culturally and historically intra-active constructions of media ontology: media technology as human-made prosthesis, media technology as inhuman or nonhuman organization of matter,

media technologies as a phenomenon co-evolving with the equally emergent category of the human. The contemporary context of hyper-technologized postindustrial capitalism, which can be anatomized as a global 'technosphere', puts the technology user in a puzzling situation with no clear solution: it is impossible for the subject to refuse technology, and yet it is impossible for her to embrace it on her own terms. The contemporary biopolitical subject is one who oscillates between (while never fully achieving) properness and improperness through her relation to media, and whether she is capable of maintaining her re/productivity through this relationship. The motivation behind this dissertation is to parse the philosophical and political conditions of existence of contemporary media addiction, while sketching out some of its main tangents, in order to argue that these conditions might allow us to pursue the possibility of reassembling phenomena marked as 'improper' media use into a model of potentially productive, ethical, and always open-ended engagement with the self, with an inhuman other, and with one's social, political and material milieu.

In 2010, a study conducted by the University of Maryland's International Center for Media & the Public Agenda (ICMPA) pursued a related line of questioning, and intended to find out what happens when the terms of common contemporary media use are shifted. The ICMPA study, suggestively titled "The World Unplugged", interviewed around 1000 subjects from universities across the five continents. The results of the study offered an intimate glimpse into young people's relationship to the media technologies that surround them. Many participants used an affective language to talk about their experience: "Sometimes I felt 'dead'", "Media is my drug; without it I was lost", "I felt incomplete" (Moeller 2011). Interestingly, the interviewed students repeatedly used the language of addiction to express their bonds with their media, and their majority reported that they failed the experiment – they could not detach themselves from the perceived influence of media in their lives (Moeller, Powers and Roberts 2012, 48). This very inescapable aspect of media technologies within contemporary society has been theorized through the concept of the technosphere – the global paradigm of "the interlinked set of communication, transportation, bureaucratic and other systems" of which humans are "subcomponents essential for system function" (Haff 2014, 301). The technosphere includes everything from seemingly innocuous 'old' technological artefacts such as needles or wheels, to increasingly complex feats of engineering or medical science, processes of transportation, harvesting of natural resources, as well as human activities like writing an e-mail or watching television. Haff sees the technosphere as the expression of a global geological phenomenon that characterizes the impact of the human species over the globe as a whole. Haff argues that the technosphere

> is the set of large-scale networked technologies that underlie and make possible rapid extraction from the Earth of large quantities of free energy and subsequent power generation, long-distance, nearly instantaneous communication, rapid long-distance energy and mass transport, the existence and operation of modern governmental and other bureaucracies, high-intensity industrial and manufacturing operations including regional, continental and global distribution of food and other goods, and a myriad additional 'artificial' or 'non-natural' processes without which modern civilization and its present 7 × 109 human constituents could not exist (Haff 2014, 301-302)

Haff's gesture is one that proposes to challenge anthropocentric understandings of the place of the species within the global system, while at the same time reinforcing the idea of human exceptionalism. He argues that the notion of the technosphere allows us to de-emphasise the role of humans as causative agents in the Earth's transformation by relegating them to the status of components that support the dynamics of the technosphere, without being its sole and privileged producers. The technosphere and its associated systems, from its own vantage point, "appears to have bootstrapped itself into its present state" (Ibid. 302). However, he also implies that the technosphere is the condition on which the existence of 'modern civilization' hinges, and while it functions as a complex system that heralds "new paradigm of Earth history" (Ibid.), it is the essential human component that allows the system to exist, and it is ultimately still the essential human component's 'well-being' that is prioritized (Ibid. 307), even if this goal is masked by a concern towards the technosphere's own demands and agentic nature. There is much that can be discussed on the topic of whether the technosphere is a refutation or a reinforcement of human exceptionalism in relation to technology, but while a discussion on the possibility of a nonhuman-centric approach to media theory has much merit, it is beyond the scope of this work. Even so, the technosphere as a growing geological and social paradigm is indicative of a discourse on technology as an emergent system – emergent in the sense of a complex, autonomous and agentic behaviour emerging from prior rules, components, tendencies or predispositions. The emergent nature of the technosphere allows it to function as an autonomous, global phenomenon that "operates according to its own dynamics", and defies the widespread understanding of humans and active while technology is merely reactive (Ibid. 307) rather than being a human-controlled and human-operated quantity. The technosphere as a concept, however flawed or incomplete, intimates a growing scholarly and political awareness of the interconnectedness of technological, human and nonhuman elements within the grand scale of planet's future. On the backdrop of the technosphere, the ICMPA study on 'unplugging' gains another layer of meaning: is unplugging a privilege? If unplugging, as a discourse on the nostalgia of a non-

networked existence, is seen as the alternative to the constraints of life within the technosphere, then who has the privilege of being able to unplug? And what are the different ways in which the human subject is necessarily plugged into the technosphere in the first place?

This project was born out of an investment in understanding the minutiae of a media-consumption phenomenon that belong this putative global technosphere, as well as out of a deep and sustained interest in a question that has been haunting Western metaphysics for millennia: what are media technologies, and what do they do to us? It is a question that has famously concerned scholars from Plato to Heidegger, with strong reverberations in the philosophy of science as well as feminist theory. The key player in the explorations presented in this work is not restricted media themselves, nor the effect that they have on their users and the complex milieus in which they are embedded. Rather, the focus is on the co-constitutive, symbiotic and often uneasy entanglements that emerge between media apparatuses and their human users. Much important work has been done on the topic of these entanglements by feminist scholars like Donna Haraway, Sandy Stone, Judy Wajcman and Diane Currier, as well as philosophers like Bernard Stiegler, Jacques Derrida, Bruno Latour and others. The work of these scholars allows us to speak of media technologies in abstract and general terms, but also to discuss the political and social implications of various specific media technologies. The present work struggles to do both, to various extents: to examine a significant and widespread phenomenon that involves contemporary digital media and its biopolitical management, while also making some scholarly contributions to the ontological study of media technologies.

This dissertation maps the topology of a biopolitical phenomenon that we might call ‘media addiction’, which marks an improper, excessive and noxious attachment between the subject and its media technology of choice. Media addiction can come in many shapes and forms, the increasingly ubiquitous and pathologized label of Internet Addiction, as well as its varieties like gaming addiction, smartphone addiction social media addiction. Internet Addiction is a particular pattern of media use that came to the fore of medical science in the mid-90s, when it became the focus of several first research papers. One of the most prominent researchers of Internet addiction, Kimberly S. Young, argued in a recent paper that although the Internet is a “neutral device originally designed to facilitate research among academic and military agencies . . . how some people have come to use this communication medium has created a stir among the mental health community” (Young 2004, 402). The effects of problematic Internet use, according to her findings, are many and varied are

decidedly aligned with a Foucauldian biopolical project: it can lead to decreased productivity at work, poor academic performance (Ibid. 403), relationship problems (Ibid. 406), personality changes, and lack of interest in sex (Ibid. 407). She notes that proper diagnosis of Internet addiction is difficult, since it is not as of yet included in the 5th edition of American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-5), and its closest related disorder is pathological gambling (Ibid. 404). She cautions that in the evaluation of Internet addiction disorders only 'non-essential' Internet use should be taken into account (Ibid.).

Young's approach sees Internet addiction as a legitimate, if not universally accepted form of pathological category that is deeply embedded into modern patterns of technology use, and with resounding impact over the social fabric of Western societies[1]. But anxiety over media comes from other discursive spheres as well, by capitalizing on the moral and ethical implications of media use. Sherry Turkle, a scholar of science and technology studies, has dedicated much of her work to the examination of human-media relationships. Her works, such as the early *The Second Self: Computers and the Human Spirit,* (first published in 1984) and the recent *Alone Together: Why We Expect More from Technology and Less from Each Other* (2011) advance the idea that we need to critically examine the limits of technology use, the way it modulates our understandings of human thought, affectivity, or memory, and technology's effects over the self and interpersonal relationships. Turkle is cautious of media technologies, which she sees as encroaching over a territory distinctly belonging to human society: affection, bonding, 'authentic' relationships. Her background in psychoanalysis allows her to zero in on the subjective experience of media use, and to attend to its potential pitfalls. On the other end of the spectrum, Nicholas Carr, a Pulitzer Prize finalist, has taken a more detached and clinical approach to the dangers of excessive media use. His books *The Shallows* (2010) and *The Glass Cage: Automation and Us* (2014) delve into the neurological impact of media use and argue that the Internet and its associated media artefacts have a profound and detrimental effect on human cognition. Following in the footsteps of Plato and Heidegger, 21st century scholars, writers and scientists are giving voice to a spreading anxiety about the way in which we and our machines attach to one another. Even if Internet addiction is not a ubiquitous phenomenon, the unrest that its putative existence produces is very much pervasive. Turkle and Carr's works in particular are a rich source for the discussions

[1] Young's research centres explicitly on patterns of media use in the US context

presented in this work, and their theories will serve throughout the dissertation as important examples of the biopolitical figuration of the media addict.

There are several questions that arise from the approach to improper media use, as exemplified by Young, Turkle and Carr's work. First, what kinds of power relations are involved in distinguishing essential from non-essential media use, in a context where media use becomes increasingly woven into the fabric of capitalist production? What does it mean to be a productive user of media and responsible, self-governing member of the community? What does it mean to use media in such a way as to maintain or further the 'well-being' of the species, especially given the fraught social history of technology, as well as contemporary discourse on who has access and entitlement to use technology? As for the subjects who fail in these endeavours, how are they identified and managed? Even more importantly, whose media usage matters for the various biopolitical apparatuses that manage them? These questions begin to hint towards the existence of an important conjunction between the politics of life, biopolitics, and theories of media use. This project is an examination of this conjunction, which seemingly materializes into a biopolitical figure: that of the improper user of media, or the media addict.

The above questions, which this dissertation aims to address at least partially, all gravitate around the figure of the media addict, who breaches two types of understandings of media technology: that of technology as a malleable human product, and technology as a self-determining, even as far as quasi-sentient system. The media addict, as a trope for the interaction between humans and their technologies, pushes us towards questioning the biopolitical status of media use. I argue that media addictions, such as Internet and gaming addiction, exist as paradigmatic formulations of the way in which we engage with media; more than that, media addictions are pivotal in sustaining the production and maintenance of a media-infused 'politics of life itself'; thus, the figure of the media addict showcases the struggle between contemporary management of improper media use and the demands of capitalism's cognitive and attention economies. The figure of the media addict is at the crossroads between two discursive strains within the Western philosophy of technology: first, that of technology as a man-made tool, properly belonging to a subject that is constructed as autonomous and masculine; second, a discourse on technology as sovereign and radically non-human, possible *inhuman* – a term which I use in order to point out both media technology's construction in opposition to 'authentic' nature, as well as technology's envisioning as capable of detracting from its user's humanity, to dehumanize her. Both of these approaches to technology are interlaced within the figure of the media addict. She is

constructed as caught between responsibility for her own well-being, and the pressure to be a media re/productive subject – a productivity which cannot be achieved without engagement with media. The goal of this project is therefore ethical in nature: to reframe the contemporary notion of media addiction that is being constructed through a variety of medical and moral discourses. I argue that reading media use as a form of nonhuman (or not necessarily human) intimacy, which often exceeds the bounds of heterosexual intimacy, leads towards a less repressive approach not only in regards to how media can be used, but who is entitled to use it as well. Media use as intimacy presents an alternative to the imaginary of masculine media, as well as to the medicalization of media use based on proper/improper divisions in its usage.

Dissertation Structure

The first chapter frames the place of media use within biopolitical regimes of power, and examines how the user of media emerges as a potentially disordered subject, whose intimacy with media technologies must be closely monitored and managed. Firstly, I will rely on Michel Foucault's writings in order frame the subject of biopolitics as a necessarily productive subject, whose purpose within postindustrial capitalism is tied to its biological destiny of both reproductivity, and economic productivity and personal independence, as per the tenets of neoliberal governance. Nikolas Rose's reformulation of Foucault's biopolitics identifies the figure of the somatic citizen as the bearer of the responsibility of re-productivity, as well as the onus of managing a biopolitical identity that has become molecularized, broken down into its constitutive somatic parts. The discourse of meaningful somatic individuality, as well as its gatekeepers – the pastoral techniques of power – engages with media use on the model of addiction and disordered pleasure. Following Helen Keane, I re-read media addiction as a queering of intimacy, a modality of desire that falls outside of re-productive norms. This reformulation of media addiction demands a systematic approach that involves not only the subject and its biopolitical standing, but also a material, relational engagement with the subject of media technology as well. In this sense, this dissertation wishes to participate in a broader tradition of conceptualizing media as an ecology – a line of thought that can be traced back to media theorists like McLuhan and Harold Innis, but also more recently explored by various scholars such as Matthew Fuller (2005), Jussi Parikka (2011), Luciana Parisi (2009) or Stiegler (2012). My reformulation of media addiction hinges

on media ecology's commitment to systems and entanglements of materialities, relationalities, affects, embodiments.

The second chapter follows the object of disordered intimacy – media itself – in an ontological exploration through the works of several key figures of media philosophy: Marshall McLuhan, Friedrich Kittler, as well as through Martin Heidegger's meditations on technology. I argue that media's unstable oscillation between humanity and nonhumanity pushes it into a position of *inhumanity*. The media user, by entering into both proper and improper intimacies with media, becomes complicit in its own dehumanization through a phenomenon that can retrospectively be described as contamination. Once the human user is captivated by the autonomous agencies of media technologies, she becomes a somewhat precarious subject whose humanity is at risk, and which must be reaffirmed through a return to biopolitical reproductivity.

Chapter 3 is an in-depth examination of the relationship between humans and media technologies. Using Bernard Stiegler's important notion of 'originary technicity', which maintains that humans and technics have always engaged in a mutual construction of one another, I further Rose's notion of the somatic individual into the 'techno-somatic' individual, in order to highlight the unavoidable interdependence of the categories of the human and media. I argue that originary technicity, which is manifested in discourses about media as the essential and originary masculinity of media, must be complemented by the careful feminist analysis of scholars such as Katherine Hayles and Stacy Alaimo. Hayles' notion of technogenesis and Alaimo's transcorporeality allow us to view media technologies as intimately and engaged with the entire gamut of human experience, in a way that refuses strict ontological separations between media and humanity, and therefore leads towards a critique of the very possibility of media addictions.

Chapter 4 stages a minute intervention into the ontology of media technology in order to acknowledge and attempt to counter the historical and philosophical assumption that technology is a masculine pursuit. Stiegler's philosophy of technology, which serves as one of the main pillars in this work's endeavour to reframe media engagements, posits the co-emergence of technics and a subject whose symbolic universality ignores questions of difference. This chapter attempts to reinscribe the potential for difference within originary technicity by crossreading Stiegler and Stacy Alaimo's theories of feminist transcorporeal embodiments.

The last chapter returns to the figure of the media addict, whose status of a biopoliticized disordered subject is no longer understood simply as a diseased subject who

must be rehabilitated for the sake of the population, but also as an instrumental part of the biopolitical framework of postindustrial capitalism. This chapter focuses on the double-bind of the user, or techno-somatic individual, as a subject whose media consumption within the technosphere is economically productive, but at the same time in perpetual danger of slipping into biopolitical unproductivity. The techno-somatic citizen, due to her inescapable intimacy with media oscillates between the demands of pastoral care and the requirements of digital/cognitive capitalism and its economies of attention. N.K. Hayles' and Yves Citton's theorization of attention will be used in order to relocate the techno-somatic individual's improper media intimacies as open-ended technogenetic engagements with a technical other.

Some Theoretical Considerations

Biopolitics and Media Use

One of the tasks that this work had to undertake in order to answer its questions was to clarify the position of media addiction within the context of the contemporary system of Western biopolitics, and attend to the kind of techniques of power that are involved in the government of media users. Foucault's theorization of biopolitics serves as a starting point in the breakdown of the media addict as an exceptional case into recurring patterns in the management of productivity and the wellbeing of individuals as constitutive raw materials for the 'mass' of living subjects. While one of Foucault's main foci was the state as an apparatus of control, national borders and institutional boundaries become an unsteady ground in the contemporary 'networked' era. Foucault's legacy was pushed forward by scholars like Hardt and Negri (2000, 2005), Roberto Esposito (2008, 2011) and a to some extent by a number of network theorists such as Eugene Thacker and Alexander Galloway (2007) who argue for a 'borderless' biopolitics and describe the forms inhabited by power in the specific context of the technosphere, and a society in which electronic information networks are the key organizational moulds of the social, political and economic (Castells; Van Dijk 2005). The networked reformulation of biopolitics is a complex discussion in its own right, and beyond the scope of this work. Instead, I will rely on Nikolas Rose's rereading of Foucault's biopolitics, in which he is concerned with the way in which life, as the horizon of politics, is managed within various contemporary biopolitical spaces such as molecular medicine, technology and so on. Rose crucially theorizes the 'somatic individual', a figure at the crossroads of individual life and the life of the population, and who is embedded into communities on the basis of the notions of obligation and risk – the calculable and

manageable risk of somatic failures, and the obligation to take responsibility for them. Rose argues, following Foucault, that biopower entails various truth discourses or regimes of truth about the vital character of human beings, as well as "strategies for intervention upon collective existence in the name of life and health; and modes of subjectification, in which individuals work on themselves in the name of individual or collective life or health" (Rose and Rabinow 2006, 195).

One of the new dimensions of power that arises in the contemporary politics of life is that of pastoral care. Pastoral power is exercised through the psy-disciplines and countless types of counselling, therapy, ethical care but also medical discourses such as genetics; its purpose is to guide the somatic individual towards its best possible iteration, towards being a meaningful and useful element of the workings of biopower – a unit of 'biovalue'. In Rose's words, pastoral power relations refer to "a form of collectivizing and individualizing power concerned with the welfare of the 'flock' as a whole" (Rose 2001, 9). The body is broken down into its molecular components and organized as an informational system that includes genetic information, various biometric values, but also means of quantifying biological, social, political and economic productivity that situates the somatic individual within the community.

The discourse on media addiction functions as a form of pastoral care in which the somatic individual who is improperly engaging with media is held accountable for her own well-being while also being provided with some form of social, psychological or medical support. This medical support hinges upon the ability to identify the disorder, the improper engagement with media – media addiction – which is constructed as a disorder or desire, following the pattern of other medicalized conditions that involved an addiction. Addictions, for scholars such as Helen Keane (2004) and Susan Zieger (2008), can be theorized as disorders that are intimately linked to heterosexual desire. Zieger, who is rooted in the field of literary criticism, argues that one of the main models of addiction links it to "heterosexual obsession, passion, or overfullfilment" (2008, 168), while obscuring the parallel association of addiction with deviance, solitude and "resistance to bourgeois norms" (Ibid.). Another model connects addiction to idleness and undeserved luxury, which Zieger identifies in the racist literary portrayal of the depraved opium addicts (Ibid). One of the most prominent contemporary configurations of addiction, sex addiction, also revolves around the sphere of 'proper' heterosexual companionship, which its excesses make impossible (Keane 2004). For both Keane and Ziegler, addiction is a queer conduct which eschews the rigid norms of heterosexual intimacy (2008, 164), either through excess or lack. For Keane and Ziegler,

addiction discourse implicitly aligns addiction with homosexual, 'unproductive' desire[2]. Alternately, addiction could also be seen as a form of intimacy with a form non- or in-human (a substance, an object, a process), which also impedes proper, productive heterosexual intimacy. The addict substitutes her social bonds with humans, and sometimes her economic and biological re-productivity with an intimacy that solely produces her pleasure. And yet, this model is also complicated by the fact that media is an integral and inexorable part of the technosphere, and also connected to what Zieger calls an "extra-bodily materiality and economy" (Zieger 2008, 163).

As such, media addiction can be rephrased as intimacy with media (following Helen Keane's alternative theorization of addiction as non-normative intimacy[3] (Keane 2011)). Media addiction discourses prove Keane's point: media use is conceived as an unproductive alternative to 'healthy' and 'authentic' intimacies that allow the somatic individual to be productive and re-productive. Media intimacy, as opposed to addiction, allows us to understand the somatic individual as neither powerlessly ensnared by media technologies, nor an unruly agent who 'chooses' addiction to media. Media intimacy as a concept can portray the complex relationalities and agential constructs that emerge in the phenomenon of media use, and opens the possibility to examine the way in which the Western ontological conception of media is plugged into the biopolitical assemblage, thus allowing us to examine the very roots of biopolitical figures such as the media addict and its sweeping significance in contemporary discourse on technology.

On Media and Technology

This work maps the relation between media addiction and somatic individuality by first delving into the modalities through which media technologies are captured by the relations and structures of biopower. The discourse on media addiction is one that springs from medical thought, self-help psychology, as well as ethical and moral understandings of the role of the human within the technosphere, and as such it must account not only for the ontological status of the human (as user of media technology), but media technology itself as well. The present work uses the terms media, technology and media technology interchangeably in order refer to a whole semantic field of human engagement with self and

[2] Although it can also be argued that same-sex desire of a specific kind, modelled on heterosexual monogamous intimacy, is also slowly becoming constructed as productive, both socially and economically in the Western context.

[3] See Chapter 1 for an in-depth discussion on the topic.

other[4]. As further discussed in Chapter 2, there are many ways in which media theory constructs the relation between media and technology (e.g. media as a subset of technology whose role is to communicate meaning), although oftentimes this relation is not explicitly theorized. Recent developments in media theory are leading towards a theorization of the media-technology relationship that is not construed in terms of inclusion/ exclusion, focusing instead on the continuities and overlaps between the two. Instead on individual media objects or technologies, some media scholars choose to investigate media as material and semiotic phenomenon in which the difference between media and technology is merely heuristic. For example, media theorists Sarah Kember and Joanna Zylinska are interested in mediation as a

> complex and hybrid process that is simultaneously economic, social, cultural, psychological, and technical . . . whereby mediation becomes a key trope for understanding and articulating our being in, and becoming with, the technological world, our emergence and ways of intraacting with it, as well as the acts and processes of temporarily stabilizing the world into media, agents, relations, and networks. (Kember and Zylinska 2012, xv)

The discourse on media addiction is not usually explicitly concerned with the nature of the media that it aims to critique. In the medical context, prominent Internet addiction researchers such as Kimberly Young (1998, 1999, 2004) only briefly describe their understanding of the Internet, and quite reasonably do not clarify the way in which the Internet fits into the broader context of the technosphere. For Young and other researchers in the field, the Internet is a self-understood concept that has been in the common vocabulary for long enough that it does not require explication. In the first and so far only study on the effects of Google Glass addiction, the glass, due to its relative novelty, is briefly described as a "wearable mobile computing device with Bluetooth connectivity to internet-ready devices" (Yung et al. 2015, 59), but what remains unclear is what the patient was addicted to: Internet access, applications, games, the physical sensation of touching and using the device? All of the above? As media theorists like Wendy Hui Kyong Chun (2005, 2013), Lisa Gitelman (2006, 2014), Peters (1999, 2015) are deeply committed to integrating media specificity into media theory, and attending to the way in which the materiality of various media informs media theory and practice. As media artist Garnet Hertz and media theorist Jussi Parikka argue, "the question of singularity and specificity of media in its material qualities for expression is as much a political as an aesthetic question because it points towards thinking

[4] Which is not to say that I dismiss the fact that nonhumans also engage in media and technological practices (as exemplified by a variety of nonhumans from ants to ravens). However, my focus in this work is the way in which technology relates to humanity in particular.

of media as potentials for action; what can a medium do? What are its potentials?" (Parikka and Hertz 2010).

And yet, there is also a concern about what specific media have in common, whether we are considering solely digital media, or media more broadly. What does Plato's written word have in common with the Google Glass, for instance? Where is the overlap between video game addiction and Internet addiction? One of the way in which we can approach these individual media on a common ground is by appealing to a category of media technologies, which can be characterized by certain overarching traits and a common ontology, or "presumptions . . . concerning the fundaments of existence" (Dillon 2003, 547). Several key figures in media theory have elaborated their own versions of media ontology, such as the controversial literary scholar Marshall McLuhan (1994), French philosopher Bernard Stiegler (1998, 2012, 2010), German media theorist Friedrich Kittler (1999, 2006, 2009), as well as Martin Heidegger (1977, 1992), whose views on technology hold a strong sway on large portions of contemporary understandings of technics and media. For McLuhan, media technologies (which for him are synonymous with technology as a whole), which included technics ranging from simple wheels to complex devices such as the television, could be understood as prostheses, as "extensions of man" (1994) that produce new modes of cognition and bodily capacities. Technology does not exist for the sole reason of human progress, but rather, has an existence and raison d'être of its own: in fact, McLuhan famously declared that "man becomes, as it were, the sex organs of the machine world…enabling it to evolve ever new forms" (McLuhan 19944, 46). Stiegler pursues a somewhat related line of argumentation. For him, the bond between media and user goes far beyond prosthesis; technics have an autonomous logic of their own, and they are involved in a relationship of co-originary emergence with the human being (Stiegler 1998). These ontological framings of media technologies allow us to re-envision media addiction on a different scale: not as the excessive use or desire for a man-made tool, but rather as a relationship to something that is partially inhuman, a relationship which in itself contributes to the emergence of the category of the human itself.

Gender and originary technicity

In the field of media theory, gendered performance, representation, and the material embodiment of users as gendered subject have been the topic of several influential scholarly works. Laura Mulvey staged a ground-breaking critique of the male gaze and the patriarchal ideologies that pervade various media examples, Angela McRobbie's work centres on media

as systems of gendered ideology (1991, 2004), Lisa Nakamura is concerned with the intersections of race and gender in the context of digital media (2002, 2007), while Janice Radway has focused on ethnographic approaches to women's reception of media texts (1984). In relation to technology, American feminist scholar Carol Stabile shows the tense and often contradictory stance of American feminist movements towards technological change (1994) while Nancy Lublin critically approaches the place of reproductive technologies within feminist ideologies (1998). Media theorist Anna Munster approaches the issue of gender and media technologies obliquely, by adopting a feminist analytical framework in her reconsideration of the role of non-Cartesian embodiment, materiality and affect in relation to new media (2011, 2013), Luciana Parisi explores the ways in which contemporary science and technology can produce shifts in conceptions of sex and desire (2004), and Anne Balsamo focuses on the status of the gendered body in relation to technological developments and a range of emerging media practices (1996). However, there is a smaller tradition of writing about the way in which ontological conceptions of media technology and norms of gendered difference are often intersecting and co-constitutive, and how various ontologizations of technology are inscribed with implicit assumptions about sex and gender which trickle into contemporary understandings of media as well. I am particularly concerned with the media ontologies of Marshall McLuhan, Heidegger, and Bernard Stiegler, who are as of yet highly significant figures in the domains of media and technology. Contemporary discourses on media are conversant in such notions as media prosthetics, the instrumentality of humans and technology, or the increasingly illegible boundary between human bodies and media technologies. Therefore it is important to consider how the various ontologies of media are involved in propagating assumptions about gendered and sexual difference, and how alternative or mutated ontologizations of media technologies can have an ethical and political role in critiquing norms of gender in the context of media use.

As opposed to McLuhan and Heidegger, Stiegler's conception of technology is one that provides the means to rethink both the category of the human and that of technology, not only the relationship between them. But if we accept the model of a co-originary relation between technics and the human, be it as biological species or as ideological category, one must necessarily ask the question of what kind of human being is the epiphenomenon of such a process of technogenesis. Originary technicity denies the possibility of a 'pure', pre-technological humanity, and also posits the dissolution of any clear boundaries between the body and media technics. However, Stiegler's theory posits an abstracted, neutral and

universal human being that emerges through its intra-action with technics. This universal human figure becomes problematic insofar as there is still a deeply-rooted and longstanding tradition of associating technology and the domain of the technical with the masculine. In this tradition, which is reflected through contemporary incidents such as Gamergate, the user who is entitled to media technology emerges as a white, male, heterosexual figure who possesses the right to use, own and create technology, as opposed to the mass of Others who remain removed from the technological domain. Any liberatory ontological conception of technology as an impartial and universally belonging entity must also take into consideration the masculine bias within the history and philosophy of technology, and take steps towards dismantling these assumptions.

The question of media addiction in the contemporary cultural climate surrounding gender and technology is particularly relevant one. On the one hand, there is a growing awareness of women and other minorities' marginalized position in the tech industry. On the other hand, technology is still inferred to the 'natural' domain of men. Addiction, or intimacy with the inhuman sphere of media, is figured as a flaw in the structure of proper techno-somatic individuality, partly because of the strong metaphysical separation between the human and the inhumanity of technology. But the relationship between humans and technology in Western ontology, whether it is posited as a hierarchical one or not, is essentially a relationship between Man and technology, as can be concluded from Stiegler and Heidegger (see Chapter 3). The biopolitical imperative of the techno-somatic individual is to maintain a proper separation between himself and technics, and to maintain technics' position as a subordinate object. As explained in Chapter 2, the clarity of the human-technics boundary is threatened by the notion that technology is not simply nonhuman, but inhuman and beyond such easy separations. How do Others fit into this already complicated schema? And if Others are not entitled to a relation to technics, then how can they become techno-somatic citizens, the building blocks of the contemporary politics of life itself?

A note on femininity and women's use of technology: it is far from the goals of this project to embrace any type of gender essentialism. Femininity, rather than being causally linked to a codification of biological binary sexual differentiation, denotes a mode of being, of engaging with the world that is at odds, or challenges, or often embraces, appropriates and reworks the patriarchal values of the day. The feminine stands opposite or complementary to the tenets of the privileged masculine subject of thought and politics, and she shifts to accommodate the shifting norms that structure the privileged subjects.

The attentional practices of techno-somatic individuals

The last theoretical pillar of this project refers to one of the specific discursive techniques of through which the biopolitical subject, i.e. the techno-somatic individual, is co-opted into the power-knowledge networks of capitalism within the technosphere, namely, the management of the media user's attention. Attention can be theorized not only as a way of essentializing the intimacy that unfolds between user and media, but also the binding agent that plugs the media user, qua techno-somatic individual, into the systems of postindustrial capitalism. Attention has been co-opted as a biopolitical variable by medical science through its pathologized labels such as Attention Deficit Hyperactive Disorder (ADHD), pastorally managed through a variety of attention-herding techniques, programs and software applications, and valorized as a finite resource, commodity and labour by discourses on the 'attention economy' and 'cognitive capitalism'. Scholarly formalizations of the attention economy can be flawed and subjected to intense criticism (as will be seen in Chapter 5), but they also provided a model that was eagerly adopted by various capitalist structures whose main engine is digital media – through adverts, the coding of websites (Bucher 2012, Roberts 2012), productivity apps (Zekany 2015), search engine optimization tools whose role, nominally, is to "budget attention more effectively"[5].

The discourse on the attention economy, which blossomed with the spread of networked/digital media through the works of various business strategists like Thomas Davenport (2002) or Michael Goldhaber (1997), constructs attention as a limited and quantifiable cognitive resource that can be transferred from the user towards media objects in order to 'create value'. The more attention media attracts, the more prolific it becomes within the circuits of capital. Two of the most forceful and compelling critiques of the attention economy were staged by feminist literary scholar N. Katherine Hayles (2012), and Swiss literary theorist Yves Citton (2014). In Hayles' work, attentional processes are crucial for understanding our contemporary intimate engagements with digital media, which have profound effects on our conceptions of thought and embodiment, life sciences. Attention is a mode of intimacy with media, and as such, different media produce different possibilities of engagement – digital media co-produce forms of distributed, multivalent attention, hyper attention, while 'traditional' media such as print or television require deep attention. Importantly, Hayles stresses that these two attentional forms are adaptive modes of engagement to specific milieus; in the digital economy of postindustrial capitalism, hyper

[5] As claimed by various journalistic and self-help articles, with titles such as "Treat Your Attention as a Resource to Budget it More Effectively" (Ravenscraft 2015)

attention is a means of survival, which makes its pathologized forms such as ADHD all the more insidious and in need of critique. As for Yves Citton, his critique of the attention economy involves a systematic reframing: he argues for an ecology, instead of economy, of attention. Within the ecology of attention, it is accepted that attention is manifested under different but equally valid forms, which emerge through the confluence and tension of various relations between multitudes of subjects of attention. Citton argues against the understanding and practice of attention as a resource that can be accumulated, or labour that can be monetized, which turns the source of attention, i.e. the user of technology, into a cog in the workings of postindustrial capital.

The reframing the engagements of humans and media in terms of ecologies also opens up the possibility of envisaging media intimacy (as well as its pathologized form, media addiction) as a relation, embodied, intimate and affective form of engagement with a technical other. The discursive construction of attention as a limited resource and as a form of productivity that the techno-somatic citizen has a duty to allocate towards the proper targets (economic and biological re-productivity, heterosexual forms of intimacy) prevents the legitimations of non-normative forms of attentional practices, media addiction/intimacy among them.

Some Notes on Methodology

From a methodological point of view, this project incorporates at various points a practice of diffraction: reading and writing texts and theories through one another, in order to disturb causalities, highlight difference and create interferences. Diffractive methodologies, disseminated through the works of Donna Haraway and Karen Barad, focus on "the production of difference patterns in the world, not just of the same reflected-displaced elsewhere" (Haraway 1997, 268). In the present work, the conceptual reworking of media addiction happens through several interference patters: between Foucault, Rose and Keane, between the media theories of McLuhan, Kittler, Heidegger, between Stiegler and Stacy Alaimo's transcorporeal thought, between biopolitics, media theory, feminist studies of science and technology, between narratives of media addiction that span across different media: news articles, medical research papers, documentaries, historical narratives. Diffractive reading and writing allows interdisciplinary jumps and a certain disregard towards the preservation of linear temporalities. The media addict, the techno-somatic individual engaged in an intimate and improper relation with media, materializes across and between

diverse media histories and materialities, from 18th century obsessed reading women to late 19th century telegraph operators, late 20th century fangirls and 21st century adepts of the Google Glass. These interference patterns allow us to see the multiple discursive facets of the media addict (user of technology, and used by technology; sovereign techno-somatic individual, and biopolitical-capitalist subject; powerless addict, and affectively and intimate connected to media) not as distinct phenomena, but as intra-acting processes. For Barad, diffraction entails the recognition that things, phenomena, categories "do not produce absolute separations, but rather cut together-apart (one move) . . . an iterative (re)configuring of patterns of differentiating-entangling" (Barad 2014, 168). That is to say, the goal of this project was not to carve out or identify a stable position for the media addict within the biopolitics of the technosphere, but rather to highlight and mobilize the contradictions, overlaps and leakages of the media addict into an even more open and fluid subject position.

Within this project, diffractive reading is understood as a method of reading and writing modelled on quantum physical notions of touch, as Karen Barad explains in her 2012 concluding essay in *Differences*. For Barad, reading writing and thinking diffractively entails entanglements and layerings, and acknowledging that "theories are not mere metaphysical pronouncements on the world from some presumed position of exteriority. Theories are living and breathing reconfigurings of the world" (Barad 2012, 207). A diffractive reading is an act of material reconfiguring, a means of approaching the problem of epistemology without fixing or pinning down the relationship between object and subject, knower and knowledge, signifier and signified. While in one sense diffraction involves reading texts and theories through one another, and allowing them to modulate each other, to bring out and harmonize their differences while creating something new, it is also a way of opening up the possibility of subject positions that would not otherwise be tenable. Hence, the figure of the media addict that emerges from this work is a figure of diffraction – not just the outcome of diffractively reading biopolitics, media theory and new materialism, but also an experiment in rematerialization.

One of the small contributions of this research is the quest towards a transcorporeal understanding of human-media engagements, which was sought through diffracting Stiegler's originary technicity with Stacy Alaimo's transcorporeal subjectivity, which lead towards an articulation of the techno-somatic individual – the media user as embodied, material and relational subject which can never be considered apart from its milieu and all the human and nonhuman matters that it contains.

Through the influence of Alaimo and Barad, this work is grounded into feminist new materialist scholarship. The core commitments of the new materialisms, from Haraway to Van der Tuin (2014), are to trouble notions of the self, otherness, identity and difference, matter and discourse, binaries between humanity and nonhumanity in all its forms, to affirm the relationality of ontologies, and to scramble the conventional separation between rational humans and their surrounding milieu (Alaimo 2014, 16). Thus, this work approaches media across diverse material-semiotic configurations and historical entry-points, in an effort to critically examine the assumptions and conditions that render it open to a biopolitical capture in the shape of media addiction and associated labels, while also keeping in the forefront the materiality and embodied nature of media use.

Chapter 1: Producing the disordered media user

> In the end, it is always, I think, under this charge that the interdiction is declared. We do not object to the drug user's pleasure per se, but to a pleasure taken in an experience without truth. – Jacques Derrida, *The Rhetorics on Drugs*[6]

Introduction

The century-old ceramic tiles that adorn the stations of Budapest's underground, the second oldest in the world, are covered in national public awareness campaign posters. Several of them depict a teenage boy, his torso encrusted with electronic circuits, eyes downcast, large headphones covering his ears. 'I am part of the network', the boy proclaims. But the bolded letters of the campaign tag line warn: 'Tell your child that there is life outside the web'. Hungary's youth prefers the company of machines rather than their social groups, the poster seems to say, and they need to be brought back into the fold. Similar thoughts radiate from the academia as well: sociologist of science Sherry Turkle, who wrote extensively on the psychology of human-technology relationships, also mourns the loss of social connectivity and affective relations caused by the Internet in her book *Alone Together* (2011). An inside perspective is provided by former self-described Internet and gaming addicts, who write cautionary tales about the dangers of falling into the trap of excessive technology use: titles such as *Unplugged: My Journey into the Dark World of Video Game Addiction* or *Cyber Junkie: Escape the Gaming and Internet Trap*. The problematic usage of media is also a frequent feature in various news outlets as well – Google Alerts set for 'media addiction' and 'internet addiction' turn up one or two results daily. Their titles may range from "A Nation of Kids with Gadgets and ADHD: Is technology to blame for the rise of behavioral disorders?" (Rock, 2011) to "Is social media bad for your mental health?" (Burley

[6] Derrida 1995, 236.

Copley, 2014). The prevailing theme is the way in which media technologies restructure social relationships, cognitive functions, and even the body at a biological level. In these discourses, the problematic uses of media are presented not only as an individual problem, but as the expression of a wider phenomenon that affects the social fabric. These writings suggest that even when posed outside the scope of medical science, the question of media's potentially harmful effects over user's lives is a pressing one. And judging by the growing number of medical studies on media's adverse effects, these concerns are certainly not justified.

One might be tempted to partially ascribe this media-inspired anxiety to some manner of misplaced nostalgia for a purer, more natural and less technologized past. However, such simplification would obscure the complicated set of relationships woven between the cultural history and meanings of media, and their involvement in the construction of subject positions amenable to the techniques of life management proper to the second half of the 20th century and early 21st century. A longing for a non-technologized, purely human past is unquestionably layered onto much of the contemporary discourse on problematic media use, and it also a cyclically recurring topos in the cultural history of media technologies, as will be seen in Chapter 2. However, these cultural obsessions cannot be simply dismissed as a naïve kind of humanism that should be ignored in the name of progress. Instead, attention should be paid to the political stakes of such discourses, and the subject positions that they bring into existence, as well as the biopolitical locus of these new subjects. In other words, if improper media use is polymorphously constructed into a somewhat coherent discourse at this time, then it is certainly worth investigating the mechanisms through which its constitution takes place, as well as the socio-political reasons that drive the emergence of 'improper' media use as a modern condition.

Media use has become an object of inquiry for medical science at the turn of the 21st century, with the first peer reviewed research on 'computer addiction' having been published in 1991 in the journal *Behavior and Information Technology* (Shotton 1991). The medicalization of media use, however tentative it might be, indicates that the way in which people use media technologies is subject to regulatory practices – it has been decisively included into the domain of biopower. The chief manifestation of anxiety over the potentially pathological nature of media use is formalized under the labels of 'internet addiction' and 'gaming addictions', but they are connected into by countless satellite discourses manifesting the same type of concern, expressed in different vocabularies. The language of medicine functions with a strong moral component in the case of media use.,

Sherry Turkle aptly articulates these concerns in *Alone Together*, her exploration of the changing landscape of intimacy, authenticity and human relationships in the age of networked media: "technology reshapes the landscape of our emotional lives, but is it offering us the lives we want to live?. . . Are these propositions psychologically, socially and ethically acceptable propositions? What are our responsibilities here?" (Turkle 2011, 17). For others, the moral angle is often rooted into the facticity of neuroscience. According to Nicholas Carr (2010), attention must also be paid to the effects of media use on the nervous system itself. It is not even the content of these media that we should be concerned with, but rather their mere permeation of human lives: "Media work their magic, or their mischief, on the nervous system itself. Our focus on the medium can blind us to these deep effects" (2010, 15). For Turkle as well as for Carr, media technologies are not seamlessly integrated into the fabric of day to day existence; they are put into the spotlight, not because they might deliver specific information that could harm the audience[7], but simply because their existence renders them abnormal in some sense.

Media are involved in changing our understanding of sociality, intimacy, and even the functioning of our anatomies, for Turkle, Carr, and many others. These scholars and social commentators are searching for the answers of powerful questions: what media do, and what their users become? These questions are legitimate considerations insofar as the management of life is concerned: they are biopolitical in nature, they are involved not only in the disciplining of individual bodies and their media habits, but in the management of entire populations. If for some users media erode traditional modes of social and political engagement, and even put them outside of the normal limits of health and sickness, then what is to be done with these users? Should either users or the media be understood in terms of potential threats to those whose life remain yet untouched? And what are the stakes of marking some types of media users more dangerous than others? How are media-infused lives to be understood, and managed? These questions are in large part prompted by Turkle's work on technical intimacies and their displacement of human affective bonds, as well as the example of the Google Glass 's destabilization of both social behaviour, economic function and biological state. These two intersecting stances will return again and again over the course of this work to showcase the imbrication of life processes and technology in the contemporary discourse on media use and abuse.

[7] As, for example, the discourse around inappropriate violence and sexual content in media that are available to children, which are thought to potentially affect children's later stage psychological development (Earles et al. 2002)

This chapter seeks to address the problematics of media addiction and improper media use, and to set up a framework for understanding the place of media use within biopolitical regimes of power. More specifically, it is investigating the possibility of the media addict as a key biopolitical figure in the contemporary 'politics of life itself'. First I will introduce the theoretical framework of this project, namely the construction of biopolitical subjectivity. I will begin with Michel Foucault, who in *Society Must Be Defended* and *The Birth of Biopolitics* lays out his theory of biopolitics and the technologies of power particular to the management of life. Foucault offers a framework through which to understand phenomena such as problematic media use as situated at the nexus of disciplinary techniques, and the newer techniques of biopower. As such, media use can be examined as a phenomenon that is mobilized by mechanisms that govern the management of life, or, as Foucault puts it, which conduct the conduct of man (Foucault 2009, xxii). The work of Nicholas Rose on the subject of the 'somatic individual' takes Foucault's work a step further, and focuses on the shifts within the technologies of power at a time when medical science no longer attends only to bodies, but dives down to the level of cells and molecules, disintegrating the subject's body into its component particles.

All of the above are theories on biopolitical techniques that lead towards the construction of the media user as a potential Foucauldian 'disordered' subject. I argue that the media addict, constructed as biopolitical figure through techniques of power that are at the same time medicalizing and ethical, is at the crossroads between discourses of self-governance, productivity and autonomy, as well as a discourse that sets up the influence of media technologies as an inescapable trap. The theoretical scaffolding of biopolitics will provide an intimate view into how problematic uses of media become part and parcel of the biopolitical mode of organization in postindustrial capitalist cultures. The last part of the chapter will focus on specific narratives of media addiction as disorders that can be remedied through the practice of responsible somatic citizenship. Examples of recuperation by former media addicts, such as the Google Glass addict, show that the figure of the improper media user is always somewhat in excess of its biopolitical reading, and evades its complete management through the politics of life itself by diffracting its configuration onto questions relating to the very onto-epistemology of media itself, which will be further explored in Chapter 2. However, the figure of the media addict can also pave the way towards the possible alternative, affirmative readings of problematic media use outside of a classical biopolitical framework.

1. Foucault's Biopolitics

Disciplinary power and biopower

Throughout his expansive oeuvre, one of Foucault's chief preoccupations was reflect on the relation between truth, power, knowledge and the discursive constitution of subjectivity. While in some way or another most of his works show a concern with life and the living, his series of lectures at the College de France constitute a rigorous and targeted discussion of the ways in which life has been historically managed through various regimes of power-knowledge. This section approaches the notion of biopower and biopolitics as elaborated in Foucault's 1975-76 lecture titled *Society Must Be Defended*. The lecture marks one of the first explorations of what Foucault calls a new paradigm of power, biopower, a mode of operation of power that differs from its earlier constraining and judicial form, instead operating on the management and production of life.

During the times of feudal rulers and absolute monarchs the sovereign held the power over life and death, that is, to "put people to death or let them live" (1997, 240). In this political framework, the subject had no bearing on her own life or death, and it was merely the will of the sovereign that made life or death a right of the subject. This hierarchical model of power headed by the sovereign began to change in the 17th and 18th centuries, when we saw

> "the emergence of techniques of power that were essentially centered on the body, on the individual body. They included all devices that were used to ensure the spatial distribution of individual bodies (their separation, their alignment, their serialization, and their surveillance) and the organization, around those individuals, of a whole field of visibility. They were also techniques that could be used to take control over bodies. Attempts were made to increase their productive force through exercise, drill and so on." (1997, 242)

The disciplinary type of power was one that was concerned with the management of the individual through various mechanisms that instructed, constrained and educated. A second shift occurred in the 19th century, when a new kind of power emerged, one directed not to the human as an individual body, but to "the living man, man-as-human-being" (Ibid.). The sovereign power to let live or make die was transformed into the power to make live or let die. The new nondisciplinary power, or biopower, did not replace disciplinary techniques, but instead infiltrated them. A point that Foucault stresses repeatedly through his lectures is that disciplinary power and biopower operate on two different but ultimately integrated levels, targeting different aspects of life and employing different instruments.

In Foucault's conception, the object of biopower – the species – is more than an aggregation of individuals; it is an organic whole, a multiplicity, a "global mass" that ticks according to processes "characteristic of birth, death, production, illness and so on" (1997, 243). Foucault calls this new politics *biopolitics*, as opposed to the previously existing anatomo-politics of individual bodies. This new politics centred on statistics, birth rates, mortality rates, life spans is not a replacement of the politics of the individual bodies, a point which Foucault insists on numerous times. The two powers become interlaced, infiltrating and feeding off one another. The politics of the individual and the politics of the species are inseparable in that way, even if they are often analysed separately.

Techniques of power

Foucault gives three important examples of the techniques particular to biopolitical governance. First, the development of medical institutions that are concerned with the prevention and treatment of disease, through campaigns for public hygiene, for example. While his examples relate to the 'birth' of biopolitics in the late 18th century, one can easily find comparable deployments of power in contemporary times as well, such as vaccination campaigns. Such techniques focus on preserving the health of the population, not only through direct intervention, but also through a mode of channelling medical power by recourse to moral discourses. To take the example of vaccination campaigns, these often deploy the idea of a public moral responsibility as a tool. In their analysis of HPV vaccination campaigns in Canada, Connell and Hunt argue that the "HPV campaign is illustrative of the moralization of health, a convergence of the regulatory discourses of moralization and medicalization in an era of biopolitics" (2010, 63). Their research describes how the campaign appeals to the sense of responsibility of parents with non-adult daughters, positing vaccination as a necessary safety measure that can reduce the risks of cervical cancer, while also bringing in discourses on teen sexuality, abstinence and STIs (2010, 74-75). Such medical campaigns (including Foucault's example of public hygiene campaigns) suggest that when it comes to the techniques of power engaged by medical institutions, moral discourses are intimately tied into medical tools of prevention and treatment.

Foucault's second example of biopolitical techniques relates to the way in which anomalies, accidents and infirmities are treated. He notes that in order to deal with these potential problems, biopolitics establishes a variety of institutions such as charities,

associations, funds[8], but deploys more subtle mechanisms as well, like insurance, individual and collective savings, safety measures, etc. (1997, 244). Such institutions provide a space for the separation of the ill and infirm from the rest of the population with a dual purpose: the potential rehabilitation, or the sustained care of the ill and infirm, all the while keeping them contained from the rest of the 'healthy' population. The subtler mechanisms he mentions have the role of either altogether preventing illness or infirmity, or offering a safety net in the event of their occurrence. As for the third main instance of biopolitical governance, it is concerned with the relation of the human species and its environment (1997, 245). This happens through means of control of the environment so as to protect the species, whether one means natural or urban environments. (Foucault gives the example of epidemics originating in swamps in the 18th century; in the contemporary context, some relatable examples could be natural disasters or pest-borne illnesses in heavily populated urban areas).

For Foucault, the above three types of techniques do not encompass the entirety of biopolitical power, but are its main pillars; he argues that biopolitics derives its knowledge and field of intervention based on these techniques (1997, 245). The object of these techniques is not the individual, or at least not quite: it is the individual in its multiplicity as species. This is not to say that the individual becomes meaningless within a biopolitical lens, but that the phenomena that biopolitics considers meaningful[9], seem random and unpredictable when considered individually, but reveal consistent patterns when seen at the level of the collective (1997, 246). In his words, the mechanisms of biopolitics are not meant to "modify any given phenomenon as such, or to modify a given individual insofar as he is an individual, but, essentially, to intervene at the level at which these general phenomena are determined, to intervene at the level of their generality" (1997, 246). This might mean that from a biopolitical perspective, the techniques of power are not meant to eradicate phenomena that affect the species in a negative way[10], but to restrain them, to make them pliable and open to such interventions as are deemed necessary in order to maintain balance. Disciplinary techniques and the techniques of biopower are complementary, acting on different aspects of life: the first renders the individual docile and useful, while the second is focused on a living mass (249). This is an extremely important point, because it suggests that Foucault's biopolitics does not minimize the importance of the individual, but instead

[8] Although he does mention that these types of institutions have existed even before the dawn of biopolitics (1997, 244)

[9] I.e. pertaining to the continued health and wellbeing of the population, or at least a certain privileged segment of the population.

[10] Negative ways, that is ways that are not conducive to the species' survival qua species.

reframes it: the individual remains the ground zero from which collective analysis can proceed, and therefore still an important part of larger biopolitical considerations, such as forecasts, statistical estimates and overall measures.

As mentioned before, as opposed to the disciplinary techniques that sought to regulate individual bodies, the purpose of biopolitics is to "achieve overall states of equilibration or regularity; it is, in a word, a matter of taking control of life and the biological processes of man-as-species and of ensuring that they are not disciplined, but regularized" (1997, 247). The mechanisms of biopolitics work towards achieving a state of homeostasis, "that protects the security of the whole from internal dangers" (249). This state of equilibrium is obtained through the imposition of norms, which act as a bridge between the individual and the population. A norm, as Foucault argues, can be applied both to a body that has to be disciplined, as well as to a population that needs to be regularized (1997, 253). The result is a normalizing society, situated at the point of articulation between disciplinary and biopolitical techniques. It is precisely this notion of normalization that can be seen to underlie such discourses on problematic media use as mentioned in the introduction to this chapter. The medicalization of media use, as evident in the on-going research into the bodily effects of media use, coupled with the moral discourse on the effects of media use on the social body, suggest that the relationship between people and media is being put under the lens of the biopolitical gaze.

Biopower, productivity and reproduction

In a piece published in the online edition of *The Telegraph*, media critic Nicholas Carr argued that the presence of Internet in the day to day lives of people leads them to becoming less focused, less creative, less capable to remember information – in a word, less productive (Carr 2010). The division of attention enforced by the structure of the web gives people no choice but to process multiple stimuli at the same time, and to spring from cluster of information to cluster of information without cementing meaningful concepts in one's memory. Carr cites studies according to which "our brains can't to forge the strong and expansive neural connections that give distinctiveness and depth to our thinking. Our thoughts become disjointed, our memories weak" (Ibid.). Although networked media lead to increasing one's multitasking skills, according to Carr and the researchers he cites, multitasking does not equal productivity in solving tasks and critical thinking, and these effects are permanent: using technology changes the neural pathways in our brains. Productivity, or lack thereof, seems to be the implicit keyword in the medical research

reviewed by Carr, as well as for Carr himself. The damage caused by networked media is not contained to a few scattered individuals, but takes the shape of a social ill that affects entire economies, cultures and populations.

The above studies skirt around the idea of economic productivity, even if they do not explicitly mention it as such. In the case of media use, as will be discussed in more detail in Chapter 5, discourses on productivity oscillate between the privileging of a deep commitment to focus and deep thinking (which N. K. Hayles understands as 'deep attention'[11]), and the increasing acceptance of a distributed type of engagement with the process of production, demanded by the abundance and variety of media technologies that have become integrated into the fabric of day to day life in Western societies. The need to focus, to think deeply, to accomplish tasks without distractions and to manage one's media use so as to best serve one's potential to be productive all conjure up capitalist ideals of productivity and productive labour, but the same can be applied to the subject's capacities to flit and switch from one object to another, shifting focus with seamless dedication to maintaining productivity. In the words of Emily Martin, the focus is on the flexibility of bodies and their mobilization towards the maximization of capital (Martin 1994). However, flexibility is not an intrinsic condition of the subject, who is permanently in peril of stepping away from the path of productivity.

The user of media is endangered and a cause for concern not only because her condition is inextricable from the management of the population's health, but also because she is becoming a less socially and economically productive member of society. But who is this distracted subject whose productivity is so important for Carr and others? Although Carr's meditations on the loss of productivity are voiced in carefully gender neutral terms, one cannot help but wonder if gender is truly so irrelevant for this type of analysis, especially in the view of the rich feminist materialist criticism of production and labour. The issue at hand is that productivity cannot be discussed separately from gender and reproduction, due to the very different assumptions that accompany productivity in the case of women and men. This section will attend to the gendered politics of production and reproduction within biopolitics in order to examine how such an analysis might shift the interpretation of discourses on productivity that shape the onto-epistemology of media use, and therefore of biopolitical figures such as the media addict.

[11] See Chapter 5 for an in-depth discussion of Hayles' work on attention and the forms it takes in the contemporary capitalist and media climate. Deep attention refers to an attentional mode that is proper to 'old' media such as books, and it allows a sustained and focused mobilization of attention towards one specific object.

In contrast to Carr's ungendered productivity, some feminist theorists have engaged with the gendered angle of 'unproductivity' as portrayed in literature on improper media use. Lori Reed provides several examples of early research on Internet Addiction specifically focused on women. The women whose Internet addiction was studied became an object of concern for researchers because their productivity in the domestic sphere was diminished due to their disorders. In these examples, the result of Internet use was child abuse, neglecting domestic work and partners (Reed 2010, 58). Reed argues that the pathological category of Internet addiction, in these cases, functions as a disciplinary technology as well as a technology of gender by organizing and stabilizing the 'proper', historically and culturally contingent set of social relations (Reed 2010, 60). In other words, women's Internet addiction, as a loss of productivity, becomes intelligible through the reproduction of norms of femininity that keep women grounded in the private sphere of affective and reproductive labour. Women's productivity, then, is often tied into norms of social reproduction, rather than the neoliberal embracing of intellectual labour.

This invites an examination of the relations between political and economic systems, the norms of productivity derived from them, and the place of gender in this type of analysis. For Foucault, biopower and economic systems are symbiotic, and while he might not have performed an explicitly gendered analysis, he did focus carefully on sex. In his 1978-79 lectures *The Birth of Biopolitics*, he continues his interrogation of the new paradigm of power, and importantly, he closely examines the way in which biopower functions as a condition of possibility for the emergence of neoliberal capitalism, thus linking the management of life with the doctrine of productivity. Although biopolitics itself does not feature as prominently in these lectures as in previous ones, Foucault starts by arguing that despite their apparent oppositions, the logic of neoliberalism and biopolitics are intertwined. While the arguments he advances in *The Birth of Biopolitics* are far too complex to be covered here, it is clear that Foucault thought that neoliberalism and biopolitics should take on a joint analytical form: "It seems to me that it is only when we understand what is at stake in … this governmental regime called liberalism … will we be able to grasp what biopolitics is" (2008, 22). In short, the issues that biopolitics is concerned with should not be considered independently from the concerns of liberalism.

In her reading of *The Birth of Biopolitics*, Johanna Oksala argues that neoliberalism is actually a 'powerful mutation' of biopolitics: the regimes of truth that are privileged under neoliberalism drive towards the same aims as biopolitical governance: "the maximal material wellbeing of the population. Only economic growth, a continuous increase in productivity,

can deliver higher living standards for everybody and thus ensure the best care of life." (2013, 61). According to Oksala's interpretation of Foucault, the form assumed by biopolitics in contemporary Western culture is essentially determined by neoliberalism (2013, 62). The discussion of the tensions and reinforcements between neoliberal political rationality and biopolitics is too intricate to be accurately portrayed within the pages of the present work[12]. However, this digression was meant to bring attention to the potential importance of neoliberal values of productivity, self-enhancement, self-responsibility, and autonomy are inscribed in the current iteration of biopolitical governance, and relevant for an approach to media use.

Productivity in particular is of interest when it comes to constitution of the modern subject of biopolitics, due to its potential semiotic and ontological associations with ideas of reproduction, social, sexual or otherwise. By productivity I mean the capacity for material, intellectual, reproductive or affective labour. As a measurement of labour, productivity is necessarily gendered. Feminist theorists have repeatedly emphasized and critiqued the mind/body, nature/culture, public/private divides and the resulting gendered division of labour[13] that leads women to be primarily associated with affective and reproductive labour. Woman, as the other of man, remains crudely carnal, fertile, unreasonable and instinctual, a "necessary evil for reproduction" (King 2004, 31). Her productivity must therefore also be adapted to the innate capacities afforded by her gender. Productivity cannot be an innocent concept, and is itself always already gendered. In this case, whose productivity really matters for sustaining the neoliberal-biopolitical complex? Whose productivity is must be preserved by maintaining the population healthy and fit? And whose productivity is threatened by the excessiveness of the Internet in Carr's example above?

While he was certainly interested in the modes of regulation and production of the sexual subject, Foucault did not seem to pay much attention to the way in which the techniques of power produce, train and regulate *gendered* bodies, which has garnered him a fair amount of critical attention from some feminist theorists. Lois McNay argued that Foucault failed to consider the gendered nature of the various techniques of biopower and disciplinary power (1992, 11). While power creates docile bodies, some bodies are produced to be more or less docile than others, depending on gender. Angela King, following her analysis of gender's absence in Foucault's work, argues that gender, i.e. masculinity and

[12] A nuanced and detailed discussion of these issues can be found in Nilsson and Wallenstein (2013).
[13] Boris and Salazar, 2010; Goodman, 2013; Huppatz, 2012; Bakker and Gill, 2003.

femininity, is a disciplinary technique that "produces bodies and identities and operates as an effective form of social control" (King 2004, 30).

Where does this leave the docile, productive biopolitical subject of biopolitics? I would argue that specific gendered embodiments certainly matter, especially when thinking about inequality and exploitation of certain gendered, raced and classed categories. However, strictly in terms of abstract productivity, in terms of productivity as a necessary condition of neoliberal capitalist governance, sexuality is the principal object of care and regulation. For Foucault, sexuality is the fuel that powers the machine of biopolitics. It is the disciplining non-normative sexual practices and through rewarding heterosexual production and reproduction that underlies the management of life, as well as its mobilization as capital. In other words, sexuality is a privileged site of control within the framework of biopolitics. At the same time, all other sites of control under biopower are connected to, or are in the service of maintaining sexuality as a site of discipline and management. The heterosex/homosex binary, while occupying a major role in Foucault's analyses of sexuality, can also be understood as a duality of productive versus unproductive sex. Foucault argued that the transformation of sex into discourse had as its goal

> the endeavour to expel from reality the forms of sexuality that were not amenable to the strict economy of reproduction: to say no to unproductive activities, to banish casual pleasures, to reduce or exclude practices whose object was not procreation (Foucault 1978, 36).

The maintenance and adherence to the norms of sexuality have a profound importance for Foucault's biopolitics. Proper sex is meant to "reproduce labour capacity, to perpetuate the form of social relations: in short, to constitute a sexuality that is economically useful and politically conservative" (Foucault 1978, 37). Proper sexual conduct also ensured that the individuals engaged in it escaped the searching gaze of regulatory practices; the "legitimate couple, with its regular sexuality" did not suffer the same amount of scrutiny as potentially dangerous individuals such as "children, mad men and women, and criminals; the sensuality of those who did not like the opposite sex; reveries, obsessions, petty manias, or great transports of rage" (Foucault 1978, 38). The construction of gender, while it goes unmentioned yet again, is impossible to ignore when speaking of the legitimate couple and its regular sexuality. The couple as a unit of discipline and regulation, and its adherence to sexual norms, was also a site for the production of specific gendered embodiments, as well as a site for reproduction.

The techniques of gender, historically contingent as they may be, hinge on the enactment of proper sex – in other words, a proper capacity for re-production. Notions of productivity and reproduction articulate into the constitution of gendered and sexual norms, and the management of productivity cannot be neatly delineated from the management of key biopolitical operations such as sexuality and gender. The techniques of biopower and disciplinary power ensure the production of a biopolitical subject who is sexed, sexual, gendered and productive in all the appropriate ways. To return to Carr's article on lack of productivity and Reed's internet addicted women: read as biopolitical interventions, both cases show the need to situate productivity within the map of gender, sexuality, reproduction.

An important implication of the gendering/sexing of productivity is that such re-productivity must be a relationality that emerges between humans, with the complete exclusion of the nonhuman from this equation. The moral and legal status of bestiality is the most blatant example of this. However, the human-nonhuman unproductive coupling is not necessarily one that skirts legal and ethical boundaries. Sherry Turkle touches upon a related point when she is examining the ethical implications of companion robots for children or the elderly, which invite their users to conjure up fantasies of mutual affection (Turkle 2011, 68). But technical nonhumans can also be included into sexual engagements, in the guise of 'sex robots' that can provide not only sex but also romantic companionship (Parsons et. al 2016). Such unions are valuable as part of the capitalist system's proliferation of consumer goods – the robots themselves are a valuable commodity – but their users are in precarious position of being useful elements within the flow of capital, as consumers, but potentially biopolitically promiscuous due to a sexual conduct that is a non re/productive masculinity[14].

2. Biopolitics in the 21st century

Power is everywhere, it infiltrates and diffuses into bodies, institutions, regimes of truth; it is does not simply repress or coerce, but produces; it is not static and owned, but fluctuating and negotiated. These are the traits of power that Foucault insisted on time and time again. And while these characteristics might be inscribed into the very nature of biopolitical governance, the means and techniques through which power operates are far from unchanging. The social and scientific configurations of late 20th – early 21st century produced

[14] Unsurprisingly, 'sex robots' generally mimic femininity, both in fiction and reality. Laurie Penny also makes a compelling argument that AI's and robots are designed with female characteristics due to the cultural and political context in which femininity and labour are produced and understood, as many robots are built to perform work that is currently predominantly done by women and girls (Penny 2016).

what some theorists call ‘mutations’ in the operation of biopolitics. This section will examine the production of the biopolitical subject in the wake of the emergence of biomedicine and new ethics of care of the self.

The somatic individual

The second half of the 20th century brought about the intense and sustained development of what can be termed as the biotech industry. The sequencing of the human genome, the advances in reproductive technologies and the invention of a new generation of psychopharmaceutical drugs led to the belief that the human body and mind could eventually be manipulated from its very building blocks. This new shift within the knowledge regimes of medicine and politics produced as much hope as apprehension, leading to the development of disciplines such as bioethics that could provide the tools to evaluate these issues (Rose 2007, 2). The realization and the expectation of new forms of life based on biotechnological research demand a new political understanding as well, according to Rose: vital politics, or the “politics of life itself” (Rose 2007, 3). As opposed to the vital politics of the past, when the health and illness of the population was the chief concern, Rose argues that the politics of life itself focuses on the “growing capacities to control, manage, engineer, reshape, and modulate the very vital capacities of human beings as living creatures” (Ibid.). The mechanisms of biopolitics earlier described by Foucault are not invalidated, but nonetheless suffered several mutations.

First, life is no longer understood only at the levels of either individual body or living mass, but at the molecular level as well. That which is manipulated resides more and more often at a microscopic level, and its manipulation does not only entail a shift from healthy to ill, but rather involves practices of recombination, identification, isolation and intervention that are not constrained by traditional ideas of the ‘natural order’ (Rose 2007, 5). Contingently, since medical science is not exclusively constrained by the poles of health and sickness, the emphasis falls on optimization instead. The goal of medicine is to secure “the best possible future” for its subjects (Ibid.). Importantly, the subject itself undergoes a process of recoding as far as her rights, responsibilities and expectations of illness and health are concerned. This signifies, for Rose, the birth of a ‘somatic individual’ – a way for the subject to relate to herself as well as to power-knowledge through the pursuit of ‘the best possible future’ at the level of the body as organism. For Rose, this decomposition of life into bits and pieces, cells and genes, leads to the development of bioeconomy: a set of economic relations that accumulate, valorise and trade on these bits of life and transform them into

capital. Biopolitics today, for Rose, is irremediably intertwined with bioeconomy (Rose 2007, 8). In enumerating these mutations, Rose disavows any intention of claiming a fundamental break with Foucauldian biopolitics, but rather to highlight the importance of attending to continuities as well as changes.

Despite the emerging focus on molecularity, many of the practices of diagnosing and treatment still take place at the molar level: at the scale of the body, organs and vital functions. However, what Rose's analysis brings to the forefront is that pathological phenomena are researched by examining them at their molecular level. As he argues, the immediate response to a new viral outbreak is to investigate the molecular structure of the virus. A similar response can be encountered even in the case of pathological phenomena that are not contagious by nature. For example, in the case of problematic media use, researchers have identified a link between the CHRNA4 gene and internet addiction in an experiment conducted in 2012. The paper presented a possible "molecular genetic link between serotonergic and dopaminergic neurotransmission and Internet addiction" (Montag et al. 2012, 191). The study was not conclusive in finding a definite link between the CHRNA4 gene and internet addiction, but rather a more general range of cognitive, emotional, and addictive behaviours. But if future studies manage to produce incontrovertible evidence that internet addiction is genetically determined, that evidence would open up the possibility of future generic manipulation or screening that could eliminate the risk of internet addiction altogether. Despite being framed largely as a cultural phenomenon, under the regime of the politics of life itself, even vague pathologies like media addiction could be broken down to their molecular causes and then eradicated. This molecularization is not innocent, and serves a deeply political purpose, since the scientific and popular legitimacy of medical conditions today seems to hinge strongly on their ability to utilize the language of molecularization. If it is in the genes, then it must mean that it is real.

These cases show that, as Rose argues, molecular biopolitics concerns "all the ways in which such molecular elements of life may be mobilized, controlled, and accorded properties and combined into processes that previously did not exist" (Rose 2007, 15). The keywords in this process of mobilization seems to be optimization, maximization, enhancement (Rose 2007, 17), but these attempts towards the 'best possible future' are not limited to the medical experts. Rose argues that concomitantly with the emergence of the new politics of life, potential patients become "key actors in the economics, politics, and ethics of health" (Rose 2007, 22). Patients are no longer the passive receptacles of medical intervention, but are expected to be actively engaged in the maximization and enhancement of their own vitality

(23). The contemporary forms of subjectification that emerge in conjunction with biomedicine create imperatives "for the self and for others, to maximize the vital forces and potentialities of the living body" (Ibid.). Preserving and enhancing one's health becomes a moral imperative within the politics of life itself. The subjects of biopolitics are now somatic individuals, that is, "beings whose individuality is, in part at least, grounded within [their] fleshly, corporeal existence, and who experience, articulate, judge and act upon [themselves] in part in the language of biomedicine" (Rose 2007, 26).

Somatic individuality, under the aegis of personal accountability that governs it, leads to the creation of identities that crystallize around particular disorders. Support groups and patient associations, for example, are means through which the somatic individuals form collective identities to "meet to share experiences, lobby for funding research into "their" disease, and change their relations to their children, their environment, and their forms of life" (Rose 2007, 21). These somatic collective identities signify the reciprocal, entangled relationship between the 'experts' and individual patients, but also seems to suggest a capture of subjectivity by pathology, in the sense that the individual herself becomes a 'representative' of a particular pathology.

The search for the molecular underpinnings of diseases has also lead to the production of what Rose calls "pastoral power", whose role of to advise patients (and future patients) on the shaping of a form of life in the name of health. Pastoral power is represented by somatic experts whose purview is not limited to strictly medical interventions. The pastoral therapists can range from dieticians to remedial gymnasts, psychological therapists, addiction counsellors, relationship counsellors, sex therapists and many more (Rose 2007, 28). This list of pastoral figures suggests that health has taken on a very broad meaning in the new biopolitical framework, extending well beyond purely anatomical wellbeing. The role of the 'pastors of the soma', as Rose calls them, is partly ethical, since their role is to guide somatic individuals who are already held responsible for their medical future. However, their guidance translates into

> microtechnologies for the management of communication and information that are inescapably normative and directional . . . blur the boundaries of coercion and consent [and] transform the subjectivities of those who are counselled, offering them new languages to describe their predicament, new criteria to calculate its possibilities and perils, and entangling the ethics of the different parties involved.(Rose 2007, 29)

Here Rose implicitly stresses the extent to which somatic individuals are held accountable for the management of their health. The 'pastors of the soma' are ready to pre-

empt and treat any signs that might suggest illness, be it of the body or the psyche. The pastoral power stemming from molecular biopolitics seemingly encompasses all aspects of lived experience: anatomical functions, cognitive functions, social relations. The somatic individual is theoretically offered all possible means to ensure the best possible future for herself. The pastors of the soma offer the subject a ways of "rendering aspects of oneself into thought and language, new ways of making oneself and one's actions amenable to judgment" (Rose 2007, 74), so as to attain a ubiquitous but nonetheless vague idea of a 'quality of life'. The somatic individual is therefore situated in a quaint position: on the one hand, her corporeality is defined by the tenets of current biomolecular research, and on the other hand by her own responsibility to manage and construct herself as living being living a 'proper', good life.

Disorders of desire

The previous section focused on Rose's reformulation of biopower so as to incorporate the development of biomedicine and the molecularization of health, with the attending mutations that these power-knowledges inflected on Foucauldian understandings of biopower. With the somatic individual positioned at the heart of biopolitical techniques, all aspects of human life that could pertain to maintaining a desired 'quality of life' have been drawn under the purview of life management techniques. This section will provide a closer look at one particular aspect of lived experience: disorders of desire such as addiction, dependences and cravings. [15]

The DSM-5[16] has an entire chapter devoted to "Substance-related and addictive disorders", with two main entries on the subject of addictions: substance use disorder and addictive disorder (2013). Substance use disorder is broken down into categories according to the used substance (e.g. alcohol, various drugs, caffeine, etc.) but all disorders in these categories are diagnosed based on the same overarching principle[17] (American Psychiatric

[15] The Diagnostic Manual of the American Psychiatric Association features heavily both in this chapter, as well as the dissertation as a whole. The focus on the authority of US-centric medical institutions and discourses is not meant to privilege the US perspective, but rather to acknowledge how influential these institutions are in shaping a global discussion on mental conditions in general, and addiction in particular. While there are certainly many culture-specific discourses that can be broached on the topic of addiction and various mental illnesses, the DSM is accepted as an authoritative discourse in many contexts, both popular and scientific. As an example, in the Romanian context, the DSM-5 is cited as a source in several diagnostic descriptions of ADHD (Croitoru 2016, Popescu 2008), even if in Romania ADHD is officially diagnosed according to the World Health Organization's International Classification of Diseases (ICD) (Iancu 2007).

[16] The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), edited by the American Psychiatric Association (APA 2013)

[17] Namely, the patient must display at least two to three symptoms from a list of eleven (APA 2013)

Association, 2013). The category of addictive disorders, however, is a relatively new one, and the only disorder included so far in the category is pathological gambling (Ibid.). While substance-use disorders and addictive disorders have different types of objects of desire, the APA considers both to have similar clinical expression, brain origin, comorbidity, physiology, and treatment (Ibid.). While these two conditions are the only two kinds of diagnosable disorders according to the DSM-5, and appendix to the manual mentions Internet gaming disorder as well. Although the condition is not formally diagnosable, Internet gaming disorder is included "to reflect the scientific literature on persistent and recurrent use of Internet games, and a preoccupation with them, can result in clinically significant impairment or distress" (Ibid.). The DSM's stance on Internet Addiction disorder presents an interesting case in which disorders marked as 'disorders of the brain' (substance use disorder, addictive disorder) are compared and grouped with gaming disorder, a condition that is more often than not seen as a disorder of the will due to the limited clinical evidence related to it. What all these disorders seem to share, however, is their implicit link to notions of desire and intimacy, which through the molecularization of illness becomes translated into addiction.

It is not a clinical, nor a strictly psychoanalytical notion of desire that I am referring to. In medical parlance, desire is usually restricted to expressing a biological drive, an urge to satisfy an appetite, whether sexual or of another nature. But desire has an undeniably metaphorical substrate as well, as Kristyn Gorton notes. Gorton argues that across various literary genres, scientific discourses and popular opinions, there are similar expressions of the notion of desire as a "progressive force that underlines movement" (Gorton 2008, 1). The transformative nature of desire is present in most of its theorizations, from Deleuze and Guattari's conception of desire as production, to feminist theorizations of gendered desire, as well as psychoanalytical interpretations of desire as a lack (Ibid. 8). I view desire through the framework of affect, in the sense that desire can be understood not as a property of the individual, or a directional force that moves from the subject towards an object of desire, but as a relational encounter that is autonomous (Massumi 1995), that materializes both the subject and the object. Desire, in my understanding, mimics what Lauren Berlant calls an affective atmosphere that is not solitary, but shared, in which "bodies are continuously busy judging their environments and responding to the atmospheres in which they find themselves" (Berlant 2011, 15). Desire, then, is the relational expression of a real or virtual intimacy, closeness or affinity between two entities; it emerges through relational processes, and it serves a connective, transformative function. It is not simply the bodily response to a stimulus, like clinically understood sexual desire, or hunger, but rather a mode of organizing

subjectivity, an interaction with and through the milieu. In this sense, desire is an intra-active phenomenon that can be encompassed in Karen Barad's theory of agential realism, which seeks to reframe the relationship between subjects, objects, and their role in the emergence of phenomena – which will be discussed in further detail in subsequent chapters that focus on the particularities of human-machine interactions. In a Baradian vein, the disorders of desires that are discussed in this section enfold and superpose both desire's reduction to bodily drive, as well as its broader affective understanding.

Desire is clearly a recurring pattern in the diagnosis and treatment of addictive disorders. Rose (2003, 407) notes that addictive disorders are being treated with a class of drugs that results effectively in the reduction of a particular desire. Pathological desire can be entirely erased through the advances of pharmacology – an act that would be at odds with the politics of life itself's commitment to almost gentle, nurturing pastoral techniques that seek to manage, care and ultimately regulate, instead of radically erase. Such potential for eradication is particularly interesting as well as troubling[18] if we consider somatic individuals' tendency to form alliances based on shared pathologies, thus engraving the pathology itself into their identities, as mentioned in the previous section. Yet, the goal of medical intervention into pathologies of desire (as well as other pathologies) is not to

> reshape the life or normalize a personality, but instead to isolate a malfunctioning process, and a related set of problematic beliefs, cognitions and life skills, and to engineer interventions that will address this very specific pathological complex with a minimum of collateral damage (Rose 2003, 431).

For Helen Keane, the molecularization of disorders of desire into a "logic of addiction" leads to potentially flawed understandings of both the patient and the disorder itself. Keane argues that the discourse on addiction has expanded to a way of thinking about problematic desires, feelings and behaviour (2011, 189). Quoting Eve Sedgwick, Keane notes that contrary to previous common beliefs about addiction, today's addictive behaviours are not always placed in opposition to ideals of productivity and discipline, quite the opposite: even exercise or work can constitute objects of addiction.

The boundaries of addiction are contested even among specialists in the field. One direction in addiction studies advocates an approach to addiction that would encompass any "particularly intense or rigid relationship between the addict and her substance or activity of choice" (Keane 2011, 190). However, others in the field claim that 'true' addiction can only

[18] A similar and somewhat related discussion is taking place in the case of the ethics of fetal genetic screening and fetal somatic gene therapy in order to prevent and treat genetic (but not necessarily genetically transmitted) diseases in babies (Coutelle and Rodeck 2002, 670-673).

be tied to psychoactive substances, and any other understanding would trivialize the gravity of the condition. The first stance seeks to find a common ground between all addictions, broadly construed, thus allowing for the constitution of a coherent field that produces coherent subjects. The second stance, pushing for increasing specificity, leads towards a "proliferation of pathologizing and normalizing discourses, each producing a uniquely disordered subject" (Ibid.). This tension is particularly palpable in the case of addictive disorders that do not fit neatly in the DSM-5's categorizations. In the case of disorders such as food, sex, work or exercise addictions, the legitimization of the condition depends on the need to identify one's unique symptoms and means of treatment. And yet, this legitimization cannot take place without recourse to the 'common language' of addiction, featuring states such as high, withdrawal, or tolerance. (Ibid.)

Keane's goal is to challenge the deployment of addiction discourse as a catch-all for desires that are deemed excessive, improper or unruly. She notes that is much discourse on recovery from addiction, addiction is depicted as the 'other' of healthy intimacy. In these discourses (Keane brings in as an example Craig Nakken's *The Addictive Personality*), 'natural' intimacy occurs between a person and their family, friends, community, self, or a spiritual power. Emotional bonding or the "illusion of intimacy" with objects or events beyond their socially acceptable role is unnatural. The intimacy between the addict and her substance, object or action of choice is a false kind of intimacy, a delusion – just like the intimacy between humans and media in the view of Sherry Turkle. I understand intimacy, in the sense used by Keane and Nakken, as an affinity, or a relation built on desire: a mutually transformative, although not necessarily mutually reciprocated relation that is intra-active[19], i.e. it allows the emergence of both intimate parties through their relation to one another.

Keane points out that the precedence of intimacy understood as above leads to a devaluation of other forms of emotional bonding. She agrees with the queer critique Lauren Berlant and Michael Warner, who argue that the primacy of intimacy in contemporary discourse is intimately is involved in the naturalization of heteronormativity. For them, the narrative of intimacy works to contain affective attachments to the sphere of heterosexual reproduction and modes of sociality[20] (Keane 2011, 202). Keane uses the queer critique of

[19] Intra-action is a concept coined by feminist theorist Karen Barad in order to challenge an individualist metaphysics based on separation between subjects and objects. Barad's theories of agential realism (including intra-action) will be explored in further detail, and in relation to the ontology of media in Chapter 3.

[20] There is much to be said about the connection between 'proper' intimacy and heteronormativity, even in the context of same-sex relationships. For example, one of the most prominent queer critiques of the legalization of same-sex marriage is that it would sustain, rather than attempt to dismantle, the

intimacy to seemingly suggest that the discourse of disordered desire (even if the desire is not sexual in itself) is rooted within the framework of heteronormative domination that privileges intimacy as that which is the

> only possible basis for a satisfying and genuine affective life and it is also presumed to be limited to institutions of personal life, especially marriage and family. Under this limited economy of intimacy, other more ephemeral forms of attachment which take place outside of the domestic space are trivialized and/or demonized (Ibid.)

Queering intimacy can therefore lead to a reformulation of addiction discourse as well. Keane suggests that borrowing an expanded notion of intimacy from queer theory, allowing for a view of intimacy as a recognition and celebration of connections and encounters that bear no relation to kinship, the couple, domestic space or property (Keane 2011, 203). In this way, disordered desire for objects, substances or is figured as "forms of intimate and emotional attachment rather than intimacy's *other*, emerging at the moment when our reliance on people and things begins to regulate as well as enhance our lives." (Ibid.). Intimacy in itself can be a useful way to understand the relations and modes of individualization that emerge in the contemporary biopolitical context, but only as long as intimacy is divested of its heteronormative underpinnings. An intimacy that is "portable and mobile . . . a relationship we can have with objects, experiences" puts an entirely different spin on current understandings of addiction, disordered desire, and non-normative attachments. (Keane 2011, 204).

Disordered desires and addictive behaviours are subjected to the magnifying gaze of molecularization, and picked apart, categorized and legitimized through the pathological morphologies. The pathologization of addiction seems to be the outcome of cultural contexts that privilege autonomy, self-reliance and responsibility for oneself as somatic individual, even in cases when the addiction seems to stem from an improperness ascribed to the context in which the addicted subject resides. One poignant example is the case of Chinese teenagers diagnosed with Internet addiction, whose 'disease' is thought to flourish within the capitalist milieus of Internet cafes that isolate them from 'proper' social structures, and incubate addictive behaviour (Medalia and Schlam 2013). The response to addiction, then, is either to force the individual to change, or to change the environment itself by placing the addict into the safety of clinics and rehabilitation facilities. At the same time, as Keane points out, the discourse on addiction is a deeply rooted discourse on heterosexist intimacy, and the pastoral

heteronormativity inscribed within the institution of marriage itself, and perpetuate the 'domestication' of non-heterosexual sex by bringing it into heteronormative parameters (Brandzel 2005, 190; Josephson 2005, 23; Puar 2007, 51).

recovery of the afflicted somatic individual is entangled in heteronormative conceptions of productivity and quality of life. That is not to say that the treatment of addiction is necessarily destructive, despite the implication that psychological discourse on addiction is most certainly intensely biopolitical, but merely that it can be better understood and more ethically approached as a transformative affective relation to others (including nonhuman others), and not necessarily a disease.

3. Assembling the addict

Media Intimacies

The normativization of intimacy in the case of addiction discourse evokes the Foucauldian primacy of 'proper' sex within the confines of biopower. When addiction is read as intimacy with an improper object (and put in opposition with proper kinds of intimacy enacted with sexual partners, family members, friends etc.), addiction discourse inscribes even nonsexual disordered desires into the biopolitical categories of proper/improper, productive/unproductive sex, as seen in the previous section. The addict then, is a somatic individual who fails to fully perform the role of the productive and reproductive biopolitical subject, while engaging in improper intimacies with improper objects of desire or affection. But as opposed to treatment methods of alcohol abuse disorder or substance abuse, media is not something that the user can completely reject. The somatic individual, subject to the forces of neoliberal biopolitics, is supposed to be versed in media literacy, comfortable in navigating a media-infused environment, as well as cognizant of media's social and economic importance as products, tools and companions. The rejection of media has its own unsavoury associations, like the radical technological determinism French philosopher of Jacques Ellul[21], whose writings served as an inspiration for the Unabomber's brand of nature-centred anarchism[22]. Using media can veer into the territory of unproductiveness, but

[21] French philosopher Jacques Ellul has written prolifically about the technological takeover of humanity. His most famous work, *The Technological Society* (1964), argues that far from being a tool, a simple intermediary between human and nature, modern technology has become an autonomous process that has taken hold of the human and uses the human according to its own laws. Instead of freeing up the human from under the servitude of nature, technology has enslaved humanity in its turn.

[22] Ted Kaczynski, known as the Unabomber, is an American serial killer responsible for 16 bombings over a period of 17 years against computer scientists, geneticists, graduate students and other people associated with the fields of science and new technologies. In his letters to the victims and the police, as well as in his manifesto entitled "Industrial Society and Its Future", Kaczynski claimed that industrialization and current technological advances have led to the destabilization of society, forcing people to live unfulfilling lives, to be subjected to various indignities and psychological harm, all the

shunning it is equal to rejecting civilization - an issue with broad global political implications.

In 2010, UNESCO, the UN agency dedicated to promoted peace and cooperation through a human-centred philosophy of peace, cultural and scientific advancement, and equal-opportunity education, published a monograph on media literacy. The goal of the booklet was to advance the idea of a "new humanism" that would suit the shifts that have recently occurred within global political, economic and social processes (Tornero and Varis 2010, 4). This new humanism "must prioritise a new sense of respect for multiplicity and cultural diversity and must support media development with the goal of consolidating the new culture of peace" (Ibid.). The task given to the booklet's authors by UNESCO's Institute for Information Technologies and Education was a rather difficult one: to find a way of championing digital literacy as a main component of a new humanism which very carefully "committed to the goal of counteracting the depersonalising effects of mass technology" (Ibid., 5). On a global scale, media technologies are hallmarks of a global human civilization, and as such they must be made available to everyone, but they are also a possible source of depersonalization. The global human citizen is one that can balance on the fine line between proper and improper media use, able to maintain the right degree and kind of intimacy with media.

UNESCO's definition of media literacy entails the user's complete immersion into a media rich environment, and the ability to navigate and manipulate the various social, political and economic assemblages that form around the presence of media. They designate media literacy as imperative and a precondition of contemporary globalized society, so that it is the duty and obligation of each global citizen to possess the ability to use media in order to achieve intercultural exchange and a "new culture of peace" (Tornero and Varis 2010, 4). Media literacy, is in fact a form of media intimacy, in which the human user must be able to master

> the process of assimilating and using the codes involved in the contemporary media system as well as the operative skills needed to properly use the technological systems on which these codes are based . . . the capacity to access, analyse and evaluate the power of the images, sounds and messages with which we are faced every day and which play an important role in contemporary culture. It includes the individual capacity to communicate using the media competently. Media literacy concerns all media, including television, film, radio and recorded music, the press, the Internet and any other digital communication (Ibid., 5).

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while causing extreme damage to the natural world. As a solution, Kaczynski called for the overthrowing of the technological basis of current society. (Kaczynski, 1995).

Media intimacy seems then to be shaped into an imperative and a precondition of contemporary globalized society, and it becomes the duty and obligation of each global citizen to possess the ability to use media in order to achieve intercultural exchange. Even more important is the notion that media use is a key factor in the process of civilization (Ibid. 6), that is actively involved in the framing of the human (Ibid. 14), but at that the same time, it is somehow indispensable in order for users to become 'proper' global citizens, proper global humans.

In the case of the media literacy/intimacy prescribed by UNESCO, media use is constructed as a duty rather than a desire for intimacy. The push towards global media literacy presents only one side of the double-bind of media technology use, without accounting for the possibility of disordered desire. Technics do not become a concern when they are figured as a duty that must be fulfilled in order to ensure the triumph of 'civilization', capitalism, or the well-being of the species, but enters into the domain of potential pathology (medical or moral) when it becomes connected to desire, to the pursuit of intimacy. It is not the intimacy in and of itself, unmediatedly, that develops into a biopolitical and economic issue. Seemingly, at least in debates such as those presented by Carr and Turkle, intimacy is translated into the vocabularies of biopolitics and capital: heteronormative, reproductive and productive failure, the erosion of authentic intimacy, and pathology. However, there is another discursive layer to human-media intimacies, which has become increasingly visible in 21st century art and popular culture, and which seems to partly echo the kind of technophobic discourse espoused by Jacques Ellul, and to a lesser degree, by Heidegger: media technologies yield to intrinsically improper articulations with the human. The next section will track the pathologization of one representative case of media intimacy, which oscillated between the hype of technophilic lust for ubiquitous computing, and potentially damaging and invasive vice.

The Google Glass and the politics of faulty intimacy

The problematic user of media, whether attached to a form of mediation such as the Internet or games, or specific technical objects such as laptops, phones or tablets, presents a case of improper intimacy and therefore faulty somatic individuality, a risk for the wellbeing of the population. The risk might be caused by the user/potential addict's inability to maintain a proper, moderate engagement with media (and thus partly failing the requirements of neoliberal somatic individuality), but also because some media are imbued with an inherent potential for improperness, as will be seen in Chapter 2. The kind of media that is being

improperly used matters less than the fact that the human-media intimacy that occurs is an impediment in the way of social and economic productivity. However, the discourse on the media-user's loss of productivity seems to be intertwined with another sense of loss as well: that of some intrinsic human quality. Sherry Turkle's work on media use is exemplary of this sense of loss that media induce at a fundamental social and personal level. For her, media are not things that are used to excess by humans, but rather media take control over their users, manipulating their sense of self, their relationships, and their work. In a poignant passage, Turkle evokes the loneliness and disconnect induced by media use, as well as the pressure of remaining a user despite the downfalls:

> Online, we easily find "company" but are exhausted by the pressures of performance. We enjoy continual connection but rarely have each other's full attention. We can have instant audiences but flatten out what we say to each other in new reductive genres of abbreviation. We like it that the Web "knows" us, but this is only possible because we compromise our privacy, leaving electronic bread crumbs that can be easily exploited, both politically and commercially. . . We can work from home, but our work bleeds into our private lives until we can barely discern the boundaries between them. We like being able to reach each other almost instantaneously but have to hide our phones to force ourselves to take a quiet moment. (Turkle 2011, 280)

Turkle's *Alone Together* takes the shape of a hybrid between personal memoir and ethnographic study. Through exposing and exploring her own experiences with technology, as well as the stories of a varied collection of people, Turkle follows the red string that connects media use to what she interprets as the loss of traditional forms of intimacy and sociality. One cause of this shift in the architecture of intimacy is the fact that human users and media devices are becoming increasingly inseparable due to the omnipresent nature of networks and connectivity, a connectivity that encourages the user to treat people like objects and objects like people (Turkle 2011, 168).

With this in mind, let us briefly consider the case of the Google Glass Addict, the first (and so far only) documented case of addiction to the Google Glass™. The Google Glass is a wearable technological piece developed in the quest for ubiquitous computing, acting as a mediator between its human wearer, the amassed informational assemblage of the internet, and material environment. That is, it allows its users to interact with their material environment and beyond through fluxes of information transmitted through the glass. The glass is operated through an inbuilt touchpad, or though natural language: the user can issue voice commands, activating various applications available on the glass's software platform. Currently, the Google Glass can be used for face recognition, translation, connecting to the 'internet of things', medical self-surveillance and measuring and codifying one's

environment (real-time weather check, measuring distances etc.). One recent research project uses the glass to develop a tool that would allow people on the autistic spectrum to 'read' other people's emotions.

The Google Glass's entry on the market was wrapped in an aura of unattainability from the very beginning. In early 2013, Google invited people to apply via Twitter for a chance to test 8000 beta versions of the glass. The selected lucky users had to pay $1500 for the opportunity to use the glass, in addition to flying to Los Angeles for personal fittings. While the glass was launched in its beta version for mass retail in April 2014 (selling out in 24 hours), its price and limited production numbers still ensured that it was available only to a select public. The Glass became synonymous with the millennial generation's unbound, shameless enthusiasm for technology that borders on arrogance (Honan 2013).

And less than a year after its launch, in January 2015, Google announced that it would cease manufacturing the device – the Google Glass had become a media artefact after a short-lived stint on the media market[23]. In the meantime, however, the glass became embroiled into a discourse of anxiety related to media use. In October 2014, news outlets started to report the case of a US Navy employee who was diagnosed and consequently sent to a rehabilitation centre to treat his Google Glass induced internet addiction, as well as several other behavioural addictions. A research paper authored by Yung, Eickhoff, Davis, Klam and Doan, "Internet addiction disorder and problematic use of Google Glass™ in patient treated at a residential substance abuse treatment program" approaches to case from the point of view of its treatment, possible causes, and relation to other 'process' addictions.

There are several points on which the Google Glass addiction case lends itself to a biopolitical analysis, in addition to its function as an event of medicalization. The story of the Google Glass addict is the story of a person whose wish to be more productive backfired spectacularly. The 31 year old man had started using the Google Glass in order to improve and speed up his performance at his workplace. He been using the device for two months by the time he checked himself into the US Navy's Substance Abuse and Recovery Programme (Sarp). At the time, he was wearing the device for approximately 18 hours per day, only taking it off to bathe or sleep. Yet, the man checked into Sarp not because he was suspecting something wrong with his media use habits, but because he wanted to be treated for

[23] In January 2015 Google announced that it would stop producing the Google Glass in its current form. The glass was developed in the Google X research unit, a semi-secret development facility concerned with cutting-edge technological innovations such as driverless cars, artificial neural networks, or the 'internet of things'. The Google Glass project is now housed in its own division. The release date for Google Glass 2 is yet unknown, but official photos of the prototype have begun circulating in December 2014 (Dolcourt 2015).

alcoholism. The treatment, lasting just over a month, required the man to give up not only all addictive behaviours (smoking, drinking, etc.), but also all interaction with media devices. His doctors noted that the patient kept absent-mindedly tapping his temple – the gesture used to access the glass's interface. The man confessed to his doctors that the withdrawal symptoms caused by the absence of the Google Glass were more distressing to him than the alcohol withdrawal symptoms: he was irritable, he saw his dreams as through the Google Glass interface, he had cravings and problems with his short term memory and focus. His doctors considered the treatment to be fairly successful – the patient felt better. So far, there are no news about the man's current state. It is not known whether he went back to using the glass, or whether his relationship to technology has changed in the aftermath of his treatment. (Ghorayshi 2014).

How did the singular case of a man's overuse of a device become known as 'the first case of Google Glass addiction', spawning countless new articles, opinion pieces, and scientific research into specifically this unique type of addiction? One discrete instance of disordered intimacy with a media object, the Google Glass, is enlisted by the disciplinary and regulatory techniques and discourses that mediate between biopolitical stakes such as somatic individuality, productivity, proper intimacy. The media addict becomes a category that embodies a set of failures that arise through contact with a toxic, improper object and behaviour. Most importantly, the user of the Google Glass is set up from the very beginning as an individual undeserving of sympathy: they are 'glassholes', *the terme du jour* for the users of the Google Glass (Schuster 2014), people who had the luck and the financial means to separate themselves from the mass even while physically being part of it (Honan 2013). The media addict is caught in the dilemma of somatic individuality: the quest for improvement (via new media), and the very thin line that separates it from self-destruction.

After all, in the case of the Google Glass addict, the symptoms of addition can be read as a loss of agentic capabilities. If the addicted human does not have control over their affective bond to the technical artefact, then does it mean that agency is relegated to the machine? The medical reading of media addiction seems to point towards an understanding of materiality (both that of the media addict's body and the technical artefact), the constitution of attention, and agency. The device, seen as a supplement that rewires the subject's positioning within the structures of work and social life, is a source of dysfunction. This is the point where the biopolitical analysis of the media addict begins to fall short: how can we talk about the intimacies between humans and so-called improper objects or behaviours? How can we understand the dimensions of somatic individuality so as to

encompass the empowering potential of these intimacies? Perhaps the understanding of the schemas of power-knowledge that lead towards the emergence of the media addict should be supplemented with a genealogical exploration of the concept of media itself. The concept of media technologies comes with a cultural and historical baggage of its own, bringing important insights through its power to reveal what Thomas Lemke calls the "consideration the agential properties of non-human forces" (2014, 2). In this way we might arrive at a type of analysis that considers the co-constructive relations between bodies, technics, leading towards a comprehensive analysis of human-media relationality that avoids the pitfalls of excessive pathologization

Conclusion: The secret lives of media objects

Biopolitics, from Foucault to Rose, gives us the tools to see the human not as a fixed and universal category, but as a form of embodiment governed by the dynamics of power and its adjacent techniques. The management of disorders of desire, as seen from Foucault's genealogy of deviant bodies as well as from the molecularization and moralization of intimacy within 21st century biomedicine, are a crucial feature in the understanding of how the body in its materiality as well as the living mass are affected by the relations of power. The viable biopolitical subject navigates an uncertain ground between configurations of health, gender, productivity, reproduction, and the intricate webs of power that form between techniques of managing and regulating bodies and populations, and ideals of autonomy, self-enhancement, self-responsibility. The biopolitical subject is in a state of constant self-negotiation and self-reconstruction so as to keep up with the demands of both the politics of life itself, and its other side, the neoliberal capitalist economy. However, in certain cases such as disordered desire towards media for example, such an analysis can further complicated if we attend to the cultural and historical underpinnings of media as a nonhuman force that permeates human relationalities, a nonhuman force with the potential to trouble and even break down these relationalities.

If media addiction can be read as a form of intimacy with a dehumanized or nonhuman object or force, then we should also consider the symbolic place of such nonhumanity in terms of its potential interference in the constitution of a normative, *human* biopolitical subject. Media archaeology, a field that combines media theory, history and philosophy, tries to "[excavate] the past in order to understand the present and the future" (Parikka 2012, 2). Media archaeology digs down into the sedimented strata of media culture,

upsetting assumptions of linearity and progress, and pays particular attention to the 'inner lives' of objects: their materiality and temporality. This type of analysis does not approach media technologies as discrete and self-contained objects – it maps them as part of genealogies or assemblages of media across space and time. In this way, an old technique such as writing, and digital media such as video games, are examined not through their differences, but rather starting from their conditions of existence as modulators and human thought and relationality. Disordered desire towards media, or media addiction, can thus be mapped out as a discursive position that dates back much further than the emergence of digital media, which forces us to rethink the position of the media addict herself within the schema of modern biopolitics.

The biopolitics of media use show us what the body of the user can do, and to what purposes it is mobilized. The media user is a sexed and gendered body which, considered in its individuality, is ordered, delimited and managed according to a logic of a 'greater good': the health, wellbeing and reproductibility of the population. The individual-as-part-of-the-mass is acted upon by both disciplinary techniques and the techniques of biopower, two dimensions of modern power that operate on different yet mutually infiltrating levels. This *bio*-politics of the population is productive and decentralized, and focused on enhancing the population's quality of life. Biopolitics *produces* life, but the means through which this production is achieved hinge on the repressive aspect of disciplinary techniques as well. Institutions such as prisons, schools, the family, medical science order bodies into specific configurations conducive to the promotion of a certain 'proper' kind of life, while constructing 'deviant' or disordered bodies in the process, and managing them with the goal of rehabilitation of containment from the healthy mass.

The existence of the healthy mass and the management of deviance, illness or unfitness is tied into the logic biopolitics' insidious other: (neo)liberal capitalism. The promotion and production of life cannot escape the circuits of capital and the need to produce not only subjects that are healthy, but productive as well – both socially and economically. The meaning of neoliberal productivity, however, is far from constant or universal. Among other variables, norms of gender exert a powerful influence on the way in which productivity is conceived in the case of different gendered, classed, raced or abled categories. We can distinguish a neoliberal notion of productivity that is articulated with neoliberal social values of autonomy, self-reliance, self-determination and economic efficiency as a moral imperative, but productivity can be invested with different attributes when gendered. Women's productivity, for example, should be approached through the lens of the historical association

of femininity with the private sphere and affective labour. The position of gender within the discourse of productivity as deployed in connection to media use is especially noteworthy given the gendering of technology use and manipulation as a masculine endeavour[24], and will be given a close scrutiny in Chapter 4. This is not to say that the relation between gender and productivity is clear-cut and neatly following the path laid out by its genealogy – quite the opposite. However, such covert acts of gendering suggest that any analysis of work, productivity or somatic individuality should be suspicious of universalizing or neutralizing discursive moves.

The principles of self-reliance and self-enhancement proper to the neoliberal biopolitics were adopted into the new molecular paradigm in medical research through the creation of the somatic individual, tasked with responsibility for her own health. The somatic individual embodies within herself the biopolitical principle of maintaining a good life for the sake of the population, and is expected to self-govern to an extent in order to achieve this goal. The body of the somatic individual is transparent as far as its constitutive parts are concerned, allowing for all illness and disease to be acted upon or prevented at their molecular and neuronal roots. Disorders of desire, such as excesses of sexuality and intimacy with improper objects (e.g. addictions) are problematic from a biopolitical view because they step outside of the bounds of proper somatic subjectivity and its norms, while at the same time being a potentially contributing factor to the destabilization of the population's health and wellbeing. The addict simultaneously defies and exceeds expectations of productivity, self-reliance, self-containment and autonomy.

[24] Feminist science and technology studies (STS) scholars such as Sandra Harding (1986), Judy Wajcman (1991, 2000) and Wendy Faulkner (2001) have zeroed in on the various ways in which gender and technology can converge. Faulkner points towards two ways in which feminist STS scholars have approached the gender question in technology studies: gender in technology, and the gender of technology. The former regards the way in which gender and technology mutually embody, and materially shape each other (Faulkner 2001, 83). The other approach considers how particular technological artefacts are gendered as either masculine or feminine because of their proximity to, and predominant association with one gender or another. Historically, technology has been symbolically associated with masculinity, and "cultural images and representations of technology converge with prevailing images of masculinity and power" (Faulkner 2001, 79).

Chapter 2: Media at the intersection of humanity and inhumanity

> The oldest and strongest emotion of mankind is fear, and the oldest and strongest kind of fear is fear of the unknown - H.P. Lovecraft[25]

Introduction

The previous chapter established the disordered use of media as a key concern in the biopolitical management of life, and sought to illuminate the techniques and mechanisms of power through which the constitution of the media addict *qua* biopolitical subject occurs. The subject of media addiction discourse and its anxious oscillation between 'natural' humanity and the technological requirements of postindustrial capitalism exposes the ways in which media and its uses are constructed as a potential hazard in the public consciousness – media technologies are discussed as the root of social detachment, loss of cognitive abilities and bodily health in the same breath as their 'civilizing' and enhancing effect on human life. In a wistful article written for TIME magazine, American academic Carol Becker talks about her first encounter with a Kindle e-reader app which transformed the way she viewed media technologies. While underlining an interesting passage in a book she was reading on her Kindle, the device gave her a message "You are the 123rd user to underline this same passage" (Becker 2016). What might seem like a common sort of surveillance tactic for anyone who has spent any significant amount of time surfing the web, turned for Becker into an instance of being faced with the nonhuman, alien side of technology: "I became afraid. Someone was reading over my shoulder. Not a person, but a Program, calculating what I found most important in the text." (Ibid.) The automated message sent by a shadowy quasi-anthropomorphic Program was a violent manifestation of surveillance for Becker, an intrusion at the core of her being, into her inner life. She realizes that the constant presence of machines might be the natural progression of our lives intertwined with media, but she fears that maybe "our species [will evolve] out of the need for an inner life" (Ibid.). Becker accepts Hannah Arendt's proposition that thought is essential to the human condition (1998, 3), and is suspicious of media technologies' power to keep us distracted from reflection. She ends her piece on a thoughtful note: "At what point will our humanness, as we have known it, become unrecognizable to us? Or has that already occurred?" (Becker 2016). For Becker, media's

[25] Lovecraft 2008, 1041.

pervasive influence might endanger more than health, cognition or sociality: it might damage the very essence of humanity. Media technologies seem to gradually step into the territory of a hybrid form of what Nigel Thrift calls "people/machines" that inhabit their own, inhuman[26] category (1994: 197).

Becker's concern that people are becoming excessively attached to media is representative of a new wave of media users who advocate for the reclaiming of humanity from the grasp of machines. Sherry Turkle has been investigating the issue of human-computer relationships for the past thirty years, paying attention to the unhealthy aspect of these attachments – which has earned her the rather unfair label of technophobe. She acknowledges the temptation of losing oneself in intimacies with media, noting that "online, you become the self you want to be", but at the price of the "raw, human part" of lived experience (De Lange 2013). Nicholas Carr, while also interested in the neurological shifts that occur in the human brain through exposure and intimacy with media, is also concerned with the loss of a more basic level of human affect: the capacity to deeply engage with narratives, be it literary, social, or philosophical. For him, there was a certain sensibility of thinking that characterized intellectual attachments and engagements with 'older' media such as books (2011, 108). Carr talks about 'traditional' ways of enjoying media almost as if media use were a solitary act of meditation. Networked media destroy this useful type of intimacy, through a "narrowing of expressiveness and a loss of eloquence" (Ibid.). In short, Carr fears that media lead us to become less than what we used to be.

It would be disingenuous to dismiss these concerns as mere manifestations of neo-Luddism, as none of the above-mentioned critics propose a wholesale rejection of media technologies. Instead, they point towards a tension between life-with-media and life-outside-of-media that has dominated Western philosophy since its earliest stages. This chapter approaches the question of media between humanity and inhumanity across a range of historical discourses on media. I will trace the (in)humanity of media not chronologically, but thematically instead. I am interested in the discursive shifts between media's humanity, inhumanity, civilizing and destructive potential, and the way in which these shifts are deployed as legitimation for the biopolitical techniques that constitute the figure of the disordered media user. I argue that it is because media's underlying inhumanity that intimacy

[26] Nigel Thrift relies on the inhuman in his work to establish a non-representational (i.e. non-dualistic and focused on practices and embodied experience) approach to geography. He draws on both Lyotard and media theorist Friedrich Kittler to formulate a geographic theory that takes into account the fact that subjectivity can no longer be understood as a "fixed node" bounded by the body, but rather as "part of human-machine networks of social connectedness that change what it means to be human" (Thrift 1994, 197).

with media is discursively constructed as a type of disordered desire, thus becoming included into the purview of biopolitics. Biopolitics needs a threat in order to function, and in the case of media use, part of this threat is media's potential for inhumanity. While the previous chapter elaborated the specific techniques through which media addiction is constituted, this chapter seeks to grasp the underlying logic of these techniques, their conditions of existence. Thus, I argue that it is the locus of inhumanity within the idea of media is a crucial element in the logic of the biopoliticization of the media addict.

The first section is devoted to the exploration of the concept of media technologies. What is it that we mean when we talk about media use, or even media addiction? What is this media that we are so prone to becoming addicted to? With a working definition of the concept in hand, we can turn to some foundational texts in media theory, and follow the trail of (in)humanity engraved within them. I will begin with one of the first philosophical instances in which the inhumanity of media (or provoked by media) is put under the lens in one of Plato's Dialogues, the *Phaedrus*. Plato sets the scene for media's dehumanizing potential by arguing that it leads to the loss of authentic human thought. Plato's thought reveals the subtle way in which the use of media has been employed as a filter that separates proper and improper thought, and therefore humanity. Martin Heidegger's work on technology is an even more overt warning against media technologies' powers to take hold of humanity for its own ends. In Heidegger, media is invested with agency of its own, and the will to subsume the human under its technical logic. These two critiques of media technologies, while thousands of years apart, are two of the most unambiguous attacks on media; the threat of media, in these cases, lies less in its intrinsic inhumanity, and more in the damage that it can cause within an already existing humanity.

Following Heidegger, several media theorists have touched upon the subtle anxieties over media's inhumanity that can be excavated in a vast array of discourses at various points in history. Another section will approach the question of media's capacity to conjure or cultivate inhumanity by being a medium of contact between the 'real' and the 'immaterial'. The last section will delve into theorizations of media as ontologically inhuman and imbued with agentic capacities. I will conclude this chapter by drawing on an alternative reading of media as a process of mediation that encompasses both its aspects as discrete material objects, communicative devices, and milieus that organize phenomenological, social, political existence.

1. What are media?

This first section was planned to be a brief, descriptive segment on the nature of media, on what they are and how they function. In the endeavor to make sense of media addiction and its place in the contemporary biopolitical order, it seemed commonsensical that one should eventually clarify what is the 'media' that addicts become attached to. But putting together a working definition of media in so few pages proved to be a Sisyphean task: as soon as I had accounted for one possible meaning of media, several others sprouted up, demanding to be acknowledged. If the desktop computer is a medium, then what is it that elevates it from a tangle of circuits and wires in a plastic case, to a "vehicle for carrying and communicating meaning" (Peters 2015, 2)? If the computer is disconnected from the Internet and the power grid, does it still communicate anything, is it still media? What if the computer's hard drive has just been wiped and it has no operating system, forcing a non-expert user to stumble her way through the machine's basic input/output system's command lines? What if the computer is taken apart into its constituent circuits and plastic casings?

For a word that has been in the common vocabulary of many languages, media is uncannily fickle. Dictionaries are rather narrow in their definitions of it. The Oxford English Dictionary defines media as "the main means of mass communication (broadcasting, publishing, and the internet) regarded collectively", while its singular form, 'medium', is "the means through which something is communicated or expressed"[27] (Oxford Online, 2010). For much of media theory, these definitions are far too limited in depth and scope. And yet, I find that they offer one important keyword on which one might start building an understanding of media: communication.

Communication is a crucial concern for humans, but it is not an exclusively human concern. In his latest work, John Durham Peters is determined to show how the communication of meaning is a process that all things, human or nonhuman, participate in. He argues that we should redefine the meaning of meaning[28], so that we can acknowledge the potential of other than humans to produce and be the originators of meaning. Clouds, oceans, tectonic plate communicate meaning, in the sense that they are "repositories of readable data and processes that sustain and enable existence" (Peters 2015, 4). For Peters, media are our communicational infrastructures, but their primary trait is not that they communicate

[27] Another common meaning of medium is a person who 'mediates' between the living and the dead. As will be seen in the second part of this chapter, this secondary meaning is also relevant for

[28] Peters' argument is similar to that of Derrida in "Signature, Event, Context". He argues that communication cannot be accepted uncritically as the transmission of a meaning that is *one*, from a subject to an object (Derrida 1977, 1-23)

meaning, but simply that they exist and provide the conditions of our existence (Ibid. 14). Peters' pronouncement might sound overly grandiose when applied to the simple TV set, but not if one accepts that everything, human and nonhuman, is a medium. Media, from clouds to computers, are the infrastructures and the conditions of possibility for forms of life – forms of life such as media addiction, for example.

In addition to the notion of communication, there is another important issue that we can identify in the vocabulary of media theory: the overlaps and divergences between the concept of media and that of technology. The relationship between the two is often glossed over or taken for granted. Media theorists Sarah Kember and Joanna Zylinska recognize that the media-technology relation is undertheorized in the field, and they briefly argue that "media cannot be conceived of as anything other than hybrids, and technology is part of that hybridity" (Kember and Zylinska 2012, 7). The overlooked media-technology connection is a rich arena of inquiry, but well beyond the scope of this work. I align my understanding of media with Bernard Stiegler and his very broad understanding of technology/technics as domains of skill, as ways of bringing things into the world, which was briefly discussed in the Introduction and further explored in Chapter 3. In this sense, the wheel or a fork is just as mediatic and technological as an industrial robot. 'Media' and 'media technologies' will be used interchangeably in this work, in order to implicitly acknowledge the crucial (if ambiguous) role of technology in the emergence of media.

If everything is media, or can be understood as media as per Durham, then we must ask the question: which are the media that prompt a biopolitical action or reaction? The answer might be found within the philosophy of technology. Part 2 of this chapter will try to answer this question by taking a closer look at Heidegger's work on the place of technology within his ontology of being, in order to parse the connection between 'dangerous' media and the value attributed to the humans who use them. The subsections of Part 1 will map out some of the key concerns of media theory that shape our understanding of phenomena such as intimacy with media, or media addiction. First, I will look at some of the major conceptual shifts and variations surrounding the notion of media itself, and focus on the work of Marshall McLuhan, who has left an immense mark on media studies as it stands today. McLuhan's contribution in regards to contemporary understandings of media is essential not only as theory, but as public discourse as well – he was seen as a liaison between the ivory

tower of theory, and lay discourse[29]. The last section will serve as a bridge towards section II, on the inhumanity of media, and looks at the tension between the anthropomorphization of media objects, and their failure to live up the human traits attributed to them.

Mapping Media: McLuhan's media ecology

Media is a concept with a rich interdisciplinary history that spans across diverse disciplines like communication studies, philosophy, art history, natural sciences and environmental studies. Understandably, the term is fraught with multiple competing meanings its titular field, media studies. And yet, we know what we mean by media – the term has gained such a widespread currency over the past century that is has rooted itself firmly into common vocabulary, both for academic and non-academic discourse. While there is richness to be found in such as transversal trajectory, the term media is laced with the perils of miscommunication. This section will serve as a critical cartographic glossary of media, in an effort to piece together a conceptual tool that brings together lines of thinking surrounding the phenomenon of media addiction described in the earlier chapter.

Media studies is an immensely diverse and rich field, and it consists of a loose association of scholars with different backgrounds and methodologies, who are concerned with a few common interests: the circulation of information, consciousness, affect, and matter between humans and other humans, as well as nonhumans such as media technologies. Media theorists look at the interaction of media and humans from a variety of perspectives: social or cultural effects on the audience, representation in various media, media objects as cultural objects, the history of media, or a range of philosophical approaches to either media or their users. Based on these various branches of media studies, we might obtain a list of objects, practices or processes that can be qualified as media (films, print books, advertisements, the television, the radio, the Internet etc.), but not a commonly applicable definition of media. Are media the processes of communication themselves? Are they the intervening space, agency or the milieu that weaves itself between a sender and receiver? Are they the material substrate of communication technologies? Are the physical forces of light, electricity, sound, magnetic energy media? Or rather, are media the lucrative products of capitalist economies? The simplest way to address media is as a list that encompasses all of the above components.

[29] Marshall McLuhan spent several decades of his academic career as a professor of English. In 1962 and 1964, he published two of his most influential works: *The Gutenberg Galaxy* and *Understanding Media*, both of which had a powerful impact in the field of media theory and beyond. McLuhan was an eccentric celebrity-theorist who appeared on talk shows, on the cover of magazines, and had cameos in movies. His influence waned in the 70's, and amply criticized in the following decades. However, with the popularization of the Internet, McLuhan's work is being given renewed attention.

However, such a list would be lacking a very important factor: the relations between senders, receivers, milieus, forces, matter, and capital. These are the relations that media theory is interested in.

Many of these questions can be traced back to the work of Marshall McLuhan, whose 1964 opus *Understanding Media* is widely credited for inaugurating a new paradigm in media theory. McLuhan wrote during the heyday of broadcasting media, but in the past few decades he has been hailed as a prophet who saw the information age before its arrival (Wolf, 1996). McLuhan was one of the first theorists to think about media from an ontological point of view, and as a plurality of objects and processes well beyond its traditional meaning as broadcast or print media. For McLuhan, before the examination of individual media, one should be able to see what they all have in common (McLuhan 1994, 6). Within the present project, and the type of media theory that it subscribes to, McLuhan's sometimes prophetic, often intentionally obscure[30] pronouncements are the scaffolding on which a biopolitically legible media theory can be constructed. In what follows, I will examine two of McLuhan's most widely quoted arguments: (1) media are the extensions of man, and (2) the medium is the message. These two notions are the foundations of an ontology of media.

McLuhan begins his book *Understanding Media* on the assumption that media technologies[31] are the extensions of human bodily and cognitive capacities. True to his style, McLuhan does not offer any easy answers as to how media become extensions, or what (if any) processes are involved in this[32]. He argues that all media extend, or amplify, the capacities of the human in some measure: pre-electric mechanisms extend the human body in space, electricity extends the human nervous system, transcending not only space but time as well, speech is an extension of thought, clothing is an extension of skin. The senses, 'nerves' and consciousness of the human are all amplified by the emergence of media, and these extensions have major effects on the "the whole psychic and social complex" (McLuhan 1994, 4). In my interpretation, McLuhan's notion of media entails the dissolution of the idea of the human as a self-contained subject. The body does not end at the barrier of the skin, cognition is not enacted solely by the embodied mind, and media technologies are not mere

[30] McLuhan was famously dismissive of critics who criticized his writing style, and was not inclined to explain his writing to those who did not understand it. In an interview with the New York Times, he declared that "most clear writing is a sign that there is exploration going on . . . clear prose indicates the absence of thought." (Kostelanetz 1967).

[31] McLuhan does not make a distinction between media and technologies, and he uses the two terms interchangeably.

[32] As a further line of inquiry in this question, the work of Gilbert Simondon might prove to be useful. Simondon's notions of individuation and transindividuation are meant to explain the co-emergence of human and technical individuals (Simondon 1989).

tools situated outside of the body. Media, as extensions, construct the human as an ecology of sorts, an assemblage that constantly seeks to gain speed and power. For McLuhan, what matters is the effects that media produce, the changes in speeds, scales and intensities that they engender. And rather than study the so-called message or content of media, McLuhan is interested in their effects, which "[involve] the total situation, and not a single level of information movement" (McLuhan 1994, 26).

The extension of the human beyond the human comes at a cost, though. McLuhan understands extension as a double-sided process, one that amplifies at the same time as it 'amputates'. The media environment or ecology is, according to McLuhan, homeostatic[33] and therefore constantly seeking to preserve a state of equilibrium. The emergence of media, which bring about the extension of some sense, mode of cognition or bodily capacity, is therefore always accompanied by the loss of some other capacity in order to make space for the new one. For McLuhan, a mediatic extension is therefore also an 'auto-amputation'. His explanation as to what he means by this amputation/numbness is rather unclear[34]. However, McLuhan's extension/amputation thesis is eminently suited for discussing some of the anxieties of the 'digital' age, such as the gradual replacement of deep reading and deep thinking with distributed forms of attention and thought. Both Nicholas Carr and N. Katherine Hayles have written about these issues with varying degrees of concern and acceptance (Carr 2010; Hayles 2012). McLuhan attributes these amputations to the central nervous system, claiming that this is its way of coping with the amplification of various senses. Today, research into the plasticity of the brain puts forward arguments to the same effect as McLuhan. The brain can 'rewire' itself in order to best adapt to its environment; "processes of learning and memory can stimulate the growth of new neurons and stabilize synaptic connections in areas of the brain frequently used ('use it') while eliminating connections that are rarely used ('lose it') (Choudhury and McKinney 2013, 2).

[33] "All organizations, but especially biological ones, struggle to remain constant in their inner condition amidst the variations of outer shock and change. The man-made social environment as an extension of man's physical body is no exception." (McLuhan 1994, 98).

[34] McLuhan brings up the example of the wheel – he argues that the invention of the wheel was a "counter-irritant to increased burdens" and "an extension of the foot" (McLuhan 1994, 42), and at the same time amplifies the intensity of an isolate function (the feet in rotation) (Ibid 43). The amputation lies in the fact that the wheel-brought amplification "is bearable by the nervous system only through numbness or blocking of perception." (Ibid.). Whether the numbness lies in the forgetting of the wheel's original connection to feet, or the fact that the wheel takes over some of the function of the legs is unclear. According to some commentators of McLuhan's, the foot on the pedal of the bicycle or the pedal of the car is prevented from fulfilling its "basic function of walking" and is instead reduced to various specialized tasks (Gordon 2010, 109).

This second important argument that McLuhan puts forward is one of his most quoted as well as misunderstood ones: the medium is the message (McLuhan 1994, 7). McLuhan is not suggesting that the message is no longer relevant in our analyses of media, but simply that "the personal and social consequences of any medium—that is, of any extension of ourselves—result from the new scale that is introduced into our affairs by each extension of ourselves, or by any new technology." (Ibid.). This is directly connected to McLuhan's urging to pay attention not only to what media communicate, but also to the effect that they have on the social and the individual, as mentioned previously.

At several point in his book, McLuhan rephrases his famous "the medium is the message" to mean that the content of any media is other media. McLuhan notes that the "The content of the press is literary statement, as the content of the book is speech, and the content of the movie is the novel" (1994, 305), and the "content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph" (McLuhan 1994, 8). The content of speech (or at least, a good speech) is pure thought according to Socrates in Plato's dialogue *Phaedrus* (Plato 2012). McLuhan does not speak explicitly about the material substrate of media, but it is easy to reframe his argument while focusing on the matter of media. As media become more and more technical, their nested nature also becomes more layered: a telegraph, for example, can be broken down into increasingly smaller scales of magnitude: the material-technical support assembled out of metal and wood, the wires transmitting electrical impulses through the network of telegraphs, the code that functions as the common language of telegraphs, the pieces of paper on which the clients of the machine wrote down their messages for the operator to transcode, and much more[35].

At a closer glance, any medium is a tightly woven assemblage of other media, extending all the way down to the very nonhuman level of physical, geological elements[36]. The problem with this complexification of media into assemblages is that at some point, the theorist is forced to make an epistemic decision about what can feasibly constitute the object of study, while still accounting for the ways in which the medium is entangled with other

[35] Media theorist Jussi Parikka is one of the scholars who show a great interest in the materiality of media, and his work often brings up the question of nature/culture, or natural/artificial binaries, as well as the nonhuman temporalities of media. Together with Garnet Hertz he writes that "Information technology in the form of its material assemblages also has a duration that is not restricted to its human-centred use value: media cultural objects and information technology have an intimate connection with the soil, the air and nature as a concrete, temporal reality. Just as nature affords the building of information technology—consider how, for example, gutta-percha was an essential substance for insulating 19th-century telegraphic lines or how columbite-tantalite is an essential mineral for a range of contemporary high-tech devices—so do these devices eventually return to nature" (Hertz and Parikka 2012, 429).

[36] A very in-depth discussion of the geological aspect of media can be found in Jussi Parikka's *A Geology of Media* (2015).

media. Media theory, then, must cherry pick those aspects of a medium that would best support an argument. This epistemic cut is especially delicate in the case of the so-called new media, which distinguish themselves by being almost inextricably entangled with one another. While in the past a telegraph and a phonograph were certainly part of the same mediatic 'gene line', one needed little justification to designate either one or the other as an object of study. Contemporary digital media are more difficult to disentangle from one another even temporarily. Smartphones, tablets, laptops, internet protocol TVs, wearable networked devices such as the Google Glass, video game consoles are operating on almost entirely shared protocols[37]. They are beginning to form one all-encompassing assemblage, that of the so-called ubiquitous computing. Ubiquitous computing is the pursuit of total connectivity, the dream of having even the most mundane objects and devices connected to a truly world-wide web. Mark Weiser, the 'father' of ubiquitous computing, called it the new technological paradigm, "the age of calm technology, when technology recedes into the background of our lives" (Weiser 1996). In this context, it becomes extremely difficult both to define media as such, and to sense the lines of separation between individual media.

According to McLuhan, like for later theorists such as Peters, everything is media. Whether or not one agrees with him, it is difficult to deny that in postindustrial capitalist societies, new media are steadily becoming a fixture in most aspects of everyday life. As Weiser predicted, digital media are receding into a surreptitious but permanent spot in the background of human existence. This has major implications for the creation of the media addict as a biopolitical figure. If, as mentioned earlier, anything can be read as a medium, from the smallest gesture to large-scale geophysical structures, then the category of media addiction can hypothetically encompass any and all interaction that a human has with her milieu. The category of the media addict would thus become meaningless, with no fixed content or referent – an all-encompassing norm rather than the exception. And yet, the media addict emerges as a solid category at the historical moment when media are becoming omnipresent and increasingly difficult to disentangle from the social.

Media agency, anthropomorphism and affect

In her book *Always Already New*, in which she discusses the fallacious distinction between old and new media, Lisa Gitelman devotes a several chapters to the case of the phonograph. One of her most interesting points is the discrepancy between what media as

[37] In telecommunications, protocols are systems of rules and codes that allow different technological devices to transmit information between one another. In other words, protocols represent the 'common language' of distinct technological systems, allowing them to communicate.

inventions are intended to do, and what they end up doing in actuality. In other words, she points out the subtle push-and-pull of media and media users in determining the nature of media themselves. This section seeks to illustrate how media sometimes escape the prescriptions of their intended purpose, and that what they are and what they do are qualities that emerge from a tangled assemblage of human and nonhuman actors, intentionalities, and affects. As a result, media can be invested with a type of discursive anthropomorphism that makes it easier both to blame them, and to ascribe them power over their users. This anthropomorphic excess inscribed within media is crucial constituting axis of improper media use, and therefore the biopolitical figure of the media addict itself.

When Thomas Edison first invented the phonograph in the 1870's, he meant it to become a technical tool for dictation, that would be used for businesses, courts of law, or for recording the sound of Native American languages whose speakers were slowly dying out. The first technical object that allowed the recording and reproduction of sound was not meant as a means of public entertainment, but rather a way to capture and fix the transient nature of speech into an "enduring record", a preservation of truth and authenticity (Gitelman 2006, 41). Edison even went as far as to declare that the phonograph heralded the death of print media, since recorded sound provided a more authentic and unmediated access to truth at a much lower cost than the written text (Ibid. 42).

By the time the phonograph irremediably captured the public's interest, it had turned from tool into attraction. The way in which the public had access to the phonograph was through exhibitions and demonstrations, during which they could listen to previously recorded sound, as well as record sounds of their own on the "the wondrous machine of iron, steel and foil that can be made to talk, whistle, sing, crow, laugh or make any other vocal sound" (Gitelman 2006, 33). The audience often took home as souvenir some bits of the tinfoil on which the sound was recorded, even if they had no way to play it – the tinfoil records were shared around, collected or preserved (Ibid. 36). The tinfoil was the materialized inscription of the voice, and it became another way in which the phonograph's audience constructed their collective identity, as well as manifested their engagement with the medium. Some years later, towards the end of the 19th century, the phonograph's public was further democratized through the opening of 'phonograph parlours', where in exchange for a nickel patrons could select from a variety of cylinders that they could listen to. These parlours pushed the relationship between listeners and phonographs even further – some users, especially among the working class figured out ways to avoid paying nickel-in-the-slot phonographs, and enjoyed their interaction with the machine even though they were not its

intended users (Gitelman 2006, 60); to put it in an anachronistic but effective way, they *hacked* the phonograph, they forged a relationship with media that they were not entitled to, and implicitly upholding an ethics of free information, access and improved quality of life[38].

This brief[39] example of the phonograph is meant to display some of the social fluctuations and ripples caused by the emergence of a new medium, but also to bring attention to the fact that when a technical medium is introduced into the pantheon of existing media, its introduction is not smooth and uncontested by the forms of media that it proposes to replace. Another important point emphasised by Gitelman's analysis is that in order to properly contextualize media as social actors, it is also necessary to examine users, who "help to define new media in crucial ways" (Gitelman 2006, 60). The first users of the phonograph were just as involved in its creation as Thomas Edison himself. These changes of plans, small breakdowns, failures and moments of repurposing are the instances where the medium become most vulnerable to inquiry.

There is one agent that seems to be absent from Gitelman's account of the phonograph's ecology: the phonograph itself. While extremely comprehensive in all other accounts, Gitelman does not mention the famous advertising record of the phonograph, published in 1906. The record, meant to convince potential users to buy the machine, presents itself as a companion capable of displaying and instilling human-like affect:

> I am the Edison phonograph, created by the great wizard of the New World to delight those who would have melody or be amused. I can sing you tender songs of love. I can give you merry tales and joyous laughter. I can transport you to the realms of music. I can cause you to join in the rhythmic dance. I can lull the babe to sweet repose, or waken in the aged heart soft memories of youthful days. (Edison Records, c. 1906).

Like writing, the phonograph was made to capture some essence of human thought, affect and presence – the full experience of a humanity that is felt even in its physical absence. But unlike the written word, the phonograph captured a fleshy, organic part of humanity as well – a voice, whose origins lie in the living, mortal body. The phonograph, as an 1877 issue of *Scientific American* noted, made it so that "speech and action could live beyond their human origins" (Peters 1999, 144). The phonograph was exemplary in its ability to transcend bodily constraints by transposing the human voice from vocal cords to machine,

[38] These principles are at the core of 'hacker ethics', the unofficial moral code of hacker communities, and according to some scholars, might serve as a basis for a radical rethinking of digital culture and globalization (Wark 2004).

[39] The example of the phonograph, its history and its social and cultural implications on the understanding of media publics is given an exceptionally thorough treatment in Lisa Gitelman's *Always Already New* (2006). The incursion into the history of the phonograph provided above cannot possibly do justice to the complexity of Gitelman's work.

and thus creating a ghostly image of the embodied voice. Was the voice coming from the phonograph still a human voice? Was the phonograph human because it could emit a human-sounding voice? At this historical and cultural juncture, it is possible to observe the rise of questions surrounding media's humanity or lack of humanity.

The personification of the phonograph, as well as its affective appeal, are of particular interest if we are to trace a genealogical connection between 'old' and new media. The personified machine, with enough agency so as to be capable of producing affective responses, finds its echo in countless media-related discourses in the 20th and 21st centuries. In the wake of Edison's phonograph, the 20th century produced a lineage of smart, talking machines comprising illustrious names such as HAL 9000[40] GERTY[41], Samantha[42], and Ava[43], but also scores of lesser known and less verbose relatives. Multimedia writer Sylvia Tomayko-Peters picks up on users' tendency to anthropomorphize technological devices in her interactive, web-based performance piece titled *My Computer Hates Me*[44]. Tomayko-Peters reworks the titular phrase, commonly uttered by computer users whose devices are malfunctioning or not functioning as expected, and turns it into a tool that allows her to think critically about the way in which affective expectations and responses to technologies shape users' relation to them. In her words,

> we are aware, at the most fundamental level, that our machines are neither sentient nor capable of human emotion, anthropomorphization of digital devices still has the tendency to foster an unproductive and even irresponsible relationship to technology . . . As a result, these types of anthropomorphisms paradoxically bring computers closer to our understanding of human, only to distance them from ourselves with the use of technophobic rhetoric (Tomayko-Peters, 2014a)

Anthropomorphization not only brings to light the failure of media to perform humanity (and humanly), but also a failure of our epistemic approach to media. The

[40] HAL 9000 is the name of a sentient computer in Stanley Kubrick's 1968 cult classic science fiction film, *2001: A Space Odyssey*. In the early scenes of the film, HAL is presented as a valuable member of a spaceship crew, and treated equally with his human colleagues. After he makes some technical mistakes, HAL is threatened with disconnection by the human crew. In order to save itself, HAL decides to murder the astronauts and continue operating its code.

[41] In the 2009 science fiction film Moon, directed by Duncan Jones, GERTY is the robotic half of a Moon mission, acting as the foil of its human companion. GERTY can also be interpreted as a subversion of the 'evil AI' trope exemplified and popularized by *2001: A Space Odyssey*. While HAL 9000 follows its code even if that results in human deaths, GERTY's code of ethics is much more nuanced.

[42] Samantha is a sentient operating system and main character in Spike Jonze's 2013 science fiction film *Her*.

[43] Ava is an artificially intelligent android, and main character in Alex Garland's 2015 science fiction *film Ex Machina.*

[44] *My Computer Hates* Me is an interactive web-based game/art piece created through a programming language. The player interacts with various shapes on the screen using their mouse, and the program 'answers' to the player's actions through text. The program's 'speech' mimics the kind of affective language used by frustrated computer users whose devices do not cooperate (Tomayko-Peters, 2014b)

personification of media, for Tomayko-Peters, equals the application of a mismatched epistemic lens over understandings of media. We treat media as we would treat another human being, and we are frustrated when media is unable to respond as a human being might. Of course, human interaction is also always fraught with frustration, but it is important to point out that when media fail, they are unable to affectively respond to the user's frustration in the same way that another sentient being would. A program that regularly crashes will not provide an affective response to the user's frustration, despite the user's pleas or anger. When the media device operates according to a logic that defies our expectations, it becomes an inhuman, alien thing. But the same can be said of media technologies that try too hard to become human or human like – for example, at the sight of a robot that looks too human and at the same time not human enough[45]. Media have a difficult task, then: toe a line between humanity and inhumanity that will not put them under suspicion.

2. What is inhuman about media?

The previous section constructed a scaffolding for a working notion of the media grounded in McLuhanite ecological thinking as well as contemporary neomaterialist approaches. The goal was to establish a fairly coherent vocabulary for a concept that is notorious for its instability, but also to emphasize the need to approach media intimacy in such a way that we can attend to the specificities of discrete media (and the theoretical approaches associated with them), while also acknowledging the complex, intertwined and co-emergent nature of humans and media technologies. As argued in the previous chapter, the maintenance of 'proper' intimacies which are conducive to social life that stays within the biopolitical parameters of self-governance, docility and productivity. This section pivots around the idea that the concern over the threats posed by media can be understood as a technique of managing anomalies. The anomalies of media technologies can be read in terms of a tension between media as human-created, human-controlled and socially constructed, and media as radically nonhuman and capable of determining human actions and culture. I argue that the strain between humanity/inhumanity at the heart of media is part of the reason why media can be conceived as a threat against the wholeness of the somatic individual.

[45] As expressed both through Freud's theory of the uncanny, and the concept of the uncanny valley, originating in the field of robotics. Masahiro Mori, professor of robotics, claimed that a human's empathetic response towards a robot is directly proportionate with the robot's similarity to a human. The hypothesis works only up to a certain point – the uncanny valley – and from there on, the more human a robot looks, the more revulsion it will instil in its human audience.

This inquiry starts with a ghost story starring a haunted video cassette. Suzuki Kouji's 1991 novel *The Ring* tells the story of an inhuman presence attached to a videotape. The ghost residing in the tape is the shade of a girl named Sadako, who died after being horrifically abused. Those who watch the tape, on which Sadako's image is ingrained, have only seven days to live, unless they give a copy of the tape to someone else, thus propagating the curse. While she was alive, Sadako was the embodiment of fears surrounding sex, sexuality, disease, and superhuman powers. She had technopathic powers – she could project mental images onto technological interfaces like TV monitors – she was intersex, and just before her death she got infected with smallpox by the man who raped her. Sadako was treated as less than human in life, and she became inhuman after death, a deadly virus with a seven day incubation period, the cure for which lies in its transmission forward to another host. Some of her victims failed to copy the tape, which meant that they failed to fulfil their role as vehicle of Sadako's reproductive drive. In their final moments, Sadako's image fills the TV screen, and slowly climbs out of the interface, and into the outside. The victim's death is a moment of mediation, an intimate yet fatal transmission from media to the human. The haunted videotape represents most contemporary fears about media: deadly intimacies, sex, reproductions and contagions, loss of self-determination. The Ring takes these fears to their extreme through the tropes of horror fiction.

What do we call a mediated entity such as Sadako? The binds of humanity and nonhumanity come too short of capturing the essence of a creature who passed through the nodes of both humanity and nonhumanity, and exited triumphantly in the end – triumphantly, because when the tape finishes rolling, Sadako inhabits a momentarily stabilized identity as something we could call *in*human. I am wary of attributing the modifier non-human to media, despite the fact that from a materialist point of view, media are hybrids of human and nonhuman matter and meaning[46]. John Durham Peters notes that doing media studies entails a "meditation on the nonhuman condition" (2015, 21), and therefore he grounds his theory in nonhuman, elemental media such as clouds and the sea. Jussi Parikka examines the kinship and affiliations between media technologies and living nonhumans such as insects (Parikka 2010). However, the discourse on media (both media as such, and media effects) is often imbued with a vital quality that Sarah Kember and Joanna Zylinska call lifeness (Kember and Zylinska 2011, xvi). But instead of the nonhumanity or lifeness of media (both of which are immensely productive lenses), I choose to focus on inhumanity precisely because just like

[46] Chapter 3 will return to this point and expand on it in detail.

Sadako, it resides at a crossroads between the human and the nonhuman, familiar and alien, the dead and alive, the organic and inorganic, and represents the excess of media that go beyond of below our expectations of them. Rather than the nonhuman, which has been associated with a scholarly turn towards deconstructing privileged humanisms and anthropocentric frameworks, the inhuman suggests relationalities, powers and agencies which are far beyond the grasp of human experience, which are far too alien and incoherent to abide by any known onto-epistemologies.[47]

There are several ways in which the inhuman rears its head in media discourses. One of the most blatant (but not insignificant) ways in which the inhuman manifests itself is through the trope of the paranormal in some of the media discourse that crystallizes in the form of fiction – through the topos of the malevolent robot or machine, stripped of human or human-like capacities such as empathy or love[48]. It is not a coincidence that the singular of media, *medium*, also has the meaning of a person who can communicate with the dead. Throughout history, humans have harboured hopes that they might be able to speak to the dead or communicate with a world beyond the human realm. However, it is only a few years after the invention of the telegraph that spiritualism emerged as an organized practice (Peters 1999, 95) Communication, whether via technical devices or simply the techne of speaking or writing, has always involved some type of communion with that which is not present, or rather, unpresent. Such beliefs can be observed in Plato and all the way to Heidegger and beyond. Jeffrey Sconce, in his examination of the intertwined history of media and spirituality in American culture, notes that most manifestations of fear regarding media can be traced back to a "larger cultural mythology of about the 'living' qualities of technologies" (Sconce 2000, 2) which marks them as alive, potentially a conduit for the dead, but all the more inhuman for that.

The inhumanity of media, or entailed by media, can also transgress human experience and relationality through ways other than the trope of the paranormal. Martin Heidegger sees contemporary technologies as potentially driving a rift between those who can access their

[47] The general place of the inhuman within Western metaphysics has been consistently explored by philosophers such as Eugene Thacker and Ben Woodard, whose read the horror fiction of authors like H.P. Lovecraft and Thomas Ligotti in order to think through what they see as a vast inhuman ethology of not only the universe as a whole, but also residing within the human itself. Woodard writes that inhuman onto-epistemologies "must recognize not only the non-priority of human thought, but that thought never belongs to the brain that thinks it, thought comes from somewhere else" (Woodard 2011, 9)

[48] While affective forms such as or similar to empathy or love are certainly not restricted to an anthropocentric focus, and are a focal point for much animal rights discourse, it can be argued that love, empathy or care are very much human-centric even when they are attributed to other species, since they reify human forms of sociality and affectivity. In other words, while nonhumans might feel love or empathy, these affective forms are discursively constructed as essentially human processes.

humanity, and those who do not. For Heidegger, the question of whether one uses technology in proper or improper ways makes the distinction between those who are fully human and those who are not quite so. An improper technological encounter produces a person who is less than human – the result is a loss of humanity, and a production of inhumanity. This section will explore how interaction with media can be interpreted as a transgression of proper intimacies in at least three ways: loss of humanness through media, intimacy with improper nonhuman or inhuman objects, or simply intimacy with a media figured as a nonhuman or inhuman agent. These imbrications of the discourse on inhumanity in media are the most visible discursive strategies through which media is captured within the sphere of biopolitics.

Marking media as agentic but not human exposes their radical difference from humanity, thus rendering media inhuman rather than simply nonhuman. The inherent humanism within biopolitics makes it difficult or almost impossible for intimacy with nonhumans to be seen as a productive practice, unless the relationship is one of domination. As Cary Wolfe notes, humanity and its other (animality, inhumanity) are ontologically opposite zones in biopolitics[49] (Wolfe 2012, 6). I argue that media's latent inhumanity is integral to the biopolitical governance of media use, because it functions as the necessary danger that allows the construction of the figure of the media addict, and threatens its destruction at the same time. When the media user fails its somatic duty of self-governance, and can no longer control all the outcomes of its intimacy with inhuman media, that is the moment when the discourse of media addiction is launched into action and begins drawing up boundaries between the proper and the improper.

Media and the loss of humanity

Sarah Kember and Joanna Zylinska note that throughout the history of Western metaphysics, Plato's opinions on tekhne have maintained their influence and bolstered a "hegemonic consensus in modernity . . . that sees technics as having no ontological sense, as only an artifice that must be separated from being" (Kember and Zylinska 2012, 16). In his

[49] The notion of the inhuman and its relationship to biopolitics is an area that merits a much broader and insightful discussion than the scope of this work can afford. Although Giorgio Agamben's work on bare life can be a valuable starting point for the interrogation of the dynamics between humanity and inhumanity, Agamben's biopolitics is one that is implicitly centred on the repressive, destructive and dehumanizing aspect of biopolitics. Bare life is a life that, while originally human in its essence and relationality, has suffered through the stripping away of its bios, through a process of dehumanization. The inhuman, on the other hand, does not rely on a human a priori. Rather, it is a standpoint that seeks to avoid the dual poles of the human and nonhuman, and produce relationalities that can be the starting point for alternative politics and sociality.

dialogue *Phaedrus*, Plato makes no secret of his ambivalent attitude towards some media technologies, and namely the technology of writing. *Phaedrus* is a conversation between Socrates, who acts as Plato's proxy, and Phaedrus, a young aristocrat and member of Socrates' inner circle. The discussion centers around a speech on love and eros by the logographer Lysias, which Phaedrus had just attended. Socrates asks Lysias to recite the speech to him. Lysias refuses, but it turns out that he has a copy of the speech concealed under his cloak. The discussion thus turns to such topics of love, madness, and the proper practice of rhetoric. But one of the most interesting parts of the dialogue is the last third, in which Socrates evokes Plato's opinion on writing versus speech.

Plato's[50] reticence about writing stemmed from a similar position as his quibble about rhetoric: they did not allow any dialogue between the interlocutors, and therefore they prevented the emergence of truth. The written word, as opposed to spoken conversations between people, was not capable of creating and communicating knowledge. Oration is a pure connection to some inner core of humanity, both for the rhetorician and the audience. Rhetoric, as opposed to oratory, can fail in its mission to expose the truth, and Socrates notes his suspicion of rhetoricians; however, he admits that those who practice their art in earnest, the orators, can give "an exact description of the nature of the soul", can (Plato 2012). Socrates exclaims that a good speaker, when addressing his audience "set[s] forth the nature of that being to which he addresses his speeches . . . the soul" (Plato 2012). Socrates does not seem to believe in such a thing as good writing, which could correspond to a good philosophy or a good kind of love – which are two of the other themes of the dialogue.

Writing cannot convey the nature of the soul – the essence of the human - and it represents an imperfect kind of communication. Unlike the orators, who have the knowledge of and access to their audience's humanity (they "learn the differences of human souls" (Ibid.)), writers hinder communication knowingly and willingly by "conceal[ing] the nature of the soul which they know quite well" (Ibid.). The texts that writers produce cannot be an authentic connection between humans, but merely a false image – and even worse, it is a false image, a loss of authentic connection that was put forth willingly by the writer.

The connection between humanness and technologies in Western thought is particularly finely-honed in the work of Martin Heidegger, whose work has had a momentous

[50] Some commentators of *Phaedrus* argue that Plato's opinion on writing was much more nuanced than the opinions voiced by Socrates in the dialogue. Jan Zwicky phrases Plato's probably position as " written philosophy can exist and not degenerate into mere rhetoric when, but only when, it surveys all the best available counterarguments to its own theses . . . when it assumes the form of dialectic" (Zwicky 1997, 37)

impact not only on the philosophy of technology, but other branches as well. Heidegger is not usually considered to be a theorist of media, even if his philosophy of technology is widely acknowledged. This might be because Heidegger usually tends to speak of the essence of technology, rather than individual technologies or media. However, his conceptualization of the essence of technology has profound repercussions on potential readings of media technologies, allowing us to divine how his influential thoughts on the essence of technology have left a legacy in our assumptions about the essence of media as well.

The Question Concerning Technology opens with Heidegger cautioning the reader that he will not be talking about technology itself, but rather it essence. The essence of technology for Heidegger does not reside in a particular technological device, but rather pervades *all* technology, or our technological environments. Our contemporary attitudes towards technology prevent us from seeing its essence, argues Heidegger. We are chained to technology, whether we acknowledge it or not, and our gravest mistake is that we consider it to be neutral, which "makes us utterly blind to the essence of technology" (Heidegger 1977, 1). Heidegger's definition of technology is quite precise: it is a means to an end and a human activity. It comprises "the manufacture and utilization of equipment, tools, and machines, the manufactured and used things themselves, and the needs and ends that they serve" (1977, 2).

If technology is viewed instrumentally, than it means that it presupposes a certain 'right' kind of relationship between itself and the human. The human must manipulate technology in a proper way in order to master it. In his lectures collected in Parmenides, Heidegger returns to the idea that proper humanness is defined by a proper relationship to technology. He uses the examples of handwriting and typewriting to elaborate his view on the distinction between a proper and improper way of being (1992, 1). For Heidegger the spoken word and the hand are both markers of the human, and the traits that distinguish humans from nonhumans. Unlike the hand, which contains the essence of man (1992, 80) and establishes a conduit for 'pure thought', technologized writing "deprives the hand of its rank in the realm of the written word and degrades the word to a means of communication" (81). Cutting off the connection between the word and the hand also leads a rupture between the human and Being, loosely understood as the essence of the human. In Heidegger's philosophy, the difference between proper and improper relation to technology is inherently biopolitical, and analogous with the distinction between proper and improper humanity as well.

For Heidegger, as for French philosopher Jacques Ellul, technology is thought to be capable of exerting a form of dehumanizing mastery over its users. Heidegger sees this technical domination as an encounter that effects a dramatic change over man as a species,

where the two stand in opposition: man attempts to master technology (and fails), which leads to technology taking over the man as species, mutating in into something else.

Technology can escape the user's control and eat away at their humanity. The improper user of technology is in danger of becoming dehumanized. The metaphor of media-imposed loss of humanity is a common one nowadays, and it infiltrates a variety of discourses on the problematic effects of media. The "kind of man" who becomes altered because he or she was not able to maintain their proper relation to technology is eerily reminiscent of what critics of the Internet think is a shift in the users' consciousness. Nicholas Carr, for example, Internet use creates the "'pancake people'—spread wide and thin as we connect with that vast network of information accessed by the mere touch of a button." The improper use of technology (which is caused by the human's attempt to dominate technology) gives birth to a new species of man for Heidegger (Campbell, 2011: 7), and the Internet addict, whose encounter with technology is increasingly understood in medical terms, might be one such example. As Timothy Campbell suggests, Heidegger's argument regarding technology is chiefly biopolitical – setting up two categories of humans which can be subject of management: those who access technology properly (proper humans) and those who do not (improper humans). That the danger of technology lies in the fact that it prompts a change in the nature of humanity: a mass of mankind distinguished from those who enjoy a proper relation to technology (Campbell, 2011: 8). The Internet users that appear in the discourse of techno-anxiety, those who get 'lost' in cyberspace and disconnected from nature as well as their own nature can be placed into this kind of biopolitical category envisioned by Heidegger.

Intimacy with the inhuman

This section explores another aspect in the mythology of inhuman media: the notion that media is not necessarily inhuman in itself, but creates the possibility of intimacy with the inhuman. Like the medium as the human conduit of ghostly apparitions, media can become gateways to relationships with nonhuman entities who might or might not be dangerous. The nonhuman in these relationships is a hazy concept: it might entail an otherworldly inhuman presence, like Sadako and her haunted tape, but it also extends to people or actions that can pose an actual physical or mental danger to the user. Let us take the very mundane example of the Internet as a tool that murderers and predators use to lure in their victims. 'Internet killer' is now a consecrated term used for murderers who met their victims online. The deep web is anecdotally known to host websites where users can hire contract killers, or watch live

murders. Even cyberbullying, whose perpetrators are routinely called 'trolls'[51], fit into this discourse. I argue that although that safety and privacy issues in networked media are a serious and valid concern, they are part of a larger cultural metaphor of media as doorways for inhuman presence, facilitators of improper intimacies with these presences.

The notion of media technologies as inviting inhuman presences can be traced back to the earliest stages of electronic communication: the electrical telegraph. The first electromagnetic telegraph transmission took place in 1844, from Washington to Baltimore. The message, chosen by a Miss Ellsworth, was ominous: "What hath God wrought?" In the next two decades, the telegraph networked webbed its way all across the United States, and across the Atlantic to connect to Europe. It is difficult to overestimate the importance of the telegraph as a means of communication in the second half of 19th century, when previously letters between continents and even from one coast of America to the other took weeks or months to arrive. The telegraph transgressed space and time, and took mere seconds to connect people in spirit if not in body. Jeffrey Sconce notes that the sense awe and wonderment that dominated the discourse at the time was due to an unprecedented feeling of disembodied communion that would lead to a utopian community (Sconce 2000, 22). Sconce quotes one telegraph enthusiast who exclaimed that "the world . . . will be made . . . a great assembly, where everyone will hear and see everyone else" and lead to a "practical unity of the human race" (Ibid. 23). Such techno-utopianism is no stranger to our present age: only a few decades ago, cyber-enthusiasts wrote manifestos such as A Cyberspace Declaration of Independence, extolling the Internet as a space where "all may enter without privilege or prejudice accorded by race, economic power, military force, or station of birth . . . where anyone, anywhere may express his or her beliefs, no matter how singular, without fear of being coerced into silence or conformity" (Barlow 1996). These humanist sentiments persisted for a while, but they developed another side as well – instead of sustaining a community of humans, the telegraph opened a line of communication with other worlds.

American spiritualism as a movement[52] began to emerge only a few years after the first fateful telegraph transmission. Kate and Margeretta Fox, two young girls in New York, allegedly began to hear rapping sounds in their home. They began communicating with

[51] Internet trolls take their name from mythological Scandinavian monsters, portrayed as malicious, antisocial and unintelligent creatures (Myth Encyclopedia, 2016)

[52] Although the origins of the American spiritualist practice can be traced back to certain readings of the works of self-titled mystics such as Mesmer and Emanuel Swedenborg (Carroll 1997, 17), the general consensus among historians of American spiritualism agree that the Fox sisters' 'telegraphic' communication with spirits opened up a 'new era' of organized belief spirit communication (Carroll 1997, 21; Braude 2001, 18).

whatever made the sounds, and they quickly became a national sensation, with hundreds of people coming to witness their communication with the 'spirit'. First, their 'spiritual telegraph' was based on raps for yes and no, but their exchanges gradually became more complex, with the 'spirit' choosing letters from the alphabet to formulate its replies. In a decade, the Fox sisters and their spirit acquaintance sparked a political and religious movement that became known under the name of Spiritualism (Sconce 2000, 23-24). Sconce argues that the historical and geographical proximity of these two media, the telegraph and its spiritual counterpart, were not a coincidence, and neither a simple "fleeting moment of naïve superstition" (Ibid. 25). The spiritual telegraph and its potential for channelling the inhuman, for Sconce, still very much informs contemporary narratives on the media's powers (Ibid.). To put it differently, perhaps that what Sconce is hinting at is that the spiritualist movement was involved in the evolution of a topos[53] that sets media technologies as inhuman, and which can be argued to persist and influence contemporary media culture as well.

Today's online cultures are rife with various kinds of intimacies with inhumans. Line Henriksen writes about the folklore of the Internet, short stories called creepypasta which are meant to be circulated like chain emails. Creepypasta take the shape of anonymous short stories, copy-pasted from site to site, forum to forum. They can be described as the urban legends of the Internet, with many of these stories describing alleged events that happened in connection with some media or other. Henriksen sees creepypasta as "companionship with and responsibility towards that which is not supposed to exist" (Henriksen 2014, 40). The core of creepypasta is the spectral: the inhuman, neither present nor unpresent, imaginary but not quite. Henriksen, talking about the figuration of the spectre in Western thought, argues that technological advance has not destroyed the idea of the spectre; instead, the ghostly inhuman has "drawn a somatechnical cartography of the movements and mutual transformations of technologies, embodiment, imagination and that which remains unfathomably strange" (Ibid.). In the context of media, we might understand the place of the inhuman as an acknowledgement that the metaphor of the ghostly, of the spiritual telegraph, has become ingrained into the media assemblages of which humans are co-constitutors of.

The inhuman channelled through media is even more seductive when it is not originating in the supernatural, as proven by the case of love and devotion to fictional

[53] I use topos in the sense developed by media archaeologist Erkki Huhtamo, who frames topoi as recurring clichés in media culture that embody cultural fears and desires, and shape the meaning of cultural objects. For Huhtamo, topoi are "discursive meaning processors [that] not only express beliefs but can serve rhetorical and persuasive goals, as evidenced in the field of advertising. New products are promoted by being packaged into formulas that are meant to strike the observer as novel, although they have been put together from ingredients retrieved from cultural archives." (Huhtamo 2011, 28).

characters, enacted through media. In Western discourse, Japan is often marked as the locus of origin for various unhealthy or improper transgressions of the border between humanity and technology (Galbraith 2011). The West's techno-orientalism aside[54], Japanese dating simulation games[55] are a significant point of inquiry into the discourse of intimacy with media as potentially disruption of capitalist norms of re-productivity, as Galbraith argues. When it comes to examining the affective bonds between media and users, game studies has somewhat privileged Japanese dating simulation games and role-playing games as a site of analysis[56]. However, the phenomenon of such techno-intimacies is by no-means exclusive to Japan, and it is also pervasive in the sphere of Western video game fandom.

The orientalist discourses that produce sneering headlines such as "Japanese man 'marries' computer game character" (Ryall 2009) or "The Japanese men who prefer virtual girlfriends to sex" (Rani 2013) could be interpreted as a way of externalizing the fear or improper intimacy onto a cultural and racial other, but they are also indicative of a similar fear directed inward. After all, computer games have long been the target of various moral panics surrounding children and adolescents who become corrupted through their playing (Cover 2006). It can be argued that the concern over the anthropomorphization of certain media such as video game characters[57] to the point of producing improper intimacies is in a way a return of media technology's ability to conjure and put humans in contact with ghosts. The video game characters who become objects of improper affections and intimacy are symbolic of pleasures that are "suspended from (re)productive functions" (Galbraith 2011). In these intimate relationships, there is no fleshly being behind the screen, and the user is put in a position where the reproductiveness and productivity necessary for proper somatic individuality are made impossible.

[54] Toshiya Ueno defines techno-orientalism as "the orientalism of cybersociety and the information age" (Ueno 1999, 95). Following Said, if the Orient was constructed as a fantasy to uphold Western supremacy and cultural identity, then techno-orientalism is its adaptation to the demands of technologically advanced information capitalism (Ueno 1999, 97). Techno-orientalism can manifest in the form of the Western fetishization of Japanese animation, video games, or otaku culture.

[55] Dating simulation games, or dating sims, are a genre of role-playing video games in which the player, as the main character, is tasked with romancing, dating, or engaging in sex with the various characters of the game.

[56] Which can be read as an ingrained techno-orientalism within Western scholarship in the field of game studies.

[57] For example, gamers' attachment to certain game characters, to the point that the character is described and treated as a human being, and ascribed agency. Noteworthy fictional game characters such as Lara Croft, Mario or Link have transgressed their status as simple literary fictions, and have ascended to a quasi-anthropomorphic status, especially in discourses circulating in gaming communities. For a rather upsetting example of the way in which the anthropomorphization of games can have a negative outcome, see the documentary *Love Child* (2014), discussed briefly in Chapter 5.

Media can conjure up the inhuman, and the users of media are sometimes bound to fall in love with these disembodied, unproductive spectres who in their turn render the user herself incapable of enacting proper somatic citizenship.

Inhuman determinism, inhuman ontology?

This section explores a third way in which the notion of the inhuman is woven into the fabric of media and its theorizations: media as a nonhuman or inhuman actant imbued with agency of its own. We have seen that media is often read as causing the loss of humanness, and can unfold intimate relationships with processes and things that are not human. Both of these aspects of media criticism are undercut by the assumption that media can cause change in their milieus, or, as Friedrich Kittler put is, media can "determine our situation" (Kittler 1999, xxxix). The following paragraphs will focus mainly on Friedrich Kittler's theory of media, which is representative of a discourse on media technology as the conditions of human existence, or, as Kittler would put it, a technological a priori for life. Kittler is often labelled a technological determinist, which is not surprising considering his often inflammatory throwaway lines such as "media determine our situation". Kittler's work was indeed meant to cause trouble in 'traditional' humanist media theory – his stated goal was to 'expel the spirit from the humanities'[58] – he meant to use media as a way of changing the frame of reference of traditional humanities (Siegert 2015, 81). It is not my intention here to paint Kittler as an unambiguous techno-determinist[59], but rather to highlight those strands of his thought on the agency of technology whose echoes can be felt in contemporary discourse on media.

Kittler considered media to be devices and processes of storing and manipulating time, and as such, they are populated by the dead, by those who are only present through media. In the age of the mechanical (and now digital) reproduction of media, Kittler argues that "the realm of the dead is as extensive as the storage and transmission capabilities of a given culture" (Kittler 1999, 13). In Kittler's media theory, ghosts and media technologies always accompany one another. But there is another side to these ghostly media: their ghosts

[58] In the original German, "Austreibung des Geistes aus den Geisteswissenschaften". It is the title of a collection of essays based on a series of lectures at the University of Freiburg. Although the title is widely translated and quoted as 'expelling the spirit from the humanities', Geoffrey Winthrop-Young, one of the foremost Kittler scholars, notes that it might be more accurate to translate it as "kicking the Man out of humanities" (2015, 3).

[59] Winthrop-Young argues that the accusations of techno-determinism directed at Kittler were by no means unfounded. However, on a careful reading of his work, there is no doubt that Kittler did not manage to entirely avoid the notion of the human and its intentionality. As Winthrop-Young notes, Kittler could not help "saying what he did not want to say" (Winthrop-Young 2011, 121).

are not the effect of the human mind's naïve method of coping with the compression of space and time; the unearthliness of media, for Kittler, is simply part of their internal logic.

Although a literary scholar by training, Kittler was interested in why Western ontology had been aggressively ignoring technical media, and argued that it was crucial for the connection between ontology and media to be formulated in more precise terms (Kittler 2009, 23). On cannot talk about media technologies without truly understanding what they do, and how. Relatedly, Kittler considered that 'what technologies do' is not an effect of human agency. He disagreed with McLuhan that media are extensions of man. The ontology of media technologies, for Kittler, lies in the fact that they are to some extent self-determining: "media history can be told, at least partly, as the story of a series of steps of escalation where one innovation in technology really does triumph over its forerunner" (Kittler and Armitage, 2006, 28). For him, the history of media technologies is not the history of human agency and desire, but rather the history of media technologies themselves, told from their point of view. The "so-called Man" (1999, 16), a cultural fiction fabricated through media technologies, is not the master of technology for Kittler, but rather its subject endowed only with limited agency and capacity for self-determination.

In Kittler's work, media technologies figure almost as an omnipresent deity, a presence that, as Avital Ronell put it, is irremissible and lacking an off switch. There is no possibility to escape technology by find a safe zone that has not been affected by it. Everything that humans experience is already "plugged into a larger technological circuitry" (Ronell 2011). If for McLuhan media were the extension of man, for Kittler the opposite is valid: man is the extension of technology – "After all, it is we who adapt to the machine. The machine does not adapt to us" (Kittler 2009, 36). Kittler's stark distinction between the human and the technological leads him to deny the possible the existence of transgressive figures such as Haraway's cyborg. The result of media technologies is not the birth of cyborgs, but the propagation of the technological logic, the development and maintenance of infrastructures for existence. As far as Kittler was concerned, the entirety of media theory (as long as it focused on media and not on the fallacy of the so-called Man) inasmuch as it tells the story of media from the point of view of media.

3. Alternative readings: from media to mediality

So far, I described the way in which the concept of media as stemming from the work of Marshall McLuhan can be a tool that allows us to examine media not just as individual

vehicles for content, but as part of an effects-driven ecology that encompasses the human user and her extensions. I have also attempted to show how the assumption of inhumanity underlies the theoretical, artistic and practical understanding of media, by drawing on the writings of Plato, Heidegger, Kittler, Sconce and others. As seen in the previous chapter, biopolitics is grounded in techniques that sift and separates its subjects into oppositional categories of human/nonhuman, proper/improper. Media, through its instability, unclear origins and indeterminate agentic capabilities poses a problem for the anthropological machine of biopolitics. But at the same time, the legacy of McLuhan, Kittler and Heidegger in media studies are not always favourable starting points for a revision of media's role in the media-user couplet represented by media addiction. This section draws on recent directions in new media theory in order to seek alternative readings of media which escape the trap of categorizations such as human, nonhuman, inhuman while still acknowledging the meaningfulness of these points of reference and their productive potential. Media scholars such as Sarah Kember and Joanna Zylinska suggest that media theory should shift its attention from the study of media objects to media processes – in their words, mediation.

Kember and Zylinska propose mediation as an alternative conception of media that, according to them, avoids the pitfalls of false categories imposed by early media theory. They argue that 'old' media theory falls into either technophobia or technophilia, none of which can provide a complete picture of human's relationship with media, and that in order to avoid this, theorists should take a nonhumanist stance towards media technologies. Kember and Zylinska argue that instead of considering humans being situated within a technological environment, we must acknowledge that humans are "physically and therefore ontologically – part of the technological environment, and [that] it makes no more sense to talk of *us* using *it*, than it does of *it* using *us*" (Kember and Zylinska 2011, 13). I believe that Kember and Zylinska's concept of mediation can strike a productive balance between the understanding of media as static conveyors of meaning and media as extensions of unknown origins that we can approach only in terms of their effects.

I will approach the notion of mediation as a potentially productive reframing of media-human intimacies as something other than exploitative, destructive or dehumanizing intimacies. However, I am somewhat wary of Kember and Zylinska's rejection of the media/human distinction, which, as Peters notes, can lead theorists to discount useful empirical investigations of media (Peters 2015, 18). The goal of this section is to expand on an alternative understanding of media are dynamic and inseparable from the human, but

In an insightful introductory lecture to her course on new media at Goldsmith, Sarah Kember advises that if one wants to define media as a scholar, they should start not by describing what media is, but rather what it is not. Media are not discrete technological objects whose purpose is to communicate meaning. Nor are they simply the meaning (i.e. content) transmitted by technological objects. Media, as argued by Kember and Joanna Zylinska in their book *Life After New Media*: *Mediation as a Vital Process* (2011), media are complex and interlocking processes of mediation "that are in operation at the biological, social, and political levels" (Kember and Zylinska 2011, xiii).

Kember and Zylinska, like an increasing number of media theorists today, speak the language of new materialism, assemblage theories, and deconstruction. This new parlance of media theory is not entirely dissimilar from McLuhan and other early theorists of unruly media, and is attentive to the ontologies, layers and interconnections observable in media history. What is unique about the 'new' media theory is that it fully acknowledges media technologies as active agents on equal footing with human users, and seeks to undo the categories that separate them. Kember and Zylinska argue that the categories are "reductive and therefore unhelpful; it also has serious political and ethical consequences for our understanding of the world, its dynamics, and its power relations" (Kember and Zylinska 2011, 2). Kember and Zylinska revel in the ontological instability of media, and are critical of those theorists who seek to "grant media a relatively stable ontology as long as the object has been adequately isolated and historicized" (Kember and Zylinska 2011, 12). Yet they commend theorists such as N. Katherine Hayles and Karen Barad for grounding the ontology of media in their co-constitution with the human (Ibid.). However, Hayles and Barad never advocated for boundless dynamism and uncontained fluidity that avoids all ontological fixity. In fact. Barad argues that intra-action[60] entails an agential cut[61], that is, the differentiation of subjects and objects within a given phenomenon (Barad 2003, 815). My concern with Kember and Zylinska's schema of media is their criticism of media theory as the analysis of

[60] Karen Barad borrowed the term intra-action from physicist Niels Bohr, and repurposed it to mean that in any given physical (and presumably nonphysical) phenomenon, the observer and the observed are not two objectively independent, pre-existing entities. Rather, they emerge within phenomena, through the process of intra-action. Subjects and objects do not exist prior to intra-action, but become determinate through intra-action (Barad 2003, 814-815).

[61] Barad further explains that "the agential cut enacts a local resolution within the phenomenon of the inherent ontological determinacy. In other words, relata do not pre-exist relations; rather, relata-within-phenomena emerge through specific intra-actions. Crucially then, intra-actions enact agential separability—the local condition of exteriority within-phenomena. The notion of agential separability is of fundamental importance, for in the absence of a classical ontological condition of exteriority between observer and observed it provides the condition for the possibility of objectivity" (Barad 2003, 815).

discrete media. When looking at phenomena of media addiction for example, which are usually assigned a specific object of addiction within their respective discursive structures (i.e. the cause of Internet addiction is the assumed existence of a coherent, stable material media assemblage called the Internet). That is to say, no matter how entangled, indistinguishable and fluid media are, in order to deal with the phenomena that they produce we need to (temporarily at least) adopt some semblance of ontological stability – to enact an agential cut in order to analyse figures such as the media addict.

Kember and Zylinska brilliantly illustrate how understanding media in terms of processes lends itself productively to the media objects of the digital age, when it is extremely difficult to distinguish where one medium ends and the other begins: phones, digital cameras, film recordings, the Internet, Bluetooth technologies, satellites, tablets, digital microscopes – all these are different media based on a common language (that of binary codes, protocols), and all are on the verge of being absorbed either by Mark Weiser's tangle of ubiquitous computing or by the 'Cloud', that amorphous enterprise that is quickly becoming the paradigm of today's information infrastructure[62]. Kember and Zylinska insist on the interconnectedness of the biological and technological processes that are entailed by media, and they argue that acknowledging this interconnectedness can lead us to an ethical dissolution of the subject/object binary.

While interconnection between all human and nonhuman agencies is indeed an ethical goal, it does not necessarily lead towards the conceptualization of an ethical practice of media use. I am thinking here of the impetus that lies within neoliberal capitalism to present media-use as a necessity and obligation of the productive somatic citizen, while instituting disciplinary measures to deal with media practices which are not deemed useful. The uncritical acceptance of mediation as *the* model of media practice and theory could also entail the normalization of a type of human-media interaction whose empirical specificities are discarded in favour of the mantra of ontological indistinction.

Kember and Zylinska's work is exemplary of a new wave of media studies that is heavily influenced by the new materialisms and their focus on escaping the subject/object dualism while also recognizing the agency of actors that are other than humans. This type of media work makes an important contribution to the ontology of media, through addressing

[62] Cloud computing is a mode of information processing wherein information is not locally stored on a personal device's hard drive but rather on the Internet. The cloud is a metaphor for the Internet, and refers to the fact that the resources needed by a device are not stored *on* the device, but on shared remote servers. Google Docs and Google Drive are two examples of popular cloud services.

media's conditions of possibility, and its radical inseparability from notions of life[63]. However, mediation might not always be able to account for the way in which people experience media, and narrate their experiences to themselves within the strata of power in which they situate themselves. In other words, it can easily side-line the epistemology of media use. How do somatic individuals make sense of their mediated lives? What kind of discourses construct the meaning of media as part of lived experience, and what sort of discourses do media construct in their turn? In other words, how to we construct knowledge about media, through what means, and to what purposes? If we take disordered media use as an example, the discourses presented the previous chapter suggest that there is a variety of biopolitical techniques that function on the premise of a radical separation between media and humanity. Somatic individuals, also living in a technicized environment, are still responsible to maintain a modicum of biological purity. Interconnectedness or hybridity is accepted only insofar as it does not truly trouble any subject/object boundaries – as long as it is still possible to distinguish where the media ends and the human begins. It seems then that some media studies' recent concern with new materialities does not fit seamlessly into the way in which media are managed in actuality through biopolitical techniques.

The seeming incompatibility between media theory and media discourse in action can be assuaged by establishing a middle-ground between the two: an attention to both media as "a form of life, of a general environment for living—for thinking, perceiving, sensing, feeling" (Hansen and Mitchell 2010, xii), as well as individual mediums. I do not see mediation without media as a necessarily liberatory concept, especially when applied to this project's protagonist, the media addict. It is true that mediation as the seamless integration of human and media makes the category of media addiction superfluous and unintelligible

Conclusion

Media is a strange phenomenon in that it is very easy to identify in practice, but it becomes a blurry and unstable formation as soon as scholars attempt to theorize it. The critiques of media theorists such as Marshall McLuhan target not only logical inconsistencies, but also his failure to pin down a phenomenon that is much too elusive for generalizations.

[63] One of the main claims of Kember and Zylinska's book is that mediation is an all-encompassing process that affects every aspect of lived experience, which is why one cannot speak of any subject separate from mediation. For them, mediation is a "theory of life" through which "mediation becomes a key trope for understanding and articulating our being in, and becoming with, the technological world, our emergence and ways of intra-acting with it, as well as the acts and processes of temporarily stabilizing the world into media, agents, relations, and networks" (Kember and Zylinska 2011, xv).

This quandary is certainly felt in the present project as well. The media addict as a figure can be traced back to improper intimacies with specific, discrete incarnations of media: computers, games, Internet, etc. However, in order for a category such as media addiction to be able to exist coherently enough in order to be biopoliticized, one must assume that there is a unifying force or trait that characterizes *all* media.

But speaking of *all* media is a dangerous endeavour, as Marshall McLuhan's writing illustrates. His idea of media as the extensions of man (and by definition, all extensions of man must be media) is somewhat reminiscent of the notion of 'flat ontology' that has taken hold of certain parts of philosophy and critical thought[64]. Not all media are cut out of the same cloth, and, as John Durham Peters muses, "ontology is not flat; it is wrinkly, cloudy and bunched" (2015, 30). As Eva Horn argues, because the scope of media is so vast and varied, the manner in which they are or, rather, 'become' media . . . , can be analyzed only in historically singular and specific situations" (2008, 8). Horn sums up the tangled contemporary approach to media by noting that:

Theorizing media thus means not so much analyzing a given, observable object as engaging with processes, transformations, and events. Media are not only the conditions of possibility for events—be they the transfer of a message, the emergence of a visual object, or the re-presentation of things past—but are in themselves events: assemblages or constellations of certain technologies, fields of knowledge, and social institutions. Such heterogeneous structures form the basis, the "medial a priori," as it were, for human experiences, cultural practices, and forms of knowledge. (Ibid.)

Making use of media theory, even on such a metadiscursive level as examining the biopoliticization of media use, must then involve attention to particularities such as the material specificities of various media, or the contextualization of phenomena of media use, as well as drawing on a theory of mediation that allows us to speak about the nature of media. I suggested that theoretical work such as that of Sarah Kember and Joanna Zylinska is exemplary in this sense, thanks to its potential to juggle the specificities of discrete media as well as an approach to media as all-encompassing processes of mediation that affect all levels of experience. But while mediation theory provides an alternative reading, it does not erase the discourse on media that have been firmly grounded in Western history and philosophy up

[64] Namely Object-Oriented Ontology (OOO) and some other parts of the new materialisms. Object-Oriented Ontology presumes that the only true subjects of philosophical inquiry are objects that exist independently of human thought. OOO rejects anthropocentrism and the Kantian privileging of the subject. Instead of an ontology based on subjects and objects, OOO posits a 'flat ontology' wherein all objects, including human consciousness, exist on equal footing – which makes even the prospect of social critique impossible from the point of view of OOO.

to date. I relied on Plato and Heidegger to show how the inhumanity in/of media has been an persistent concern in Western thinking, which still resurfaces in contemporary anxious discourses on media. Similarly, the association between media and spiritualism that emerged in the 19th century still has an impact on how media is depicted and understood today.

The inhuman associations of media and their affinities with biopolitical theory cannot go unnoticed. In fact, Heidegger's work on technology has already been interpreted as fundamentally biopolitical by commentators like Timothy Campbell, who have highlighted the connection between proper and improper use of media and proper and improper humanity, i.e. those who qualify as productive somatic citizens and those who do not. For Heidegger, as for French philosopher Jacques Ellul, technology is thought to be capable of exerting a form of mastery over its users. Heidegger sees this technical domination as an encounter that effects a dramatic change over man as a species, where the two stand in opposition: man attempts to master technology (and fails), which leads to technology taking over the man as species, mutating in into something else. The "kind of man" who becomes altered because he or she was not able to maintain their proper relation to technology is eerily reminiscent of what critics of the Internet think is a shift in the users' consciousness. Nicholas Carr, for example, Internet use creates the "'pancake people'—spread wide and thin as we connect with that vast network of information accessed by the mere touch of a button." The improper use of technology (which is caused by the human's attempt to dominate technology) gives birth to a new species of man for Heidegger (Campbell, 2011: 7), and the Internet addict, whose encounter with technology is increasingly understood in medical terms, might be one such example. The danger of technology lies in the fact that it prompts a change in the nature of humanity: a mass of mankind distinguished from those who enjoy a proper relation to technology (Campbell, 2011: 8). The Internet users that appear in discourse of techno-anxiety, those who get 'lost' in cyberspace and disconnected from nature as well as their own nature can be placed into this kind of biopolitical category envisioned by Heidegger.

Kittler and his brand of materialist media theory that exposes media's own inhuman logic serves as somewhat of a reinforcement for the kind of techno-anxiety that Heidegger had expressed. Although Kittler had no stakes in prophesizing a media-induced change within the species and the divisions of the proper and improper, his disinterest in the place of the human within the media technological assemblage serves only to bolster any fearful discourses on media's negative effects. Heidegger, Sconce and Kittler's writings expose ideas about media which, perhaps unwittingly, seem to function as a solid basis for the biopoliticization of media use.

The next chapter will follow up on Kember and Zylinska's 'lively' new media theory and seek to delve into the specific philosophical mechanics through which human and nonhuman elements are thought co-construct each other in order to form "hybrid process that is simultaneously economic, social, cultural, psychological, and technical." (Kember and Zylinska 2011, xv)

Chapter 3: Technogenesis

Introduction

In Chapter 1, I briefly touched upon the discourse on addiction and its place within the wider canon of somatic citizenship and the biopolitical individual's responsibility to lead a productive and self-fulfilling life. As seen in Chapter 1, addiction is a messy, unstable variable that threatens to upset the balance necessary for a good life, and the containment of its contagious affects is a matter of life and death not only for the afflicted individual, but for the whole population. The addicted individual suffers from a disordered desire for a substance or process that separates her from the flock, but can be reanimated as a proper member of the population through the pastoral recovery techniques (Rose 2007, 28) of the new politics of life itself. The DSM-5 and other global medical institutions organize addiction into various taxonomical orders and their attending treatments. And while the existence of addiction has become a rarely questioned fixture within medical discourse, its root causes are still shrouded in uncertainty.

Researchers have been probing into the origins of addiction by using the reliable staple of modern, purportedly objective science: the rat. In an article for The Huffington Post, Johann Hari (2016) reports on an old scientific experiment that wished to shed a different light on traditional North American narratives on drugs and the longstanding 'war' on them. According to Hari, drug addiction is either thought of in terms of a chemical hook that hijacks the brain, or a moral failing on the part of the addict (Hari 2016). But according to an experiment on rats conducted by Bruce Alexander in the 70's, the problem is far more nuanced than a craving caused by the pleasure response to a chemical substance. Alexander conducted his experiment on two groups of drug-using rats: the rats in the first group were held in isolation in a cage with access to drugged water and no other stimuli. The second group were free to roam the 'Rat Park', a playground filled with not only with drug sources, but also toys, tunnels, food and companions. The isolated rats became addicted, while the residents of the Rat Park showed markedly less interest in the drug dispenser, and continued to lead happy, healthy lives. Surprisingly for Alexander, the isolated junkie rats completely changed their behaviour after they were moved into the Rat Park: after a brief period of withdrawal, they adjusted to 'normal' life. For Hari, the results of the rat experiment are not all that surprising. He brings up the example of Vietnam War veterans, who had purportedly

become addicted to cocaine while on the battlefield, 95% of whom simply stopped taking the drugs once they returned home, without needing any sort of specialized care. Simply put, addiction was not just the brain's reaction to highly stimulating substances – it was the product of the environment, a means of survival and adaptation to one's milieu.

The alternative view of addiction as adaptation reframes drug use as a matter of bonding – or to use the vocabulary of disordered desire, addiction is intimacy, or rather the substitution of 'real' intimacy with a bond to improper substances or actions. The cure is a reformulation of the poison: intimacy again, but of a different sort: "human connection" (2016). Instead of removing access to the addicting substance, Hari believes that the solution to addiction is to re-establish the traditional human bonds of addicts to their own feelings and to wider society (2016). Addiction, whether to drugs or something else, is a symptom of our fundamental disconnection to one another, argues Hari in a way that is strikingly similar to Sherry Turkle's stance on new media. Modernity and its failings (including those who propagate it) are to blame:

> we have created an environment and a culture that cut us off from connection, or offer only the parody of it offered by the Internet. The rise of addiction is a symptom of a deeper sickness in the way we live -- constantly directing our gaze towards the next shiny object we should buy, rather than the human beings all around us (Hari 2016).

Hari's impassioned critique of the discourse of the war on drugs highlights several of the key terms of media addiction narratives: 'proper' human intimacy, adaptation to a hostile hyper-technologized environment, and the need to change the environment in order to provide a restorative space as part of the somatic individual's quest for properness. Alexander's experiment shifts the focus of the addiction discourse from the agency of the individual to a distributed agency that emerges as the intra-action of the individual and the milieu. Feminist scholars are already ahead of game with their theorizations of such forms of distributed or non-individual agency. Stacy Alaimo's concept of transcorporeality, for example, provides a way of understanding agency as an emergent aspect of the human in its environment. Alaimo argues for the reimagining of "human corporeality as trans-corporeality, in which the human is always intermeshed with the more-than-human world, underlines the extent to which the substance of the human is ultimately inseparable from 'the environment'" (Alaimo 2012, 2).

Although the present work was partly born out of a desire to write about the agency of the media from the point of view of new materialist scholarship, this chapter is a necessary break from the overall intent of my research: its centerpiece will be the human, or rather the

human as emerging from and intra-acting with a technical milieu. So far I have looked into the crystallization of the figure of the media addict qua (failed) somatic individual through the biopolitical discourses woven into medical texts and social commentary. In Chapter 1, I argued that the media addict can be seen as a somatic individual entangled in an improper, non-productive intimacy with an improper object: media. Chapter 2 theorized media as an unstable concept denoting a variety of material configurations, and looked at several key discourses on media in order to highlight the symbolic connection between media and inhumanity, and the way in which that biopolitically-mandated inhumanity polices the forging of 'improper' intimacies with media, thus rendering media addiction as exposed to strict moral and medical management.

The purpose of this chapter is to provide an argument for the possibility of imagining generative human-media entanglements through the concept of transcorporeality, and to examine the ways in which they can be inscribed not only into the practices of everyday media use, but into the biopolitical figuration of the media addict as well. In other words, this chapter will focus on the specificities of media addiction as a form of perpetually adaptive relation to one's environment. The chief concern that arises from this line of discussion is how to understand the emergence of the 'human' subject not only in relation to the domain of media technologies, but also to pay attention to the way in which this subject emerges in an embodied way, and in the midst of a milieu that is simultaneously material, political and social.

I will start with transcorporeality, which will frame the argument of this chapter: media intimacy as a property of the transcorporeal merging of human, media, and environment. Then I will lay out the parallel concepts of originary technicity and technogenesis, sourced from the works of Bernard Stiegler and N. Katherine Hayles respectively. Both Hayles and Stiegler argue for the co-emergence and co-construction of humans and technics, and for the understanding of the human as always already a technical individual. Such a theorization of originary entanglement of humans and technics sheds a rather destructive light on the very idea of media addiction – if we've always emerged in conjunction with our media, then is it possible for biopolitical governance to devise norms of media use without endangering the very somatic individuals it purports to protect? The problem at the heart of the figure of the media addict is that the addicted somatic individual is no longer capable of the self-governance needed to maintain the ontological separation of the subject (the human addict) and the object (the media). Underneath the transgression of the subject/object border, there is also the media's latent inhumanity, which contaminates the

humanness of the somatic individual through the process of addiction. The purpose of this chapter is offer a counterpoint to these assumptions about the inhumanity and transgression involved in media addiction, and instead look at the originary technicity as a starting point for opening a discussion about media addiction both as a biopolitical figuration as well as a lived social and medical issue. The productive reformulation of the ontology of media is a potentially useful intervention into the continued formulation of a biopolitics of care (as seen in the work of Nikolas Rose in Chapter 1), rather than a biopolitics based on the management and maintenance of order within the community[65]. It also avoids the biopolitical scapegoating of either the media, or the media user but allowing us to rethink agency and embodiment in the case of human-technology interactions. The revision of media use as a form of productive engagement of self, environment and technics may lead us to imagine a (still imperfect) but more lenient biopolitical production of the media user.

1. Transcorporeality

Much of the sciences and humanities are disseminating a problematic division between the human and its environment, and assign a misguided wholeness and capacity for individual agency to the human, and frame the environment as an "inert, empty space of a resource for human use" (Alaimo 2012, 2) – this is the thesis put forth by Stacy Alaimo in *Bodily Natures*. Alaimo's ethical and political project is to deconstruct there forced separations between bodies and their environments and to offer an alternative to the narrative of the bounded subject and passive environment in which she functions. She argues that

> trans-corporeality also opens up a mobile space that acknowledges the often unpredictable and unwanted actions of human bodies, nonhuman creatures, ecological systems, chemical agents, and other actors. Emphasizing the material interconnections of human corporeality with the more-than-human world—and, at the same time, acknowledging that material agency necessitates more capacious epistemologies—allows us to forge ethical and political positions that can contend with numerous late twentieth- and early twenty-first-century realities in which "human" and "environment" can by no means be considered as separate (Ibid.)

The environment that Alaimo speaks of is implicitly technical. Her rejection of essential human nature, a goal which is shared by media theorists as well, as seen in Chapter 2, already points towards affinities between her work and that of media scholars who see mediation as a process of co-construction that involves human and nonhuman elements.

[65] Which, even in Nikolas Rose's reformulation, still involves some degree of symbolic violence in its attempt to keep the population safe by excluding those elements that threaten security (Mayes 2015, 26)

Transcorporeality, as the affirmation of interconnections between the human and the environment is a refiguration of agency as a product intersecting interactions[66]. The purpose of this section is to establish a toolkit that will allow us to position human-media intimacy within a wider range of human-environment interconnections. Alaimo's framework and its commitment to feminist politics also serves as a counterpoint to Bernard Stiegler's conception of an abiological, implicitly masculine technical individual that he frames as the model of humanity's coevolution with technics, which will be explored in further detail in section 2.

I rely on the lens of transcorporeality for my reading of Stiegler's technical individuality for two reasons: the longstanding association of nature as a philosophical concept and "a cultural repository of norms and moralism against women, people of colour, indigenous peoples, queers, and the lower classes" (Alaimo 2012, 4), which Stiegler easily glosses over in his technical version of naturecultures[67]. Stiegler's originary technicity, while it entails the human as a process of becoming with technics, posits 'man' as the universal model of technical individuation – in other words, he sees technical individuation as universal. Second, Stiegler pays little attention to the role of biological matter, corporeality, and its persistent association with the feminine, figures in the emergence of the technical being. These are not necessarily failings in Stiegler's work concerned with the relationship between technics and temporality (1998), but are imperative for a biopolitics of the technical individual. Reading together technical individuality and transcorporeality (which already presents some affinity with Stiegler's theory of technics) can paint a fuller and more accountable picture of what it means to be a technical individual in the contemporary biopolitical climate. In other words, transcorporeality might be the key towards de-universalizing the technical individual and avoiding the trap of depicting it as a neutral agent.

Like Donna Haraway's earlier figuration of the cyborg, transcorporeality muddles the nature/culture boundary, and implicitly the distinctions between categories of natural and artificial (Haraway 1991, 154). Quoting Moira Gatens, Alaimo sees the transcorporeality of bodies both human and nonhuman as "radically open to [their] surroundings and can be composed, recomposed and decomposed by other bodies" (Alaimo 2012, 13). For Alaimo and other feminists who participate in the nonhuman turn, the human opens up into the more

[66] Or, as will be seen later in this section, *intra-actions*, to use Karen Barad's terminology.

[67] Naturecultures, or nature-culture is a concept developed in parallel by both Donna Haraway and Bruno Latour as an alternative to the nature-culture dualism perpetuated throughout modernity. Haraway (2003) argues that naturecultures collapse the ontological distinction between nature and culture in Western metaphysics. Instead, she posits nature, culture and the human are part of a continuum rather than discontinuous entities.

than human world. The body, nature, culture, language are not, and have never been discrete entities. And yet, we cannot speak of the inseparability, or rather the non-discrete existence of these terms without actually naming them, and thus claiming them as categories. In order to discuss the intermingling of the natural and cultural, we still need to rely on the fictive categories of the natural and cultural. Like the human and the technological, these terms have their use if understood not as ontological categories, but rather, as Nancy Tuana (2007) argues, 'mediating membranes' that signify complex phenomena of interaction.

Transcorporeality bring the human body into sharp focus, but it emphasizes not only on the "transit between body and environment" (Alaimo 2012, 15) as a local site, but also global social, economic, scientific, technical or political networks. This double situatedness of transcorporeality – at the same time local and global – allows it to "rupture ordinary knowledge practices" (Alaimo 2012, 17) by forcing and forging interdisciplinary alliances and dissolutions. In the context of the unruly and unstable body of the media user (turned into a ticking time-bomb through biopolitical discourses), transcorporeality creates an analytical site through which the human-media interconnection is generated as a simultaneously biological, social and political phenomenon. The lens of transcorporeality is therefore an epistemological shift as well as an ethical framework consistent with the nonhuman turn in critical theory, whose aim is to decenter the modern, bounded (and most frequently white, male and heterosexual) subject as the site of knowledge production and politics. In short, transcorporeality allows us to think how a specific body is "enmeshed in the wider world" (Alaimo 2012, 19), and what the consequences of this enmeshment could mean both for the body in question, as well as its milieu.

Crucially, Alaimo's transcorporeality connects directly with Karen Barad's onto-epistemology of intra-action, which in Chapter 2 was brought in to argue for the necessity to also speak of discrete, concrete media as well as a general mediatic nature when examining phenomena such as media addiction. Barad argues that things do not pre-exist their relations. Any phenomena, be it light's embodiment as wave or particle when passing through an apparatus, or more mundane performances such as the enactment of gender, emerge within their intra-actions. Whether a photon acts as a wave or a particle is the emergent property of a conjunction of different relations: that of the observer to the apparatus, the apparatus to light, the material and semiotic conditions of the experiment itself. The photon itself it constituted through the experiment, and the observer is a constituent part of this process. Agency is therefore distributed transcorporeally in all phenomena, without the possibility of locating it in any single site. This point bears heavily on the interpretation of media addiction as either

the fault of the addict (as a failed somatic individual), or of the surrounding media, and allows us to see the media addict dissolve into a phenomenon of mutual intimacy with media instead – a point which will be discussed in further detail in the following sections.

What does it mean to talk about transcorporeal media use? To return to the example of the Google Glass (discussed in Chapter 1), framing the addicted body as transcorporeal leads us to very different conclusions than Yung et al. research paper on the topic. Yung et al. discovered that the patient, while in his state of 'addiction' to the wearable device, displayed both somatic and psychological symptoms that marked him as addicted. The man, who had been using the Google Glass for up to 18 hours a day for several months, would become "extremely irritable and argumentative", frustrated and emotionally dysfunctional when he was prevented from using his device (Yung et al. 2015, 59-60). His movements, gestures and sleep patterns were also shaped by the interaction with the glass – he kept making tapping motions at his temple even while not wearing it, and he was seeing his dreams as if through the interface of the Google Glass (Ibid. 59). The fact that the man kept using the device in order to order to improve his productivity at work, despite the jarring symptoms that made him and 'unfit' somatic individual in other ways, suggests a breakdown of rationality – which makes the addicted body a danger not only for the population that it is a member of, but also for the political and economic systems which are largely based on a doctrine of rational decision-making.

In a curious and somewhat paradoxical move, Yung et al. construct the Google Glass as both the agentic origin of the addiction, as well as a simple technological tool that has been misused by the patient. And yet, upon re-examining the (shifting) subject/object dynamic that is assigned to the patient and the device, we are left with a human-media intra-action that goes beyond the human body and the technological body of the Google Glass. The transcorporeal circulation of affect between the two sites prompts the emergence of a new body, the body of the addict, neither human and neither technical. Yung et al. do not focus on the nature of the addicting 'substance' – the nature of the media that is consumed is not examined. However, there is an affinity between their shelving of the medium, and the discourses on the inhumanity of media that are described in Chapter 2. The medium is too alien, too far from the realm of human bodily experiences in order to be laid open to the gaze of the researcher who is interested in the affects of the human bodily, and the human body alone. Unlike regular glasses used to correct vision, the Google Glass has not yet been indigenized - it does not meld seamlessly into the body as a pair of reading glasses would, even if their nominal goals are similar: to extend the capacities of the human body.

2. Technics and the human

This section focuses on media technologies as transcorporeal inhuman bodies which, together with human bodies, enter processes of co-construction and entanglement. By relying on Bernard Stiegler's philosophy of technology, which posits the co-emergence of humans and technics through phenomena of technical evolution that mimic biological evolution, my goal here is to assemble a theoretical of subjectivation through which the technology user can be said to emerge. In particular, I will approach Stiegler's related concepts of originary technicity and the technical individual, which he uses in order to re-read the Heideggerian notion of technology (see Chapter 2) through the process and assemblage-oriented works of Gilbert Simondon and Henri Leroi-Gourhan. While I will not engage the entirety of Stiegler's extremely complex and lengthy work here[68], I will focus on Stiegler's *Technics and Time,* which is a particularly rich re-evaluation of the notion of the human, expanding it beyond its modernist constraints.

A pure and unadulterated imaginary of the human being as living individual endowed with an essential human nature rarely seems to appear as such in writings on media and technology. Instead, the human appears as a nostalgic figure of a pre-technological past. However, the problem of the human is not that it is no longer able to exist in the contemporary techno-capitalist climate, and rather that the human never existed. Critique coming from such different corners as poststructuralism, feminist and postcolonialist theory has established the human as a modernist fantasy and a discursive tool for dominating those who did not quite fit its rigid description. Posthumanist theories, championed by scholars such as Donna Haraway, Cary Wolfe or Rosi Braidotti, reject the ontological coherence of the category of the human, and focus instead on the blurring of boundaries between all those categories that were forced to coagulate under the subjugation of the 'human': animals, nonhumans, non-organics, non-living.

Stiegler's work is not often included into the trajectories of the nonhuman or posthuman turns, but one of the outcomes of his work on technics is the re-evaluation of the meaning of the human, and its relationship to its environment and the means through which it situated itself within this environment. His notion of the technical individual and originary technicity can provide a way to focus on the mutually-informing, transcorporeal relationship between the categories of the human and that of media technologies, while providing a position that allows us to approach both of them critically.

[68] An extremely comprehensive analysis of Stiegler's work so far can be found in the edited volume *Stiegler and Technics* (Howells and Moore eds. 2013)

Originary Technicity

Bernard Stiegler does not accept the possibility of an ahistorical 'natural man' who emerges before technics, culture, or "deferred nature", untouched by anything that does not properly belong to humanness and only humanness (1998, 143). The fantasy of a human that emerges as fully formed but untainted by culture is a false one: even the use of the hand already constitutes a "distancing, manipulation as a new form of mobilization, exteriorization" (Ibid. 144). For Stiegler, this can only mean one thing: the 'natural' human has no origin, and more than that, does not exist. Once we acknowledge that existence is only possible through technics, the "pursuit of life through means other than life", we also must accept that speaking of the human entails the assumption that we reject the very idea of the human. Of course, Stiegler's implied definition of technics is extremely broad, and resonates both with Heidegger's notion of technology as exteriorization of Being, as well as with Marshall McLuhan's idea that media technologies (he does not make a difference between media and technologies) are an extension of man. In this framework, technics is the evolution of bipedal walking, and the invention of the wheel, just as much as what we call today digital technologies.

For Stiegler, technics is a curious thing that demands its own explanatory framework. Neither biology, nor science, not anthropology are adequate for this task on their own, but they can jointly lead towards the hypothesis that that

> between the inorganic beings of the physical sciences and the organized beings of biology, there does indeed exist a third genre of 'being': 'inorganic organized beings,' or technical objects. These nonorganic organizations of matter have their own dynamic when compared with that of either physical or biological beings, a dynamic, moreover, that cannot be reduced to the 'aggregate' or 'product' of these beings. (Stiegler 1998, 17).

Technics, then, similarly to what we see in the works of McLuhan and Kittler, have their own internal logic that cannot be grasped through a traditional anthropocentric perspective on technology. But more importantly, in a move that is lacking in both Kittler and McLuhan, Stiegler brings the human and technics into a co-constructing assemblage that shares a mutual becoming. Interestingly, in this passage Stiegler does not refer to the human, but only to the difference between two vast categories: living beings, and technics. Herein lies one of the caveats that must be kept in mind when thinking the human-technics relationship through the lens of originary technicity: the anthropocentric implications of originary technicity. According to Tracy Colony, Stiegler fails to account for the fact that not only humans, but nonhuman life as well is "aporetic and constituted in terms of its

relatedness to exteriority" (Colony 2011, 75). Colony makes a compelling argument in stating that in Stiegler's work, nonhuman life comes across as 'pure', and he does not account for the way in which technics can be seen as already given in the nonhuman sphere as well. While this is an important point, Stiegler's stance towards the connections between nonhumans and technics is well beyond the scope of this work, as its ramifications are impactful in Stiegler's theorization of time, and not necessarily the technical nature of the human category. Even though anthropocentrism is a valid concern in Stiegler's work, it is still a novel and invaluable for its deconstruction of the binary of pure, pre-technical human versus human bearing technical tools, and for positing an inextricable relation between humans and technics, as even Colony admits, despite his other criticisms (Colony 2011, 76). Stiegler is anthropocentric insofar as he is concerned with deconstructing the 'pure' human life, but does not extend this argument into the sphere of nonhuman life as well. If anything, Stiegler performs an incomplete, yet still useful gesture of de-anthropocentricization.

Despite these concerns, Stiegler's work still has a significant reverberation over any attempt to rethink the human-technics relationship, especially since he provides an account of human-technics entanglements which is not often encountered in Western metaphysics; technics is a way of subjugating nature, a tool, or an overlord. Stiegler argues that these visions of technology can be blamed on one of its foundational myths of origin, which can be located in that cornerstone of Western thought, Greek philosophy and the interpretation of Greek myths.

In his evocative meditation on technology and temporality, *Technics and Time* (1998) Stiegler argues for the co-evolution of the human and technics. For him, the human and technics emerge in tandem through a process of mutual construction and reinforcement, and therefore if one must speak of an origin either for the human or technics[69], then this 'origin' is a common one: an originary technicity. This origin, for Stiegler, can be found through a re-reading of the myth of Prometheus and Epimetheus, the story of the creation of humans in Greek mythology, as conveyed in Plato and Hesiod. Looking at the history and philosophy of technics in Western metaphysics, Stiegler argues that most accounts relate the version of the well-known myth in which Prometheus, the titan, creates humans from clay and steals fire from the Gods in order to help his 'children' survive the harsh environment of the earth. The myth of Prometheus pieces together all the essential traits that we can attribute to technics: its quality as prosthesis, as well as the relations it weaves between itself and notions of

[69] The question of origins can become especially relevant when discussing either technological determinism, or the social constructionism of technology.

temporality, forgetting and existence[70]. However, basing a philosophy of technics on this myth leads us towards an incomplete picture, because one key player of the myth is missing: Epimetheus, Prometheus's brother. While Prometheus brought fire to earth, he had to do that because of the mistake of Epimetheus. Epimetheus was tasked with handing out skills and abilities to all beings so that they can live in balance with one another, forgot about the human, leaving it defenceless. The gift of fire, then, is the divine gift of technics and science so that humans could survive (Stiegler 1998, 114-115).

This myth of creation and the originary technicity that it entails sketch out a philosophical stance that distinguishes itself from the conception of technology as tool, as well as purely a product of human intentionality and agency. Moreover, it goes directly against the notion that there has ever been, or can ever be anything resembling a pure and untainted humanity. The technicity of the human is not then a by-product of the technological innovations of the print age, and more dangerously, the digital age. Humans are not the masters of technological cool, they do not *create* them, but both of them are entangled in a complex process of co-constitution. The human has therefore never been truly 'human' – it has never fully conformed to the humanist conception of the human subject as rational, agentic and in control.

However, Stiegler's human is hardly an anti-humanist or nonhumanist dream. While Stiegler's philosophy of technics contains a deconstruction of the humanist subject, this is only a partial deconstruction. The human who co-evolves with technics is a supposedly neutral actor, whose interaction with technics constructs both. But Stiegler makes no mention of how the process of mutual shaping leads to the emergence of different categories of humans. In *Technics and Time 1*, Stiegler has only a few brief mentions of Pandora, the first

[70] Time and temporality are crucial parts of Stiegler's philosophy. He argues that technics is the horizon of human existence, its past, present and its future. However, this important fact is not acknowledged by most of Western philosophy (with the exception of a few scholars such as Heidegger, Leroi-Gourhan, Simondon), which Stiegler ascribes to the fact that they operate on a 'creation myth' of technics that does not take into account the fault of Epimetheus as well as Prometheus' gift. From the Greeks on, philosophy has positioned itself as distinct from technics, through the separation of techne (interpreted as skills or craft) from episteme. Returning to Plato's Phaedrus (explored in Chapter 2) we can see how technicization is associated with the deterioration of memory, and how episteme is associated with the production of 'true knowledge', in opposition to the artificiality of techne (for example in the rhetoric versus writing debate).In other words, Stiegler is looking for stepping ahead of the kind of Western philosophy that, as Timothy Clark argues, support "the traditional, Aristotelian view is that technology is extrinsic to human nature as a tool which is used to bring about certain ends. Technology is applied science, an instrument of knowledge. The inverse of this conception, now commonly heard, is that the instrument has taken control of its maker, the creation control of its creator (Frankenstein's monster)" (Clark, 2000: 238).

The emergence of technics for Stiegler entails the emergence of humanity and temporality as well. He argues that the temporality of human existence is technical, and more than that, that technics itself *is* the constitution of time.

woman[71], the female third party in the legend of Prometheus and Epimetheus. The woman is the counterpoint to the divine gift of techne – she brings pain and suffering to the men who were previously blessed with divine technics. In this sense, while originary technicity surely troubles the subject/object relation between humanity and technics, their co-construction results in a conception of the human that is closer to its modernist, purportedly neutral idea of 'man' as a universal subject. This important issue, which has important ties to the perception of technology and science and masculine domains, will be discussed more detail in section 2.2.

The techno-somatic individual

This section describes the convergence of the somatic individual and originary technicity into a figuration that can be called a techno-somatic individual. The purpose of this reframing of the somatic individual is to destabilize its biopolitical production as a stable agent tasked with the responsibility of its own 'proper' biopolitical life, in order to potentially arrive to a biopolitical figuration that allows more openness and perhaps tolerance in the biopolitical manufacturing of improper media intimacies. The complication of the somatic individual so as to include the technical constitution of the subject is relevant to current understandings of media use and abuse as formalized under the label of media addiction.

Techne and the human are engaged in an inseparable dance of co-creation and neither can be defined without drawing on the other. To wit, the human and technology are epiphenomena of the process of originary technicity, they do not exist prior to originary technicity, they emerge as categories through the performance of the relations that blossom between them. As Braun and Whatmore succinctly phrase it,

> our embodied relations with things are not something that comes to be 'added to' human life. The human body and its capacities emerge as such in relation to a technicity that precedes and exceeds it: there is no body, no original body, no origin outside of this relation; no thinking, no thought, no logos, without that which forces thought (Braun and Whatmore 2010, xix).

This 'common origin' ensures that the human is at the same time the biological, social, political and technical. But where does this leave technics, which, as Stiegler

[71] In the myth of Prometheus, the humans that the titan created were by default male. In order to punish humanity for the stolen gift of fire, the Gods of Olympus create the first human woman, endowing her with beauty and grace, but meaning her to ultimately become the destruction of the human race. They give Pandora a mysterious box, and offer her as a wife to either Prometheus or Epimetheus. Prometheus refuses, but Epimetheus falls in love with Pandora and marries her. Pandora opens the box, and unleashes upon the world all the evil, pain and suffering that the Gods put therein. The only thing that remains in the box is hope.

contends, is subject to a logic of its own that is neither biological nor anthropological? These "inorganic organized beings" or "technical objects" (Stiegler 1998, 17), are, to use Gilbert Simondon's term, *technical individuals*. The technical individuals of Simondon and Stiegler are not human, or to be more precise, no longer human. Simondon, in his history/philosophy of the evolution of technics, argues that humans, as long as they were the bearers of tools, they were technical beings. However, modern science and technology are increasingly leading towards the complexification and autonomization of machines, thus making technical systems into the new technical individuals who now carry the tools and can even do without their human auxiliaries (Barthélémy 2012, 213).

Stiegler takes up the idea of the technical individual when describing the co-emergent human-technics couple. And yet, he does not explore the possibility that these two types of individuals are not conscribed by clear cut boundaries. If technics are an unavoidable constituent of humanness, then perhaps we might conceive of humans as a type of technical individual as well: a techno-somatic individual. Stiegler has highlighted the way in which humans and technics continually construct and evolve with one another, but is not concerned with the way in which their relationship results in materially and discursively meaningful 'individuals' who are both human and technical and are governed as such. In extending the qualifier of technical individuality to include humanness – and thus becoming a techno-somatic individuality - my intention is to highlight the politically, socially and culturally prescribed aspect of technology use, which necessarily also appears through the emergence of human-technics. Here we can mention the complex interconnections of gender, race and class with media technologies – both in terms of their emergence, as well as representation[72]. The techno-somatic individual is meant to acknowledge both the biopolitical pressures of somatic individuality, as well as the transcorporeal nature of our interactions with technologies.

The phenomenon of transcorporeality is of crucial importance when trying to conceptualize the techno-somatic individual. The material self is profoundly moved through the influence of, and interaction with various media technologies, as well as other nonhuman elements. Alaimo argues that transcorporeality is a contact zone between the human and what she calls the 'more than human', and thus it turns human corporeality from essential and bounded into an intermeshing with the nonhuman world. Alaimo employs transcorporeality mainly as a way of bringing the focus back to the biological body and its embeddedness into the environment as useful for environmental justice (Alaimo 2008, 238), but she concedes

[72] The nature of these interconnections is explored briefly in section 2.3 of the present chapter, and further detail in Chapter 4: "Who is the mediated human? Gender and media technologies".

that a turn towards the nonhuman, and the human body's integration with other forces, are meaningful inquiries in many other fields as well.

While Stiegler's approach to technics as radically different from humanity and yet irremediably intermeshed with it results in a decentering of the human subject, who is no longer defined by its boundedness and individual agency, it is also important to pay attention to the embodied processes that take place at the level of human-media interactions. These processes of co-constitution, while they trouble the notion of the agentic individual whose agency is situated within, are still a necessary point of analysis not only when discussing biopolitical phenomena such as media addiction, but also at the mundane level of technology use as an embodied experience.

To recapitulate, the somatic individual is to contemporary biopolitical subject par excellence. In Chapter 1 I described Nikolas Rose's 'updating' of biopolitical techniques to the shifts produced by the molecularization of life that occurred through biotechnology. This 'new politics of life itself' demands a reconceptualization of the biopolitical subject: she must now become a somatic individual, responsible for her fitness as a citizen within a biopolitical system whose stability must be preserved at all costs. The somatic individual must 'help herself' while under the guidance of various pastoral techniques that are concerned not only with curing disease, but also preventing it and managing it. However, the somatic individual is in an impasse when it comes to the self-governance of media use, which can deteriorate into media addiction. The idea of the somatic individual resonates with a continuous quest for and anxiety over what Cressida Heyes calls the "adequacy of human bodies" (Heyes 2007, vii). The somatic individual is embodied, and her embodiment is a particular concern of hers that she needs to attend to in order to qualify for biopolitical properness. The somatic individual is embroiled in vast material and discursive networks that seek to mould and contain her – the discourse on media addiction and the potential dangers of media use being one of them. These discourses target not only affective bonds with media, but also bodily reactions to media use (such as the Google Glass addict whose adaptation to the device – a tapping gesture at the temple – was construed as a symptom of addiction).

Stiegler's originary technicity, when modulated through the lens of transcorporeality and its commitment to embodied differences and integration into the milieu, serves as a background for the techno-somatic individual. This individual is no longer a stable individual as such, but rather an on-going and dynamic engagement with one's milieu and the unavoidable technical affordances of that milieu. While the somatic individual was the result of biotechnological innovations and their shifting of the understanding of the body, the

techno-somatic individual's relationship to techne is mutually reinforcing and inhabited by a distributed agency. This does not mean that the techno-somatic individual is not subject to the same constraints and demands as the somatic individual, but as an inherently technical being, it is more radically open to the technological conditions of contemporary media culture.

The disciplinary and pastoral techniques of contemporary biopolitics, as seen in the discourses on media addiction discussed in Chapter 1, approach media use as a complication that needs to be regulated, either through appeal to an ethical discourse on nostalgia for a 'purer' state of humanity and attendant social relations, or through recourse to the bodily/biological effects of technology use, such as its capacity to rewire brain structures. But if we accept the thesis of originary technicity, the regulation of media use presents us with a similar problem as Bruce Alexander's drug addicted rats: media addiction is a problem that transgresses the individual bodies of the addict and the substance, and becomes a question of environmental conditions: a confluence of embodied experience, desire and affect, and social, political and economic structural demands that leave space for the emergence of such disciplinary categories as media addiction. Whether intentionally or not, the pastoral techniques that care for the media addict operate on the same conceptual plane as originary technicity, but without absolving the techno-somatic individual from her duty of self-care, self-governance and moderation. If we re-examine the case of the Google Glass Addict, we can see how the medical discourse emphasises both the patient's failure to keep within the bounds of productivity and slippage into addiction, as well as the beneficial effect of the treatment received within a facility where he was effectively restrained from using technology. The embodied being is still a crucial site of analysis if we are to reframe media intimacy is more permissive terms. Stiegler's originary technicity might be a fruitful starting point, but it must be expanded with mindfulness to the embodied, material and marked nature of the technology user.

3. Technogenesis and transcorporeal attention

The techno-somatic individual can be framed as an open-ended and dynamic intimacy of the human with its unavoidable surrounding media, as well as with the biopolitical requirements assigned to its specific, situated embodiment. This section focuses on the embodied experience of the originary technicity of the techno-somatic individual. More specifically, I will examine the way in which media use, as an embodied phenomenon of technical emergence is being inscribed and grasped by the biopolitical techniques of

managing the techno-somatic individual. The media user is situated and embedded into a milieu that, as has been described in Chapter 1, is governed by the forces of postindustrial capitalism, and its emphasis on individual productivity. In this section, I will concentrate on the case of embodied cognition as a 'raw material' for the functioning of biopolitics-cum-postindustrial capitalism, and on the way in which the transcorporeal effects of media serve as a partial foundation for the discourse of media addiction.

N. Katherine Hayles argues that "we think through, with and alongside media" (Hayles 2012, 1), and that this coexistence require a radical rethinking of the relationship of humans to media. For Hayles, media interaction is embodied, and has bodily effects on a psychical and physical level, but at the same time, media are embodied in their turn, albeit their embodiments demand a nonhuman frame of reference. Unlike Stiegler, whose originary technicity is attached to an abstract human body, or scholars such as Andy Clark who, albeit concerned with embodiment are less interested in the mechanisms through which the embodied media user emerges, Katherine Hayles meticulously studies not only the forms of embodiment that emerge in the transition from 'old' to digital technoscapes, but also the processes that allow these embodiments to exist in the first place, namely, technogenesis. Even more importantly, Hayles provides us with a material, embodied point of contact between the media user's lived experience, and the abstract theoretical constructs of technogenesis and originary technicity, through the notion of attention, whose involvement in the politics of media addiction will be given due clarification in Chapter 5. For Hayles, speaking about contemporary culture, it is imperative to consider how

> The capacity of networked and programmable machines to carry out sophisticated cognitive tasks . . . [how] embodiment then takes the form of extended cognition, in which human agency and thought are enmeshed within larger networks that extend beyond the desktop computer into the environment. (2012, 3)

As Hayles herself acknowledges, the enmeshedness of human and media has been voiced by previous media theorists like McLuhan and Kittler as well. The intra-action between human and nonhuman technical elements is not a product of the 'digital age' or the gradual move towards ubiquitous computing. Kittler, especially, has written extensively about the media/discourse networks that emerged in the 18th and 19th centuries, woven around such media as printed works, gramophones or film.

The idea of technogenesis, while not universally embraced or even critically approached in the humanities and social sciences, is not especially controversial in fields such as palaeontology or evolutionary biology. For example, the idea that bipedalism in humans

emerged as an adaptation alongside the invention of tools and transport is quite widespread among palaeontologists, while evolutionary biology has embraced the notion of epigenetics - modifications in the human body that are initiated and transmitted through the environment rather than through genetic code.(Hayles 2012, 10).

The problem of theorizing human-media relationships, for Hayles, rests partly on the necessity for treating technologies not as "static entities that, once created, remain the same throughout time but rather are understood as constantly changing assemblages in which inequalities and inefficiencies in their operations drive them towards breakdown, disruption, innovation and change" (Hayles 2012, 13). In this view, technologies are more accurately referred to as technical individuals (Gilbert Simondon's term), whose agencies are acknowledged and seen as enmeshed in various social, economic and political networks. Their embodiments matter, and, Hayles argues, it would be no exaggeration to say that they have an umwelt "in the sense that they perceive the world, draw conclusions based on their perceptions, and act on those perceptions" (2012, 17).

Technogenesis then comes as a middle-ground between technological determinism and the social constructionism of media technologies. Rather than the inhuman presence pulling the strings behind human thought and behaviour, or tools that are shaped by human intentions, desires and political-economic structures, technogenesis presents us with an alternative in which humans and technology are players on a level field. Much as Kember and Zylinska (2011) reframe media as mediation in order to address the mutual flow of affect, matter and meaning between humans and media, Hayles describes the way in which humans and media are drawn into a "coordinated epigenetic dynamic" (81). As opposed to Stiegler's imaginary of originary technicity of which the human seems an exceptional by-product, technogenesis posits an intra-active and ontologically egalitarian emergence of humans and technics, and can serve as a mode of refiguration of techno-somatic individuality in a way that can allow us to read media not only as a repressive, amputatory[73] phenomenon, but also generative and liberatory.

New media cyborgs?

The techno-somatic individual, as the previous sections have attempted to show, is a 'natural-born cyborg', to use Andy Clark's term (2003); it is involved in a mutually reinforcing relation to media technologies, whose cognitive-embodied interaction with technics is involved in the doctrine of productivity that is an integral part of the new politics

[73] To use McLuhan's somewhat controversial imaginary of technology as amputation (McLuhan 1994).

of life. This section will illustrate this point by focusing on the case of internet cafes, and their current embroilment in large swathes of the contemporary discourse on media addiction.

In Western and Eastern Europe, internet cafes were a permanent fixture of urban spaces during the 90's and early 2000's, the heyday of Internet access for the masses. Before the popularization of broadband connections, and during the peak period of dial-up internet connections, internet cafes were a popular and affordable means of accessing the Internet for those who could not afford a good connection in their homes, or did not possess any personal computers. In the Western context, internet cafes became next to extinct once the Internet became cheaply and easily available through low-price broadband and Wi-Fi access. However, in some Asian contexts, internet cafes are as popular as ever, despite the fact that countries such as South Korea, Japan or Hong Kong have some of the fastest average Internet connection speeds in the world (Statista 2016).

While generic Eastern European internet cafes provided the user with a computer and access to the web, an IRC client and perhaps some games for a few hours, their current iteration, as seen in South Korea, Japan and other intensely technocratic settings, can be interpreted as an ecosystem specially made for human-media conjunctions. Internet cafes, or PC Bangs as they are called in Korea, are prevalent even though at-home Internet connections are far from uncommon. PC Bangs in Korea provide the user with cutting-edge devices, food and drinks, couples sections where they can play together with their partner, and sometimes private cubicles where patrons can spend the night, or even days at a time. According to Stewart and Choi, PC Bangs become an environment in which media use is often radically different from media intimacy at home. In their study of students from the University of Ulsan and their PC Bang use, Stewart and Choi conclude that these cafes are constructed as masculinized[74] spaces intended for a very specific media-intimacy: online gaming. For PC Bang players, the milieu of the café is not a means of social isolation, but quite the contrary. In a short documentary for *Tech Insider*, Will Wei claims that gaming at PC Bangs has a highly social function, with many people attending in order to partake of the company of fellow players and to create new relationships (Wei 2015).

Gaming in PC Bangs has a very specific cultural status that situates it between leisure and work, much like online poker games in the West; many games involve real-life financial transactions, can offer substantial prize money, or even a living wage. From gamer to the game industry, playing games in Korea is a valued for its economic function. Productivity, in

[74] According to Stewart and Choi, the majority of PC Bang patrons are male, while the interviewed women preferred to use media at home (Stewart and Choi 2003, 61)

the context of the PC Bang, transgresses the work-play boundary that often informs the discourse on media addiction. A productive techno-somatic individual, in this case, emerges in the highly technical and very specific milieu of the PC Bang. Jin and Chee (2008) provide a thorough analysis of the emergence and background of online gaming culture in Korea, by attending to its various sociocultural, economic and political dimensions. In the context of Korea's gaming industry, being a professional expert player is a highly respected position that comes with a corporate sponsorship and even a fanbase (Jin and Chee 2008, 49).

When referring to Korean player's intense intimacy with media technology, Western discourse on media addiction often quick to call on the label of pathological gaming, without taking into consideration the complex sociocultural and economic context that Jin and Chee speak of (Jin and Chee 2008, 50). But what might seem like 'addiction' according to media addiction discourses, in the case of Korean gamers is simply the socially acceptable way of engaging with media, within a socially-acceptable environment, and is not seen as either a replacement or deterioration of 'traditional' social relationships and other embodied experience (Jin and Chee 2008, 54). However, this does not mean that the techno-somatic individual, as denizen of PC Bangs, escapes being governed through various biopolitical techniques. Most notably, the threat of addiction is managed through the infamous "Cinderella Law", passed in 2010 by the Korean Ministry of Culture, Sports and Tourism, which decreed that players under 16[75] are banned from playing between 12 AM and 6 AM (Sexton 2014). Interestingly, the law targets online gaming only – mobile games and console games are not affected by it. But despite the regulatory mechanisms that govern intimacy with media, Jin and Chee argue that gaming simply involves "navigating within the world that was given to them, often involving an extraordinarily high level of engagement with ICTs and online games in general" (Jin and Chee 2008, 55).

In the discourses exemplified by Jin and Chee's paper, the media-human interaction is conceived of in a way that is congruent with a transcorporeal understanding of the techno-somatic individual. Both the attachment of the player to the device and game, as well as the affective bonds between player and games are integral parts of the gaming community. Media use, in this context, emerges simultaneously as an affective, embodied, social and economic mode of engagement with technology, unaffected by media's inherent 'inhumanity' or the idea of a 'pure' pre-technological human being. PC Bangs, and the players within it, are part of a complex "computational apparatus" (Clark 2003, 6). In other words, an internet café

[75] Korean gamers are required to provide an ID number when logging into online services (Sexton 2014).

functions as a milieu that consists of a nexus of affects, embodiments and nonhuman actors, plugged into vaster social, political and economic assemblages. The gamer in the Internet café is caught between navigating the dictates of techno-somatic citizenship, and the intricate transcorporeal web of human and nonhuman bodies in a continual material and affective exchange.

The technical milieu of the PC Bang puts the case of the Google Glass addict into a sharp new focus. While gaming cafes are a space that allows the emergence of a economically and socially productive media apparatuses as well as economically and socially productive techno-somatic individuals, the Google Glass fails abysmally on both of these scores. Rather than focusing on the emergence of productive bodies whose cognitive functions are adapted to long-term media intimacy, the Google Glass produces a subject who is biologically and psychically faulty, and whose productivity is impaired. The gamers in the PC Bangs, on the other hand, are given the benefit of the doubt when it comes to the evaluation of their productive capacities, even if ultimately their transcorporeal relation to their media milieu is still subjected to the gaze of biopolitical techniques.

The case of Internet cafes, and the production of the subjects (both human and nonhuman) within them, illustrates the impossibility to navigate the line between productivity and non-productivity within the context of a technologically mediated or always already technological subjectivity implanted in a highly technologized milieu. An important issue that arises in this discussion is the way in which the affects and attentive capacities are constructed and designated as meaningful within the context of a biopolitical system that increasingly integrates the use and abuse of media technologies.

Managing the mediated self

This section will begin discussing one of the major biopolitical techniques are concerned with the management of the techno-somatic individual: the regulation of embodied cognitive capacities that arise within the process of media use, and namely the management of attention. For N. Katherine Hayles, technogenesis, the process through which the subject emerges in conjunction with an unavoidably technical environment, has serious consequences not only on the way in which we understand media and conceptualize its ontological status, but also on the transcorporeal, embodied nature of the human subject. This embodied nature, who is engaged in an intricate mutual conversation with its milieu, is captured in the

structures of postindustrial capitalist society by means of the notion of cognition and attention.

Hayles sees the technical individual as a decidedly productive figure, "enmeshed in in networks of social, economics, and technological relations, some of which are human, some nonhuman" (2012, 13). Unlike for Stiegler and McLuhan, it is not the idea of an originary lack that underlies technical individuality for Hayles, but rather an alternative understanding of embodiment, figured as part of extended cognition, in which "human agency and thought are enmeshed within larger networks that extend beyond the desktop computer into the environment" (2012, 3). Both humans and technics are mutually embedded into cycles of "coordinated transformations" (2012, 81). For Hayles, it seems, using technology is not a question of filling a lack, or replacing tools with their more advanced iterations (as McLuhan posits media[76]), but an organic, dynamic assemblage containing both the human and technics. One product of this assemblage is attention, figured as embodied cognition, which is directly articulated with the human-media intra-active coupling.

Hayles's focus in mainly on the way in which digital technologies affect the way we think and use technologies, although she grounds her project of technogenesis in earlier influential media apparatuses such as the telegraph. In *How We Think: Digital Media and Contemporary Technogenesis* she takes up the example of reading as one of the most crucial processes through which humans have been interacting with media. Our brains and their capacities have been altered by the way in which we pay attention to (and therefore use) various media technologies. Hayles's example is that of 'older' analogue media, whose demands on human attention were significantly less intensive than that of their digital counterparts. Older media demanded 'deep attention', a way of concentrating on an object for long periods of time (Hayles 2007, 187). Hyper attention, on the other hand, is the type of attention allowed by our networked, digital present, she argues. The mode of engagement allowed by digital media is one that which requires 'high levels of stimulation, has a low tolerance for boredom, and operates through a rapid alternation between multiple streams of information' (Hayles 2012, 12). Attention is one of the key terms in understanding technogenesis, in Hayles' view, understood not as a cognitive ability or property, but as a process engaged in a feedback loop with the technical environment in which it operates (2007). That is, attention is both determined and determines technical innovation, and therefore the birth of 'new' media.

[76] McLuhan's stance on media as extensions of man is discussed in detail in Chapter 2.

As discussed in Chapter 1, much of the discourse on improper media use works on the assumption that digital media, by opening a window to a different world, cause people to neglect their responsibilities to their selves, bodies and social bonds in their non-digital reality. However, in these discourses (as can be seen in Turkle and Carr for example) there is little to no emphasis on the relations that emerges between media and human, beyond an object/subject approach. The 'digital' and the 'real' seem to stay firmly separate in these accounts (a theoretical fallacy that is often called 'digital dualism'). Hayles, however, is careful to point out that human interactions with media are always embodied, taking the form of 'extended cognition, in which human agency and thought are enmeshed within larger networks that extend beyond the desktop computer into the environment' (2012, 3). For Hayles, the problem of the shift from deep attention to hyper attention is couched by her implicit claim that human-media interactions are processes of *adaptation*, of co-emergence and mutual construction (Ibid., 81). Hyper attention is then the result of an attempt to fit within a constantly dynamic technical environment, a means of synergizing the human and the technical nonhuman, so as to fit the demands of a postindustrial capitalist system that constantly rearranges and repurposes objects and people (Ibid., 101).

The techno-somatic individual, embedded into a politics of life itself that requires a careful curation of the not just the body, but the embodiment as embedded into its environment, including the embodied cognition that is mobilized in the human-media intra-action. The discourse on media addiction, such as the example of the Google Glass addict hinges on a conception of media use that does not lend itself to a transcorporeal production of subjectivity which emerges at the interface of the body, media, and the milieu. The management of media addiction, either through ethical-biological appeals such as the works of Carr and Turkle, through the gradual construction of diagnostic categories that focus on media addictions, or through legislation that directly target the modalities of media use, cannot grasp the fluidity and situatedness of the techno-somatic individual in all its complexity.

Conclusion

In a twist on Bruno Latour's famous declaration that 'We have never been modern', we have never been other than technical either. Technics, understood as all the processes, phenomena and material artefacts that allow us to live through recourse to our environment, is critical to our very understanding of the meaning of the human. The human, in both the

philosophical and the anthropological sense, is not a being that is ontologically different from the nonhuman category that we might call technics. Rather, technics and the human are two mutually informing categories that are subject to the shifts, upheavals and reversals that occur within our milieus. The way in which both technics and humans come to be is transcorporeal – they both become an emergent property of the entirety of the milieu which they are part of. And importantly, the originary technicity that creates the categories of human and technics does not result in one fixed and stable humanity – but rather, human embodiments that are rife with scores of modalities of living, including those of gender, race and class. However, the role of these differential becomings in the emergence of media ontologies and epistemologies is often obscured in the discourse of originary technicity. This question will be given due attention in Chapter 4.

For Stiegler and McLuhan, two theorists of media and technology whose insights are echoed in many lay and academic conversations on the nature and role of media, the originary technicity of the human means that we must accord the same degree of care and attention to our analysis of technical objects as to human subjects. Even more importantly, technical 'objects' are not the passive receivers of instructions doled out by their human masters – they are imbued with agencies that designate them as pivotal for our analyses of human-media intra-actions. In Gilbert Simondon's words, they are technical individuals. However, if the ontological borders of human and technology are neither stable nor impermeable, perhaps we are no longer dealing with human individuals on the one hand and technical individuals on the other, but rather phenomena of intimacy between the two – intimacy which becomes translated into the figure of the techno-somatic individual. The techno-somatic individual is the raw matter of biopolitical techniques of management and discipline, and are tasked with the duty of care for their embodied selves while also fulfilling the expectations tied to productivity within a biopolitics that is heavily integrated with capitalist modes of production.

As Hayles shows, the subject produced through technogenesis (Hayles' own reading of the co-evolution of humans and technics, which is more concerned with the bodily effects of this concatenation than Stiegler's originary technicity) is drawn into the anxious discourses on media use through the notions of attention or embodied cognition. For her, media intimacy has important bodily effects, but these must be approached in the wider context of media's mutability and the human's own malleability both as living being and philosophical category. However, the question that remains to be addressed is the following: who are those techno-somatic citizens whose media intimacies fall under the purview of the biopolitical apparatus?

Given the historical association between technology and masculinity, as well as the bias towards neutrality that is implicit within the notion of originary technicity, it is necessary to examine the dynamics of gender that inform assumptions about media addiction. Media might operate under the laws of their own internal logic, as Stiegler and McLuhan argue, but they are not innocent when it comes to their role in the articulation of gender, especially in discourse on media. To recall the recent Gamergate controversy, mentioned in section 2.2, the place and space of gender within media as an industry as well as a part of lived experience is still contentious, while the problematization of media intimacy as a potential medical problem still follows a heterosexist framework, as seen in Chapter 1.

Chapter 4 will follow up on these concerns by exploring the question of whose addiction matters in the context of a biopolitics that is concerned with preserving the productivity of the techno-somatic individuals under its purview.

Addendum: Some notes on Stiegler's technics

There are several key terms that stand out from the very beginning of Stiegler's work: techne, technics and technology. Stiegler wields vast amounts of literature with extreme ease, to the point that his argument can be obscured by the lack of clarification regarding the history and meaning of the terms he uses. Tekhne, straightforwardly enough, is a reference to Greek philosophy, as an opposition to episteme. Tekhne is concerned with crafting, doing, constructing, while episteme aims to knowledge and its production. For Stiegler, Western philosophy is guilty of creating a false opposition between tekhne and episteme, where tekhne is technical know-how, while episteme is a knowledge that can be deemed pure. In one of his works on Derrida, Stiegler brings up the example of the sophist, who was thought to instrumentalize knowledge and thus distancing it from truth, and the philosopher, the true guardian of pure knowledge. What is interesting to note here is that there is an implicit hierarchization between episteme (or in more current terms, science), and tekhne. Tekhne is an instrumentalization of knowledge, and therefore a tool in itself. As an example, writing is a form of tekhne, while thinking/speaking is access to a purer form of thought (in the work of Plato). Because writing requires the participation of the hand in the act of communication, the act of writing becomes a mere mediation of thought. Tekhne, it seems, contains within itself the threat of an impure knowledge, or a craft that cannot ever reach a level of pure knowledge that should be proper to the human. Derrida explicitly connects Plato's discourse on writing as tekhne to the notion of the Pharmakon, a mixture of both poison and cure. Writing is a

pharmakon for Plato because it entails repeating without truly knowing. The curse of the pharmakon is such that it operates "through seduction, mak[ing] one stray from one's general, natural, habitual paths and laws" (Derrida 1981, 70). But if writing is a pharmakon, what kinds of tekhne would qualify as well? What kinds of conditions must tekhne fulfil in order to function as the pharmakon? And what about the related concepts of technics, technicity and technology?

In the book's preface Stiegler proclaims that technics is the "horizon of all possibility to come and of all possibility of a future", "the unthought" (1998, ix). While it is clear from the onset that technics is the precondition of temporality for Stiegler, he does not get much closer to a definition than by stating that technics is a process of exteriorization, or the pursuit of life through means other than life (17). Closely related to this pursuit is the technical object, the object of technics, a thing that is somewhere in-between the organics subjects of biology and the inorganic matter of science. Technical objects, Stiegler's view, are "nonorganic organizations of matter [with] their own dynamic when compared with that of either physical or biological beings, a dynamic, moreover, that cannot be reduced to the 'aggregate' or the 'product' of these beings" (Ibid.).

These early propositions echo both the work of Marshall McLuhan on media as prostheses, as well as the neomaterialist attachment to underlining the agentic capacities of nonhuman matters. Stiegler's technics, therefore, seems to relate to both the unthought and the infinite (and as such, absent or lacking at the same time), and the concretely external, an excess, a prosthesis. This contradiction seems to become the very conditions of technics existence, in *Technics and Time*. Technology, in its turn, is the material-semiotic result of the process of exteriorization that pertains to technics. As the exteriorizations of human thought, technologies serve as archives and repositories. This does not mean that technology is reduced to a collection of information, but rather that it is the concretization of years, centuries, millennia of both technical and nontechnical thought. For example, a light bulb is can be seen as a mere electrical illumination device, but also as a concatenation of glass, wire filaments, screw base, of the raw materials and labour that went into crafting and sourcing them, of the affect an energies that crystallized in the very idea of the light bulb. Grounding technology into its material, geological and intellectual history is a trick that allows us to branch off into countless different directions. Technology, it seems, is always in excess of itself.

Stiegler's framing of the human technics relationship tells an origin story based on mutual and iterative construction – iterative in the sense that both categories feed into and off

of each other with each new variation within them. Prometheus's humans were given the tekhne of fire, and thus became closer to gods. Tekhne like agriculture, writing, clothing, the wheel, shelters, cooking, vaccines, new tech are continuously rewriting the ideal attributes of humanness, a humanness which, in Derrida's words, is continually deferred. If Stiegler's definition of technics as the production of life through means other than life applies, there is a little human action that could not, in some way, be considered technics. While this might make Stiegler's 'technics' seem like a catch-all term, it does not diminish its value for STS or media philosophy, particularly due to its ability to think humans and technology interdependently. It therefore explicitly eludes both technological determinism and a purely social constructionist approach to technology – both of which are quite prevalent trends in discourse on technology.

As Ben Roberts argues using pertinent examples from literature on technology, media theory has often been wary of the philosophy of technology, with good reason. The question of technology, while approached by many scholars, is very often precariously balancing between either technological determinism or social constructionism, with some incursions into the substantivist theory of technology[77]. As Roberts observes, none of these 'classical' approaches are entirely able to theorize reciprocal co-implication of the human and technology (2012, 10). And if, as Caroline Basset argues, media theory has rarely stemmed from technology studies for fear of either technological determinism or social constructionism, then Bernard Stiegler's technicity can answer these concerns due his reluctance to differentiate between technology and culture. This is one of the points of affinity between Bernard Stiegler's philosophy of technics, and Karen Barad's new materialist reimagining of materialization: nothing its prior to its relations. Technics and humans are both constituted through their relations to one another. The importance of Stiegler's work for media theory is therefore twofold: he creates the grounds of a material-semiotic, relational approach to technics (and therefore media as well), as well as (through his reading of Derrida), a pharmacological reading of the human-technics relation as a poison and cure at the same time.

[77] Feenberg (2003) distinguishes three main approaches to the question of technology: (1) technological determinism, the reductionist conviction that technological development shapes cultural and social structures; (2) social constructionism, according to which technology is shaped by social, cultural, political and economic forces; (3) substantivist theories of technologies argue that technology is a substantial force that impacts on the relationship between humans and the world.

Chapter 4: Gendered media

> Woman, herself, is thus seen as a technological extension of man's being. (McLuhan 1994, 33)

> Man becomes, as it were, the sex organs of the machine world, as the bee of the plant world, enabling it to fecundate and to evolve ever new forms. The machine world reciprocates man's love by expediting his wishes and desires, namely, in providing him with wealth. (McLuhan 1994, 57)

Introduction

This chapter is a necessary companion to the previous one, in which I started to sketch out the figure of the techno-somatic individual, the biopolitically-grounded epiphenomenon of technogenesis, who is always embodied and always systemically attached and embedded into its environment: the technosphere. As briefly mentioned in Chapter 3, the additional lens of feminist transcorporeality is necessary in order to read Bernard Stiegler's originary technicity in such a way that allows us to acknowledge the embodied and relational (and not just as concerning technology) nature of the techno-somatic individual, and the way in which media addiction can be framed as a phenomenon that emerges from the interconnections of bodies, environments, media, flows of power, capital, affect. Transcorporeality also brings into sharp focus the need to examine the production of difference in phenomena such as media use, as well as at the level of our various ontologies. The originary technicity that expresses the co-emergence of the categories of human and technics does not result in one fixed and stable humanity – but rather, human embodiments that are rife with scores of modalities of living, including those of gender, race and class. Gender is not the only axis of difference that is meaningful when it comes to our understanding of media technologies; on the contrary, scholars such as Lisa Nakamura were early proponents of the importance of examining race in conjunction with new media (2002, 2007). In the contemporary cultural and political climate, paying attention to the way in which race, ethnicity and class are not only represented in media, but also created through media, are especially relevant for understanding oppression and the struggle for social equality. However, sexual difference is one of the primary binaries that organize the ontology as well as the epistemology and performativity of media technologies, and it is at the root of such overarching binaries such as nature-culture, human-nonhuman, natural and artificial. The very category of the human is

postulated on the premise of sexual difference and 'appropriate' gendered performance. Therefore, attending to gendered difference at the core of media ontology is a necessary first step in a project of reconfiguring media ontology – a project to which the present dissertation wishes to make a small contribution. This chapter seeks to fill a small gap in Stiegler's ontology of technics, rooted in the gender blindness of his theory of originary technicity. While originary technicity allows us to proceed towards new understandings of the way in which the category of the human is produced through and with technics, it is important that we use the lens of originary technicity in such a way that it does not perpetuate Western metaphysics' assumptions about the role of sexual difference in the ontology of technology. This is necessary not only for the sake of a critique of media ontology on its own terms, but also because the way in which we construct our ontologies, as Karen Barad's extensive oeuvre suggests, has a lasting impact on the praxes derived from these ontologies. In the case of media addiction, the ontologies that we construct and ascribe to media are always intra-acting with our notions of humanity, gender difference, sexual difference etc. in what concerns their exclusion from and entitlement to media use, production, representation. Media ontology matters because it circumscribes who the media addict is, whose media use matters enough to pose a threat, who becomes the object of pastoral care, and which media intimacies are legible within the biopolitics of postindustrial capitalism, and who is inscribed as the media addict's internal other. This chapter is therefore a Baradian exploration of the coproduction of ontology and epistemology, of matter and discourse, of lived experience and abstract categories in the case of the phenomenon of media addiction.

There are countless examples that underline the need to attend to the gender of/in media ontology. "It doesn't take a scientific study to understand that men and women use the Internet for different purposes: guys are drawn to sports, while ladies prefer to shop", begins an article published in 2013 in the online computer magazine *PC Mag* (Mlot 2013). The author of the article is not alone in her assumptions about media use's putative segregation along the lines of gender. Upon a superficial examination, men and women use different media technologies, form different relationships to it, and more than that, are entitled to it to different degrees. While feminist scholars of technology and science have been discussing the contentious ties between gender and these 'masculine' domains, in the past few years the discussion burst out of the confines of academia and into popular arenas. One recent example is that of GamerGate, a major controversy that swept the media and technology-oriented corners of the Internet. The roots of GamerGate stretch back to 2012, when feminist media critic Anita Sarkeesian, creator of popular web-series *Feminist Frequency*, came under attack

for launching a Kickstarter[78] campaign in order to fund a series of videos exploring stereotypical representations of women in video games (Sarkeesian 2012). The project was fully funded within 24 hours of its launch, but soon after Sarkeesian became the target of an extensive cyberbullying campaign, ranging from the vandalization of her Wikipedia page to threats of rape and murder[79] (Moore 2012). GamerGate was not an organized phenomenon – it had no clearly defined goals or leaders, but was held together by its members' stance against 'social justice warriors', LGBTQ people, women and racial and ethnic minorities (Elderkin 2016). Rather, it was a widespread attack conducted by some segments of the gaming community (which associated themselves publicly with the ill-famed message board 4chan) against what they perceived as a dangerous diversification of gaming spaces and game content. For the supporters of GamerGate, the problem was simple: women, and especially feminists, are "actively working to undermine the gaming industry" (Chess and Shaw 2015, 2010), implicitly sending out the message that gaming and technology were not a woman's space.

The question of media addiction in the contemporary cultural climate surrounding gender and technology is particularly relevant one. On the one hand, there is a growing awareness of women and other minorities' marginalized position in the tech industry. On the other hand, technology is still inferred to the 'natural' domain of men. Addiction, or intimacy with the inhuman sphere of media, is figured as a flaw in the structure of proper techno-somatic individuality, partly because of the strong metaphysical separation between the human and the inhumanity of technology. But the relationship between humans and technology in Western ontology, whether it is posited as a hierarchical one or not[80], is essentially a relationship between Man and technology, as can be concluded from Stiegler and Heidegger (see Chapter 3). The biopolitical imperative of the techno-somatic individual is to maintain a proper separation between himself and technics, and to maintain technics'

[78] Kickstarter is a crowdfunding website and public-benefit corporation focused on artistic and creative projects. Crowdfunding refers to the practice of raising money from a large number of contributors. In crowdfunding, including Kickstarter, provides a platform on which creators can post their project descriptions, and interested parties can donate money to initiate the project. Depending on their contribution, funders often receive rewards from the creators.

[79] Sarkeesian responded to her abusers by talking openly about the sexism prevalent in the gaming industry and gaming communities. Two years later, the bullying campaign resurfaced with a new target: independent game designer Zoe Quinn. The bullying campaign, which took the name of GamerGate, was directed towards Quinn due to allegations made by her former boyfriend, who claimed that Quinn received positive reviews for her games because of her sexual relationship with the critic who penned the reviews. Quinn and Sarkeesian were two of the most prominent targets of GamerGate, but the anti-feminist side of the debate became engaged in a virulent and wide-ranging discussion about the role of women and minorities in gaming and the game industry.

[80] And whether humans are seen as the masters or slaves of technology.

position as a subordinate object. As explained in Chapter 2, the clarity of the human-technics boundary is threatened by the notion that technology is not simply nonhuman, but *inhuman* and beyond such easy separations. How do women and other minorities fit into this already complicated schema? And if women are not entitled to a relation to technics, then how can they become techno-somatic citizens, the building blocks of the contemporary politics of life itself?

The problem of women's relationship to technics is often framed as flawed because of the unavoidable incursion of nature into it. Nature is that which is opposite to the machine, that which is organic, often irrational, leaky and incomprehensible. Women, due to their 'naturally' prescribed roles in society and sexual reproduction, were not suited to the artifice of technics and its mastery over nature. Because women are slaves to their own nature, it is inconceivable that they should have mastery over Nature. One of the targets of GamerGate, Zoe Quinn, was accused of using her sexuality instead of her knowledge of technics to advance in her career. In another high profile case of sexism in technology, scientist and Nobel prize winner Tim Hunt claimed that the problem with 'girls' in science and technology fields is that they "you fall in love with them, they fall in love with you, and when you criticise them they cry" (Knapton 2015). Women's nature, in Hunt's view, endangers the rational pursuit of science and techne, and causes men to fall prey to nature's contagious influence as well. Phenomena such as GamerGate and Hunt's expression of chauvinism point towards an intrinsic exile of femininity from the domain of technics.

Events like GamerGate are the culmination of discourses that construct women's access to technics as cases of uncontrolled and illicit intimacy. Feminist gaming scholars Shira Chess and Adrienne Shaw note that even before the death and rape threats directed towards Sarkeesian, numerous women in the technology and gaming industry and community have experience threats and harassment, despite the fact that statistically, about half the gaming community is female (Chess and Shaw 2015, 209). Feminist critics of games and technology, including those coming from academia, were accused of trying to "actively fuck with the paradigm of games" (Chess and Shaw 2015, 2013). It is precisely the notion that technology can have a fixed, unfailing paradigm that is of chief interest to me in the discussions surrounding GamerGate specifically, and reactions to feminist critiques of science and technology more generally. Technology is not only figured as not belonging to

women – it is seen as belonging exclusively to the white straight male[81]. Technology and media are seen as the purview of hegemonic masculinity, and those non-white males who seek to engage with it are accused of trying to dismantle hegemonic masculinity, or alienate the straight white male (Chess and Shaw 2015, 2017). With these recent controversies in the background, and without forgetting the complex and nuanced criticism of science and technology that has been coming from within feminist theory over the past several decades, feminists are justifiably often suspicious when philosophers of media and technology sometimes speak about technology as a transcendental and neutral abstraction bestowed upon all 'humans' or upon 'Man'.

Following from Chapter 3 in which I discussed Stiegler's concept of originary technicity and the ways in which it can be modulated through an engagement with transcorporeality, this chapter seeks to explore the place of the feminine in relation to media technologies, and how this constructed place intersects and interacts with discourses on media, addiction, productivity and techno-somatic individuality. Both the notion that women are inherently disconnected from technology (and therefore have no right to appropriate it), as well as the conception of technology as neutral and transcendental can have a serious repercussions over the politics of women's and other minorities' involvement with media-technologies. Given the symbolic disconnect of femininity and technology, as well as the biopolitical insistence to preserve 'humanity' in the face of a threateningly inhuman media ecology, there is one important question that needs to be asked: who is this human who needs to be protected? Is it the masculine (and yet often emasculated through its 'geekiness'[82]) figure of the archetypal technology user? The feminine/feminized user whose 'addiction' to social media, casual browser games or online shopping is often not technical enough to be considered an intimate link to technology? How does biopolitics imprint difference into a

[81] Canadian Game developer BioWare, which authored some of the most popular roleplaying computer games of the past decade, was criticized by some of its fans for purportedly 'catering' their games to their female and LGBTQ fans, to the detriment of other players. In response to one particular fan's accusations of neglecting the games' main demographic comprised of white straight males, BioWare issued a statement dispelling the assumption that female and LGBTQ players were a minority, as well as the idea that games should belong and seek to please only a male demographic (Fahey 2011)

[82] One particularly poignant example is that of 'geek' masculinity, which is used to designate masculine performances by people in various subcultures in which technical fluency is often an important. In my examination of the performance of masculinity in one particular technology-oriented web forum, self-declared geek men played with gendered hierarchies by positioning themselves in a dialogue with hegemonic masculinities, and an array of femininities. Their own gender performance, in the context of hegemonic norms, was often caught up in a struggle to escape the stigma of a 'lacking', incomplete masculinity (Zekany 2011). Sexuality is often an important tangent in this discussion, as exemplified by the trope of the sexless, asexual or sexually unappealing geek man, which is played out frequently in popular culture (e.g. the popular US sitcom *The Big Bang Theory*)

paradigm of technology addiction that has sufficient biopolitical validity in order to become the target and beneficiary of pastoral care?

I will approach this issue by examining the place of gender within media's ontology. My entry point into this debate is Bernard Stiegler and his ontologization of media technologies, as well as the way in which these conceptions of media align with the feminist concern about nature/culture and human/nonhuman dualisms. The guiding question that organizes this chapter is whether or not we can conceive of technology without taking into account its transcorporeal relations to the humans who engage with them, and the environment in which both humans and technics emerge. More specifically, I will investigate the dynamics of physis and techne, and their translation into terms of nature, culture and gender, as they play out in Stiegler's conception of technics, in order to find out whether Stiegler's originary technicity, which is embedded into much of the discourse on gender and technology use, posits any kind of exclusion of femininity from originary technicity. The second part of the chapter will deal with the specific intersections of femininity and technology, in the past and present, in order to showcase the political, social and affective formation of gendered techno-somatic individuality.

The purpose of this investigation is to probe into the contemporary conversation about media addiction, its assumptions about gender, and its role within the techniques of biopolitics. More specifically, I argue that in order to arrive to a biopolitical critique of media addiction, it is imperative to consolidate our conception of media intimacy with a historically and ontologically-grounded discussion of the link between sexual/gender difference and our understanding of media technology. We must clarify, re-evaluate and shift the inscriptions of gender into the notion of technology in order to reconstruct the media addict as a figure of intimacy, desire and longing for the technological other.

1. Masculinity and Technicity

Masculinity is not always equated with mastery over technics, but as Steve Garlick poetically notes, masculinity and technics are involved in a "larger drama of a technological confrontation between men and nature—one in which control and the meaning of masculinity is perpetually at stake" (2010, 597). Certain technologies have gained a symbolic association with masculine power: the tractor can be read as a symbol of "male power and spatial domination over women" (Saugere 2002, 143), guns "amplify sexualized power, projecting masculinity and violence" (King 2006, 87), while technologies such as kitchen utensils,

household goods or childcare are associated with femininity (McGaw 2003, 32). Technologies like the Internet and computers occupy a curious space, as objects that can actively blur and obscure gendered and racial boundaries (as believed in the early utopian days of 80s and 90s cyberspace), possessed of a vast liberatory, norm-breaking and politicizing power (Haraway 1991), or a macho domain that is "peculiarly male in spirit" (Turkle 1984, 216). Whatever technology might be, it is never neutral from a gendered point of view. In different ways and depending on the context[83], sexual difference is always at the core of techne, has always been part of the landscape of techne. The goal of this chapter is to interrogate the place of gender in the contemporary media ontology that frames media addiction, and to imagine different possibilities for it that lessen the burden of the techno-somatic individual.

In this section, I will discuss some possible issues that arise from the universality of Stiegler's conception of technics as it relates to the human, and namely its inability to address the place of gender, sex, race and other corporeal categories that are included in the construction of the human subject, which ends up being masculine by default. Even if originary technicity eludes the pitfalls of both technological determinism and the social constructionism of technology by providing an alternative understanding of the relationship between humans and technics, it still labours under the assumption of a neutral, universal human subject. The human, as a concept, is historically and culturally situated. And yet, when we mention the human, the most common understanding of it comes from liberal humanist conception of the individual. Donna Haraway, among other feminist theorists like N. K. Hayles, has used her work to steadily pick at the seams of coherent and universal understandings of the human, especially in the contexts of technology and biological and environmental sciences. *A Cyborg Manifesto* is one of the concise and powerful articulations of how the notion of technology might be informed by the "antagonistic dualisms" (human/nonhuman included) of Western thought (1991, 180), and the possibility to envision an alternative relationship to it.

Historically, the relationship between genders and technics has been a mutually reinforcing and hierarchizing one. Feminist science and technology studies (STS) scholars such as Sandra Harding (1986), Judy Wajcman (1991, 2000) and Wendy Faulkner (2001) have zeroed in on the various ways in which gender and technology can converge. Faulkner

[83] It is also very interesting to consider the way in which the gendered ontology of technology is embedded in particular social and political contexts. In the 1927 film Metropolis by Fritz Lang, we might say that the technological horrors of WWI take a feminine shape whose seductiveness results in death and tragedy. Similarly, the

points towards two ways in which feminist STS scholars have approached the gender question in technology studies: gender in technology, and the gender of technology. The former regards the way in which gender and technology mutually embody, and materially shape each other (Faulkner 2001, 83). The other approach considers how particular technological artefacts are gendered as either masculine or feminine because of their proximity to, and predominant association with one gender or another. Historically, technology has been symbolically associated with masculinity, and "cultural images and representations of technology converge with prevailing images of masculinity and power" (Faulkner 2001, 79).

Perhaps the legacy of the late 80's, the figuration of the cyborg, is still the most suitable way we can talk about the intersection of bodies and technologies. The cyborg is not necessarily a figure, but a figuration i.e. a method, and seemingly an alternative to the identity politics that have dominated technology studies as much as other fields. The technical individual as a cyborgian entity is a way of showing how technics are not a mere extension or supplementation of a lack, but already imprinted/embedded transcorporeally into the body. The human pushing the first wheelbarrow was a cyborg, so was the human holding the first book, and so is everyone sitting at the computer for work or leisure. The cyborg allows us to rethink what the medium means in relation to the body: is it the content of the email message that someone is writing on their tablet, is it the tablet itself with its circuits and sleek plastic casings, or is it the enmeshed coupling of the human and technology feeding off of each other? The cyborg in this case is not the ontological condition of either human or machine, but the process of their transcorporeal enmeshment, and the very impossibility to pin down their identities.

The cyborg is in kinship with tricksters and ghosts, beings who joyfully transgress humanist understandings of matter and its supposed fixity. This is important because the technical individual can be seen as an organic/inorganic composite who moulds herself to her milieu: a milieu composed of techno-human assemblages. The cyborg figuration, both as a methodology or as a non-identity, has very straightforward implications when used in media theory: it dislodges the motif of the white, middle class, male subject that was historically assumed to be the starting point of not only STS, but science and technology. Despite efforts by feminist STS theorists and media scholars, the white male is still often assumed to be the ground zero of media 'in action' – as recent debacles such as Gamergate, the Anita Sarkeesian case, the GitHub sexism accusations of 2014, during which a large majority of male tech users caused a backlash against women in technology . Whether explicitly or

implicitly, the historical bias that codes technology as masculine still persists in today's tech culture, and keeps concealing the close relationship with science, technology and media that women, people of colour, and have also always had.

The philosophical (as well as empirical) relation between technics and gender is therefore framed as an inherently problematic one. In this context, Stiegler's uncritical embracing of originary technicity raises some questions. Can we understand originary technicity as grounding for the emergence of the human in all its variations, and if so, what sort of theoretical work is needed in order to see gendered, raced and classed subjects as visibly, inherently technological? For Stiegler, the human emerges when a new kind of relation emerges between the living and the non-living, in which the living start to pursue life through means other than life (Stiegler 1998, 17). This statement in itself does not automatically presume the exclusion or any specific human embodiments. Technics is, at this point, simply what Stiegler claims it to be: any inorganic organized being (Stiegler 1998, 17) that may be as simple as the wheel or as complex as a super-computer. However, given the historical co-construction and co-implication of white masculinity and technology, some caution is warranted when extending Stiegler's brand of anthropogenesis to all embodiments beyond that of the white man. More specifically, instead of looking at originary technicity as a universal phenomenon of humanization, it might be more apt to attend to its part in creating different regimes and hierarchies of the human.

An ethics of universal originary technicity should facilitate a non-exclusionary thinking of so-called 'minority' embodiments in relation to technology. However, it can also entail glossing over the social and political realities of gender and race and their intense points of articulation with technology and the philosophy thereof . In other words, the liberatory potential of originary technicity has to be in synchronicity with the goal of critiquing and dismantling already existing prejudices ingrained into both the philosophy of technology, as well as lived social reality. The exclusion or marginalization of 'minorities' from the industries of technoscience opens up important discussions about the 'ownership' of technology and discourse on technology, but there is also a level on which women and/or racial and sexual minorities are purported to have a relation to technology that is on some fundamental level ontologically deficient. Francesca Bray argues that in any society, "technical skills and domains of expertise are divided between and within the sexes, shaping masculinities and femininities" (Bray 2013, 370). Of course, the relationship between hierarchies of the human and technics are not as straightforward as simply one shaping the other 'shaping', as shown in Chapter 2. However, there is an undeniable symbolic association

between masculinity and technology, which should be taken into account when speaking of originary technicity, if only to deconstruct the 'natural' affinity between technics and masculinity.

Originary technicity is a necessary step in the project of dismantling the culture/nature, human/technics binary, but it might need a second step as well, which would attend to the situatedness of human-technics emergence. The additional lens of transcorporeality can dispel the illusion of universality from originary technicity, as well as sever or perhaps reframe its association with an equally originary masculinity. Originary technicity, as a co-constituting relationship between humans and technology, does not result in a universal technical subjectivity, but rather in an on-going conversation and conjunction with ideas of gender, sex, race, matter and so on, which acknowledges their dynamism and mutability.

2. The Gender of Technics

Edison's phonograph, which I briefly explored in Chapter 2, shows how "machines and systems are appropriated differently than their original design intended, and creatively extended or subverted by particular users under particular historical and political circumstances" (Terry and Calvert 1997, 4). The Internet is a particularly powerful contemporary example: it emerged in the guise of ARPANET (Advanced Research Projects Agency Network), funded and developed by ARPA, an agency within the US Department of Defense. ARPANET's two basic technical components, packet switching and TCP/IP protocols, became the foundation of what we know as the Internet. ARPANET was developed for easier communication within the military, research agencies and corporations, but its inception often mistakenly becomes attributed to the American military's desire for an information network that would survive a potential nuclear attack (Leiner et al. 2009, 31). Today, the Internet might still be a good servant to its military masters, but it had long ago escaped its initial confines to become a playground for desires and identities, a means of connection to other users and even the world itself, an organizing tool for lives and experiences, a space of hidden dangers and predators, and an inescapable circuit integrated into the workings of the capitalist workplace.

It is no news that since its early dissemination in the late 80s and early 90s, women and people of colour were present at the ground zero of Internet history. And more than that, what historians of ARPANET often gloss over is the crucial contribution of gender, sexual

and racial minorities in the strenuous groundwork that was necessary in order for ARPANET to even become a possibility. Algebraic structures, pivotal for most fields of computer science, are based on a lot of early work performed by middle-eastern mathematicians. 19th century mathematician Ada Lovelace is widely recognized as one of the world's first computer programmers, and the co-inventor of a primitive computing machine, the Analytical Engine. Grace Hopper is the author of one of the first machine-independent high level programming language; Katherine Johnson was a pioneer of digital navigational systems, while Alan Turing is widely considered to be one of the first theoreticians of artificial intelligence and computer science. Computing and the Internet are just one of the countless examples that showcase how science and technics are always a complex collaborative effort, and not the exclusive property of heterosexual, white masculinity. And yet, there is still a persistent assumption that technics is intrinsically, ontologically masculine, and therefore belongs to only a specific type of human being. In this sense, a phenomenon such as the above-discussed GamerGate, is not just a struggle over representation and sexual harassment in technology, but also an implicit discussion on the very nature of technology itself – or rather, a discussion on the relationship between nature and culture/technology, between those who are assigned to the wild and uncontrollable realm of the natural, and those contained within the rational, logical and unemotional sphere of technics, science, craft and culture. The different ways in which feminist theory has approached media and technology – through analyses of participation, audience, representation, historicity – reveal a fundamental disconnect between the way in which sexual difference is actively involved in the vast field of media technology, and the gendered assumptions that persist in surrounding the nature of media technology.

In the following sections I will address the relevance of nature/culture dualisms in understanding both contemporary attitudes towards women in STEM, as well as prevalent philosophical approaches to technology, such as the work of Stiegler and Heidegger. I will follow this theoretical discussion with a few historical vignettes on the hidden 'non-masculine' side of technology, and an inquiry into contemporary example of discourses on women's disordered intimacy with technology. The nature/culture dualism, despite having fallen into disrepute through countless critiques coming from feminism, poststructuralism and ecocriticism, seems to still be an insidious ingredient of much discourse on technology. And even though, as argued in Chapters 2 and 3, media's inhumanity and the preservation of humanity are the grounding principles of the biopolitics of media use, we must also acknowledge that the human subject of biopolitics is a techno-somatic individual, as shown

by both Hayles and Stiegler. The always already technical poses an inconvenient complication for biopolitical interpretations of media and technology, because how can we preserve humanity, if humanity has always been in kinship and transcorporeal intimacy with the nonhuman, and the inhuman? These complex interplays highlight the sharp contradiction between the transcorporeal techno-somatic individual, whose very mode of existence embraces blurred boundaries, and the subject of media addiction discourse and its anxious oscillation between 'natural' humanity and the technological requirements of postindustrial capitalism (discussed on Chapter 1). The key to disentangle and perhaps even dismantle some of these tensions lies in the clarification of media addiction's, and the media user's position in relation to the nature/culture debate.

If in the past the human was that category of being that could master nature, as in the writings of Francis Bacon, the arrival of the machine, or media technologies understood as something beyond nature and beyond the human complicates this relationship, changed that. The agentic and autonomous human was predicated on the rejection of uncontrollable animality and the privileging of thought and reason. However, the machine is now the embodiment of logic and rational thought, while the most 'human' thing about the human itself is its animality, its connection to a human nature, to (proper) biological function, empathy, intimacy, reproductive drive – its somatic self. When the human becomes too close to the machine (physically, emotionally, or behavioural patterns), then the human is in danger of losing its naturalness. As always, it is the blurring of boundaries, the transgression of nature/culture divides that produces biopolitical threat, and the media addict is the very embodiment of such a threat.

Nature-Culture Dualisms and the Ontology of Media

There is a rich feminist scholarship that is concerned with examining the various places of gender in relation to technology and media. Some scholars appraised the interconnections between media practices and feminist activism and gendered performance, or the role of media technologies in shaping social praxes (Fotopoulou and O'Riordan 2014), the participation of gendered and raced bodies in media production and consumption (Byerly and Ross 2008; Compaine and Gomery 2000), or the representation of gendered bodies in media (Gill 2007; McRobbie 2004; Rosen 1973). Another strain of feminist criticism that is tangentially related to the debate on gender and media technology is concerned with the long-held nature/culture tension at the core of Western metaphysics. Sherry Ortner, for example, has been concerned with the subordinate status of women and racial minorities in Western

discourse and society, which can be attributed to a very specific cultural logic: that of the nature/culture dualism (Ortner 1974).

Nature is often positioned as the other of technology, as either a resource that can be mined and controlled through technical tools, or as something to be longed for and mourned in the advent of the technosphere. The loss of nature and of natural authenticity is a recurring and implicit theme in the major media discourses discussed so far: in Turkle's regret for the erosion of authentic intimacies, Carr's suspicion against our brains' willingness to mould themselves to technology use, the Google Glass addict's inability to perform natural, normal, socially sanctioned productivity. It is by no means the goal of this work to delegitimize or disparage such sentiments, but simply to understand how they are formed and to what purpose. It is also imperative to acknowledge the way in which nature-culture dualisms have informed and are embedded into the persisting stereotype of technology being a pursuit belonging to the straight white male – an assumption that is strongly felt in such occurrences as the above-mentioned GamerGate debacle. It also prompts us toward a closer examination of empirical place of gender in phenomena such as media addicts: where are the Internet addicted women and girls? When is their addiction relevant from a biopolitical point of view, other than the times when they become neglectful 'Facebook moms' [84] who fail their reproductive role?

While the association of femininity and nature on the one hand, and masculinity and culture on the other is one permutation of the nature/culture question, there are many other configurations that have informed discourse and policing not only of gender, but of race, sexuality and class as well. For example, as Carol Stabile notes, often "what is 'natural' is therefore legitimate and socially sanctioned" (Stabile 1997) – one example is strain religious/moral discourse that seeks to position homosexuality as a deviance from the natural order, or even the increasing pressure on 'natural', GMO-free and organic food and clothing in the 21st century. Stabile notes that the relation between nature and culture, as well as the gendered and racial configurations that accompany it, are by no means stable, as Ortner sought to assert. On the contrary, "shifts in representations of nature are related to shifts in information and resources within the sciences themselves, dominant scientific paradigms are frequently invoked to authorize popular understandings and representations of nature, what is

[84] Facebook Moms is a term coined on the official website of Kimberly Young's Center for Internet Addiction, which provides information on diagnostic procedures, treatment and coping mechanisms. Facebook moms is a disparaging term that refers to women who neglect their domestic duties as mothers and wives by spending an inordinately long time using social media such as Facebook, Instagram, Twitter or Pinterest. Young associates social media addiction with teenagers and mothers who become "less engaged in the physical world of relationships" as a result (Young 2016).

natural, and therefore what is thinkable in terms of social relations" (Stabile 1997). Stabile points towards a social construction and re-construction of nature, that fits within the dominant scientific, as well as economic paradigm. The woman/nature, man/culture binary is complicated by several other intersecting and overlapping discourses that trouble any clear demarcation of these binaries. For example, the Victorian stereotype of the woman as the 'angel of the house' hinged on the rejection of 'savage', 'animal' sexuality, and the construction of marriage and the woman's role within it as a civilizing force (Caplan 2013, 11) as well as her moral power over men (Poovey 2009, 8), while also maintaining the assumption that female sexuality and gendered behaviour is a natural, biological imperative that prevents women from the ability to work or exert rational decision-making (Ibid., 7-8).

In short, the nature/culture dynamic and its embedding into gender relations is always contested, under construction - a matter of historical specificity and "critical ideological work" (Ibid., 2). But despite its shifting nature, the existence of the binary itself, with nature and culture situated on opposite sides, has been a constant for much of the history of Western metaphysics (Haila 2000, 155). Bruno Latour effectively dispelled the myth of any real separation between modern understandings of nature and culture, and argued that like many of the other binaries touted as emblematic of the modern age, the poles of nature and culture are not clear cut categories but an area populated with nature-culture hybrids of all manner and kind. While the 'Modern Constitution' would see nature and culture as constrained to their respective categories, Latour's argument is that their separation has never been anything but an on-going production of hybrids, of "purification and translation" (1993, 10).

Feminist critics of science and technology, as well as the more recent incursions into the new materialisms have also staged wide-ranging interpretations and refigurations of the nature-culture binary and its ramifications. For physicist and feminist theorist Karen Barad the nature-culture problem can be reframed through a reconceptualization of knowledge production practices in the sciences as well as other discursive bodies. Barad's key term, agential realism, is a means of setting up an ontological-epistemological framework for discussing "the nature of materiality, the relationship between the material and the discursive, the nature of 'nature' and of 'culture' and the relationship between them, the nature of agency, and the effects of boundary, including the nature of exclusions that accompany boundary projects" (Barad 1998, 89). Barad's onto-epistemology provides an alternative to seeing nature as a passive site waiting for scientific exploration or conquest, as well as the posthumanist interpretation of nature as produced entirely through discourse.

For Barad, the nature/culture binary and its extensions is a question of primacy or causal relations, but rather or co-emergence, "an on-going topological dynamics that enfolds the spacetime manifold upon itself, a result of the fact that the apparatuses of bodily production (which are themselves phenomena) are (also) part of the phenomena they produce" (Barad 2003, 826). For Barad, existence cannot be separated into matter and discourse, but should instead be understood in terms of phenomena. Her chief example is one taken from quantum physics: that of the diffraction pattern of photons passing through a two-slit grate. Physicists observed that the photon behaved sometimes like a wave, and others as a particle. The conclusion drawn by physicist Niels Bohr was that the nature of the measuring/observing apparatus had something to do with the photon's behaviour, and that "the objective referent is not some abstract, independently existing entity but rather the phenomenon of light intra-acting with the apparatus" (Barad 2003, 815). 'Natural' phenomena observed in a laboratory are therefore not a case of scientific knowledge seeking to decipher nature, but rather an example of technical devices reconfiguring not just what we know about the world (epistemology) but also the world itself (ontology) (Ibid. 816). Barad's agential realism is then an ethical project of 'knowing and being' (Barad 2001, 103).

What Barad suggests is that embodiment, materiality and agency are not properties of the individual (human or nonhuman), but rather products of the entanglement of actants, environment, apparatuses and matter. The implications of Barad's agential realism over the categories of human and technology, and the relations woven between them, are powerful and downright visceral. Technology, seen through the agential realist lens, is more than a filter for human experience (as per McLuhan), and becomes a constitutive part of the body's materialization. Barad's intra-active dynamics of nature-culture, human-technology, matter-discourse, representation and reality dissolve even the most temporary affixing of binaries. Her theoretical framework is not so much as a critique of science, but a radical reconceptualization of it.

Barad is not entirely explicit when it comes to the implications of her agential realism over feminist theories of gender and sexuality. However, we can distinguish how agential realism can serve as a refiguration of the male/female binary by first calling into question the existence of the liberal subject itself, as "gender is no longer understood to be an inherent attribute of the individual subject, but rather a reiterative doing through which the subject is constituted" (Barad 2012, 78). For Barad, gender is not an individual trait, but rather a phenomenon – the "primary epistemological unit" within Barad's onto-epistemology (2003, 815). As all phenomena, gender entails an intra-agential relation between matter and

discourse, observer and observed, or, as Nina Lykke phrases it mutually transformative interplays between the human and its environment; it is neither purely biological-material, nor sociocultural, but both (Lykke 2015, 203). Therefore, it does not make sense to consider the binaries criticized by Barad separately. Any disruption of the human/nonhuman dualism will necessarily and contingently reflect on other binaries built on the same logic: technology/nature, male/female, self/other, subject/object. Barad reminds us that the only 'essence' in our onto-epistemological categories is essentially unstable, and that has serious repercussions on the way in which we talk about and conceptualize situated identities (gender, race, class, sexuality etc.) and phenomena (Parkins 2008, 502). Barad insists on

> the importance of constructed boundaries and also the necessity of interrogating them ... Boundaries are not our enemies; they are necessary for making meanings, but this does not make them innocent. (Barad 1996, 187)

The Gender of Media Technology

Despite the on-going destabilization of the nature/culture dualism originating from both academia and the sciences, we must still account for the fact that the discourse surrounding technology is resistant to such dissolutions. Technology, as opposed to other fraught categories like science, nature and culture, is a less often tackled subject in feminist philosophy and theory (Faulkner 2001, 79), even though many sociological works have tackled the dearth of women working in the field of technology. For Faulkner, what she sees as an incomplete feminist theorization of technology stems from the liberal tradition which imagines technology as neutral, nongendered[85], while ignoring the "enduring symbolic association of masculinity and technology by which cultural images and representations of technology converge with prevailing images of masculinity and power" (Ibid.). Faulkner's castigation of techno-feminists is no longer entirely justified almost two decades since the publication of her article. Feminist theorists such as Judy Wajcman acknowledge that in recent years, feminist technoscience theory has adopted a stance that is both "critical of technoscience while at the same time aware of its potential to open up new gender dynamics" (Wajcman 2007, 287). The key problem for feminists was not technology itself, but the fact that "technologies have a masculine image, not only because they are dominated by men but

[85] The liberal tradition that Faulkner critiques occurred in the 90's, in the context of a wider cultural and academic climate of techno-utopianism that accompanied the popularization of digital technologies in general, and the Internet in particular. As Judy Wajcman argues, this feminist technophilia, exemplified by scholars such as Sadie Plant or Sandy Stone and to a more moderate degree Donna Haraway, came after decades of socialist and radical feminist theorists who discussed the inherent masculinity of technology, and argued that "Western technology, like science, is deeply implicated in the masculine project of the domination and control of women and nature" (Wajcman 2007, 287-289).

because they incorporate symbols, metaphors and values that have masculine connotations" (Ibid. 288).

Wajcman's and Faulkner's implication is that even though technology is a domain imbued with masculine symbols, and its industry and academic fields are less than welcoming towards women and racial minorities, technology itself becomes gendered after the fact. Their arguments imply that there is the possibility of a nongendered technological a priori – that ontologically speaking, technology is not masculine. However, while this position certainly does provide a fruitful space for feminist interventions, it might lead us to ignore some of the way in which technics and gender (as well as race and sexuality) inform one another. For example, following Karen Barad, we might conclude that technology and gender are embedded into intra-active material-semiotic networks – they emerge in tandem and construct one another. In this section, I will follow up on the complicated relationship between nature and femininity, and return into the philosophical accounts of techne in the works of Heidegger and Stiegler (discussed in Chapter 3), whose insights inform much of contemporary (academic and non-academic) discourse on technology and technology use.

Bernard Stiegler sees technics as the pursuit of life through means other than life (Stiegler 1998, 17). This does not mean that there can exist any other kind of life – a pure, unadulterated and original kind of human life – but that both the categories of human and that of technics emerge through one another's mutual construction. More precisely, Stiegler insists that technology involves an "originary default of origin" (Stiegler 2012, 165). For Stiegler, this means that technics is the "(de)fault of the human being" (Ibid.). The double meaning of 'défaut', meaning both default and fault, imperfection, defect in French, points towards the idea that Stiegler's human is a category constituted through a lack, and through the supplementation of that lack through technics. The human being is therefore neither purely biological, nor transcendental, and we cannot speak or its origin, only about its co-originarity with the question of technics. Then, Stiegler's understanding of technics is one that reaffirms Barad's unavoidable inseparability of our onto-epistemological categories, as well as her argument for a distributed conception of agency. Stiegler offers a reconceptualization of technology not as privileged site, but as a way of seeing human beings in terms of becomings, incompleteness and partialness.

Where does that leave the various situated iterations of human life, differentiated through the constructed categories of gender, race, class, sexuality and so on? If we follow Stiegler's line of thought, then gender, race, class, sexuality are an effect of technical evolution – of the originary technicity that allows the human as ontological category to

emerge. There is no pure, pre-technical human, according to Stiegler. He argues that "in the industrial age, the human is not the intentional origin of separate technical individuals qua machines. It rather executes a quasi-intentionality of which the technical object is itself the carrier" (1998, 67). This conclusion has rather serious implication for two broad discursive categories that form around the intertwined contemporary notions of masculinity and technology: man can no longer be accepted as the omnipotent figure of the tool-maker and tool-bearer, and the association of women with nature (and therefore of pre-technological humanity) cannot be sustained either. If the human is a co-emerging effect of technics, then there is no possible way of raising man up to a position of hierarchical privilege to either nature or technics – man is neither the master of technics itself, which he relegates to the role of object, of tool, nor the master of a nature that he has conquered and subjugated through the invention of technics. 'Man' himself, as the privileged subject of knowledge, is no longer a coherent category based on the hierarchical suppression of all that which is not heterosexual masculinity.

Again, we can return to Karen Barad's agential realist understanding of the categorical boundaries that emerge from ontological and epistemological conception of phenomena, both scientific and social. Technics is not entirely innocent when it comes to the coalescence of gender, race, sexuality and other related categories. And yet, technics cannot be accused of producing or privileging masculinity either. The way in which gender, for example, flows out of technics is the result of the social politics of technics – which comprises the systematic erasure of non-masculinity from the history and philosophy of technology. In *Technics and Time I*, where he examines originary technicity, Stiegler was not concerned with the kind of human that emerges with technics, but only with highlighting the fact that the human as a category should be understood in terms of transformations and becomings. Only in his later work does he express a concern over the *kind* of transformations that occur within the context of Western culture when the originarity of technics is no longer possible to deny: disorientation, malaise, disenchantment (Barker 2009, 2). For Stiegler, then, the problem of technology's hegemonic masculinity might be an effect of our struggle with understanding, accepting, and resisting the potential malaise caused by originary technicity. The solution to this problem is not a rejection of technics, nor a return to a mythic pre-technological past, nor an accelerationist, wholesale embracing of technics. Rather, the solution might lie in "awareness, attention, and action" towards our technical context, both in academia and popular culture (Barker 2009, 3) – in other words, what Stacy Alaimo might understanding by a transcorporeal theory and praxis, as explored in Chapter 3.

Feminist scholars like Jenny Sunden or Teresa de Lauretis sought to reframe the technology-gender relation by arguing that gender itself is a technology, that masculinity, femininity and other gendered expressions are technical assemblages that have become essentialized. Sunden argues that gender is intensely technological in all its guises, as it consists in the encounter of multiple bodies, human and nonhuman alike (Sunden 2014). She gives the example of the corset – the garment constructed of leather and boning that was such an integral part of the Victorian middle-class performance of femininity – as a technology that "makes and shapes bodies in certain ways, demanding attention to what it facilitates or makes possible, and what it blocks or limits, physically as well as symbolically" (Sunden 2015, 380). Sunden's theoretical manoeuvre succeeds not only to presenting an interesting framing of gender performance[86], but also in breaking down the symbolic boundaries between technology and femininity. The corset of the past, and its modern adoption by various aesthetic movements (such as steampunk), is one example that shows the technological constitution of gender. As the next section will show, contemporary media technologies reaffirm this relation in many more and varied ways, and pose a constant complication for the binaries and boundaries that shape gendered, raced or sexualized existence and experience.

3. How to be a girl on the Internet. Techno-somatic individuality and new media

Stiegler's originary technicity is a revolutionary idea, but not entirely unexpected. Before technics and the human, there was the cyborg, who in the late 80's was the vanguard of our new technological condition. Donna Haraway's cyborg manifesto came at a time when cyberutopianism was in full swing in the West, coasting on the hope that digital technologies can fulfil the dreams of the 60's: democracy, community, freedom, culture (Morozov 2011, xiii). Haraway offered feminists and cyber-enthusiasts a new way of seeing the messy, nonlinear and nondeterministic connections between technics and women, as well as

[86] Sunden makes a particularly compelling case for understanding gender through the vocabulary and symbolic structure of technology by focusing on both gender's and technology's propensity for glitches, failures and malfunctions. Speaking about Trans* experience, Sunden argues that "gender as technological is a fragile, instable machinery prone to breakage and breakdowns. Continuous maintenance, upgrades, and reboots might move gender in the direction of an illusion of seamless technological transparency, or even organic wholeness. But it is in the crack, the break, the glitch, that the inner workings of gender reveal themselves." (Sunden 2015b)

"situating questions of technology and bodies into broader feminist theoretical considerations of the structures of knowledge, particularly those of binary oppositions and the logic of identity" (Currier 2003, 321). However, as Puar, Currier, Kirby (1997) and other critics of the cyborg note, the cyborg's liberatory claims have one critical flaw: they still rely on the a priori separate categories of human and technics, which mesh together only by virtue of modern cyborgian assemblages. As Currier notes, the cyborg is immensely useful in rejecting the idea of a unified female subject, of the ontological difference of humans and nonhumans, and troubles distinctions between human and machine (Currier 2003, 322). And yet, the problem with Haraway's cyborg is the same one that Bruno Latour identified as the failure of the modern constitution:

> in order to fabricate the hybrid and intermingled cyborg one must first begin with the discrete component entities which are precisely those elaborated within the logic of identity. That is, in the construction of a cyborg, technologies are added to impact upon, and at some point intersect with a discrete, non-technological 'body' (Currier 2003, 323)

The cyborg might no longer be able to account for all the complexities of contemporary experience, but it did offer a solid and inviting alternative to the status quo: to the techno-somatic individual that is the object of contemporary Western biopolitical governance. The techno-somatic individual is an idealized version of the perfect, properly functional biopolitical subject, as well as the standard that contemporary social and political experience is being measured against. This individual is the one that is required by the current 'politics of life itself', in Rose's terms. The techno-somatic citizen, as argued in previous chapters, is bound by multiple demands forged through biopolitical techniques and the flow of capital, as well as the growing medical and scientific erasure of human-nonhuman boundaries. At the same time, in the contemporary technical context, the techno-somatic individual is also caught up in a contentious discourse that pits the human against not only the nonhuman, but the inhuman as well.

The techno-somatic individual that emerges from the works of Foucault, Rose, Hayles, and Stiegler is an immeasurably complex figuration whose comprehensive portrayal is beyond the scope of this work. This chapter is concerned with the particular configuration of gender within the technological discourse adjacent to techno- somatic individuality. This section seeks to understand some of the specific mechanisms through which new media technologies participate in what Jasbir Puar, following Brian Massumi, calls the retrospective ordering of identities such as gender, sexuality, race, which "back-form their realities" (Puar 2011, 50). To be more exact, this section will look at the place of gender in the context of

new media use, and the way in which the gender-technology couple is mobilized by discourses on improper intimacy with media technologies.

Feminine Media: telegraphists, typists, calculators

For Deborah Johnson, the symbolic disassociation of women from technology is partly caused by a simple reason: the selective meaning of the term technology. Although Stiegler or McLuhan expanded the meaning of technics to encompass any transcorporeal interaction of humans and their environment, Johnson argues that technology's current usage restrains its meaning to "human-made, material objects used by men", while the human-made material objects used by women are demoted to the status of appliances, tools or utensils (Johnson 2010, 37). As technology was codified into institutions and disciplines, the artefacts and forms of knowledge produced by and associated with women were devalued and labelled as crafts (Ibid.; Wajcman 2004). Johnson's argument, that technology should be redefined to include women's technologies as well, is one that has resonated with other feminist critics of technology as well. Cyberfeminist Sadie Plant, for example, argues that networked media are intrinsically feminine because they descend from the feminine technology of weaving textiles on a loom (Plant 1995). Rather than lifting the stigma from so-called women's crafts and technologies, other historians and critics of technology took a different approach: showing how women, as well as racial and sexual minorities, have always been involved in the production and use of 'masculine' technologies – even beyond the well-known exceptions such as Ada Lovelace, Grace Hopper or Alan Turing.

One of the most interesting examples of the interweaving of masculine technology and feminine gender is that of the phonograph, Edison's anthropomorphized sound player and recorder that was briefly discussed in Chapter 2. The phonograph is a classic case of a device that underwent a shift in purpose – from dictation tool for business communication, as Edison meant it to be, to a mass entertainment device (Gitelman 2006, 59). The targeted public for the phonograph were men conducting business correspondence, or a convenient tool for linguistic research. But as Gitelman points out, the eventual users of the phonograph were quite different from the intended public. As she notes, publics are "comprised of users, but not all users are entitled or constitutive members of the public sphere" (Ibid.). The voices represented through the medium of the phonograph, on the other hand, were neither users nor part of the public: they belonged to the marginal individuals that had no direct access to the

device: the Native Americans, the minstrels, the crying children, the farm animals. The phonograph defined "rules about who matters and who doesn't, and by what means and media" (Ibid., 60). For Gitelman, those people who used the phonograph for purposes other than those envisaged by Edison or the market executives are essential for understanding the phonograph itself as a device, as a historical artefact, and as a social actor. Some of the most prominent members of these unintended users of the home phonograph were middle-class women[87], and Gitelman's goal is to see them as active agents in the 'becoming' of the phonograph, rather than the passive consumers of a technology invented by men.

Gitelman's avowed argument is that the phonograph was not a neutral technology that eventually shaped gender expectations and gendered expression. She states that "gender and cultural differences were built in to home phonographs from the start" (Ibid.). The phonographs do have a particularly gendered history, in the sense that women's voices were instrumental in the technical design and quality assessment of phonographs. Because of their pitch and timbre, female voices proved to be particularly difficult to record, and thus became a kind of standard in the industry. Various phonograph companies advertised their products according to how well they could record and play contraltos[88]. Surprisingly[89], recording devices were calibrated according to women's voices. The best recording device was that which was capable to accurately, 'naturally' and pleasantly play and record women's voice, the higher the better. Gitelman argues that attending to such details of media history is crucial, because it shows the way in which the white masculinity of technology has always been subverted in some ways. For her,

> the visual and aural mimetic codes attending modern media, in other words, are constructed partly of racial and gender differences—differences that habitually attend users, not publics. Non-white skins and women's voices became particularly potent indexes of "real" or successful representation, though of course success (like realism) varies according to the social and perceptual conditions of each medium as well as contemporary aesthetic norms. (Gitelman 2006, 71)

[87] One particularly amusing example is a magazine advertisement by the National Phonograph Company, dating back to 1906. The ad counsels women that the best way to keep their man at home is by providing him with amusement. The phonograph would provide a more suitable domestic replacement for cafes, clubs and other public spaces frequented by men. (Gitelman 2006, 77)

[88] Recording the voices of sopranos was often beyond the possibilities of most phonographs. It was only in 1898 that the Boswell Company, a phonograph manufacturing company, declared that they "at last we have succeeded in making a true Record of a Lady's voice. No squeak, no blast; but natural, clear, and human." (Gitelman 2006, 70).

[89] Surprising because of technology's propensity to take white masculinity as a norm. For example, as film theorist Richard Dyer (1997) shows, film lighting in the 20th century privileged and normalized white skin tone, and made it next to impossible to shoot light and dark skinned people in the same frame. The same problem occurred with photographic film as well.

This suite of arguments, for Gitelman, proves that femininity and nonwhiteness was always at the core of recording media. I would argue that the calibration of phonographs based on women's voices can be interpreted in the opposite way as well: that maleness is so deeply ingrained in the nature of the technology itself that the device's capacities had to be extended and reworked so as to accommodate and incorporate the 'glitch' of female voices that proved to be resistant to technical interference. The soprano's voice was a desirable and pleasurable commodity, but one that was initially outside of the phonograph's powers of capture. Gitelman concludes that "modern forms of mediation are in part defined by normative constructions of difference, whether gender, racial, or other versions of difference" (Ibid. 85). This statement prompts us to return yet again to Stiegler, Barad and their theorization of technics as co-emerging with categories and ways of ordering of humanity. What Gitelman shows us is how technics is not simply co-originary with Man, but is also involved in a continuous process of complexification based on axes of gender, race, sexuality – all the boundaries involved in the transformative interplays between the human and its environment.

The phonograph is not unique in its genderedness: other seemingly masculine media also have their non-masculine circuits. The telegraph, another medium hailed as a triumph of mankind's intellect, was also a point of integration of women and technology. Telegraph operators in the West were mostly female, constituting a "subculture of technically educated workers whose skills, mobility, and independence set them apart from their contemporaries" (Jepsen 2000, 2). Telegraphists had to have technical skills, to have knowledge of telegraphy and electrical circuitry, to know Morse code, as well as to be extremely literate (Ibid.). And yet, as Jepsen notes, there are very few accounts of female telegraphists' experiences, although their male counterparts were the protagonists of many well-known rags-to-riches stories[90]. The emerging 19th century Western middle-class and changing gender roles at the time were a boon to the telegraph industry: women seeking employment outside the home could learn the skills necessary for a telegraph operator, and they worked for much lower wages than their male counterparts. Jepsen notes that the nature of the telegraphist's work was not different across genders until the early 19th century, with the introduction of the teleprinter[91]. Men were tasked with the allegedly more cerebral and well-paid Morse code

[90] Thomas Edison, the inventor of the Edison phonograph, who became a telegraphist at a young age, following a difficult childhood.

[91] The teleprinter was invented so that operators could send messages to one another without needing Morse code. Teleprinters were electromechanical devices that were somewhat similar to contemporary

operation, while women were reduced to tele-type operators. Telegraphers and teletypists were only the first in a long string of technical workers whose duties were seen as explicitly feminine. Switchboard operators, typists, human computers and code breakers during WWII - what stands out about these 'feminine', soft professions is that they were often far more technical that they were acknowledged to be. Female human computers, whose role during WWII was to solve various equations and numeral studies related to nuclear fission, ended up being the first professional software programmers in the world[92]. Media technologies such as computers and software were initially codified as feminine, and were only later saturated with masculine symbolism. At their respective times, these woman-media intimacies were deemed proper – they did not automatically trouble the biopolitics of gender. But the feminine a priori of certain media technologies forces us to examine closely the implications of proper and improper intimacies between women and media, and to look into the conditions that turn an intimate relationship with media from proper to improper.

Gitelman only briefly touches upon the way in which women's involvement into the emergence of recording media was subjected to disciplinary interventions as well. She mentions how some young women were accused of 'Wagneritis' due to their changing tastes in media consumption. A closer glimpse into women's changing intimacy with media can be gathered from the literature on middle-class women's reading habits and the medicalization thereof. In Chapter 1, I argued that media addiction is the contemporary codification of the user's intimacy with media technologies, and that addiction in the current 'politics of life itself' is caught up in the grid of heteronormative productivity. Addiction to drugs, alcohol and even media is constructed as a form of improper intimacy with someone or something other than a partner of the opposite sex, thus rendering the patient faulty: not productive enough, or not properly productive within the context of biopolitical and capitalist governance. Excessive intimacy, affection or desire for media technologies subverts the biopolitical imperative to be a fit techno-somatic citizen that carefully balances the various demands imposed by biopolitical techniques. Some of those demands are tied to performance of gender, sex and sexuality. One of the most powerful cases in which gender and media

keyboards. Each keystroke would transmit sequences of coded electrical pulse, which are sent to the receiving teleprinter, which would then decode the message and print it on paper.

[92] The world's first computer, the ENIAC, was designed to calculate ballistic trajectories. Its programmers, Betty Snyder Holberton, Jean Jennings Bartik, Kathleen Mauchly Antonelli, Marlyn Wescoff Meltzer, Frances Bilas Spence and Ruth Lichterman Teitelbaum worked with no manuals or instructions, and they wrote the first software application in the world by studying the computer's diagrams and questioning the engineers who built the computer. Despite their immense contributions to computer science, for a long time the six programmers were thought to be 'refrigerator ladies' – women photographed in front of the computer to make it look good (Light 1999; Fritz 1996).

coalesced into a disciplinary technique meant to prescribe the proper performance of femininity was the example of 18th and 19th century 'obsessed' reading women. Jennifer Phegley writes at length about how 19th century British and American women readers threatened the "sanctity of the family and the cultural reputation of the nation" (Phegley 2004, 2). In the English speaking world of the time, the art of 'right reading' was directly correlated with the art of 'right living' (Harrison 1983). The trance-like state that immersing oneself in a book could induce was seen as dangerous because it could distract women from their domestic duties and escape the private sphere: "good women [had to] show 'self-denial' and resist the 'pure-pleasure' of reading to 'take up the...needle'" (Pearson 1999, 3). Women were susceptible to the 'disease of reading' according to critics, which would corrupt not only the reader, but her family and ultimately the nation as well (Phegley 2004, 11). The woman reader's status was therefore the result of biopolitical disciplinary techniques. Her use of the medium, and the medium's alleged conduciveness to a loss of self threatened the social order and the proper role assigned to each different category of subject. Women's intimacy with their reading material was seen as problematic only in the case of a specific category – that of middle-class women, who were meant to occupy a well-defined position within the biopolitics of the time. The reading woman's attention had to be refocused, discursively and materially, so that she would enact a proper somatic citizenship. The cure for this improper type of intimacy (especially in cases that were medically interpreted as hysteria) was a complete abstention from all forms of intellectual stimulation, especially reading and writing (Scull 2011, 101).

What these historical examples show is that there are multiple levels of othering at work in the relationship between gender and technology. On the one hand, technics is portrayed as intrinsically having nothing to do with sexual difference. Technics is seen as neutral, it only becomes gendered through its use. The telegraph and Edison's phonograph were designed as objects with a particular, nominally nongendered use, even if they ultimately entered and were shaped by intra-active relations with their cultural, political and economic contexts, material conditions, and the agencies and desires of their users. And yet, what we see is that, as Gitelman suggests, technics in the West emerges in relation to, and mirroring the norm: heterosexual white masculinity. Femininity, nonwhiteness, queerness emerge as technical others which are sometimes subsequently accommodation – as in the case of the phonograph and its ability to record female voices. Another othering machination occurs at the level of the intimate interaction with technology. Who has the right to become

intimate with the machine? When does intimacy slip into the dangerous territory of addiction?

Intimacy, affect and pleasurable media

Women with excessive reading habits in the 19th century were given the hysteric's cure: bed rest, no mental stimulation, a return to more virtuous domestic duties. The female mind was considered incapable of active, self-aware thought, and thus it was deemed much too susceptible to misguided fantasies that books might instil in them. For De Ritter, the concern about women's reading habit reflected a fear of social disorder caused by unregulated female sexuality and desire (De Ritter 2014, 20). The association between overconsumption (of media, substances, food, etc.), gender and sexuality is one that is already part of the lay discourse on addiction – as mentioned in Chapter 1, addiction is often seen as a form of improper intimacy with the wrong object.

In this section I will be touching upon the issue of intimate connectivities between users and media technologies, the affective fluxes that compose these bonds, and the potential to de(value) these affects by incorporating them into a biopolitically-inflected framework of analysis. One of the most ubiquitous examples of human-media intimacies occur in the context of online fandoms I do not claim that there is a strict overlap between the discourses on online fandom[93] and media addiction. Both entail an inordinately strong bond with a technical medium, although the object of pleasure of intimacy is different. Online fans consume, and manifest their devotion to their object of choice through the means of technical media. An online fan is, simply put, someone who spends their time in front of a screen connected to the Internet, seeking out fellow fans and fan communities, and remediating and modulating their chosen object of pleasure: films, literature, art, music. An online fan is necessarily knowledgeable about the technical aspect of the device that they use to access the Internet, as well as the intricacies of the online platforms that they engage with. The process of fan participation in media consumption and production is open and amenable to inquiry

[93] When referring to online fandom, I am referring to a very specific kind of online behavior and media use. Fandom and fannish practices have a long and well-documented history, which can be traced back to the turn of the century (see the case of Conan Doyle's fans whose frenzied reaction to the death of the character of Holmes prompted the author to resurrect him and continue writing stories (Armstrong 2016)). Online fandom, that is affective engagement with media and forming fan communities on the Internet, needs to be considered on its own terms due to the intensely technical nature of the fan behavior, as well as the way in which the medium of the Internet modulates the dynamics of fandoms themselves.

into all of its details[94]. Media addiction, on the other hand, is a far more loosely defined term. Cases of media addiction often center on Internet use, without examining the specific nature of web browsing. In the works of prominent scholars specializing in Internet addiction, such as Kimberly S. Young, addiction is determined on the basis of questionnaires that examine the user's affective attachment to the act of using the Internet, without paying attention to what might qualify as 'use' (Young 2004, 404). Both fandom and media addiction are affective encounters with a potentially nonhuman other. Discourse on media addiction often invokes affective experiences like shame or guilt (Watkins 2009, 133), while that of fandom is celebrated[95]. by its participants and its discourse centers on love, pleasure, devotion (Jenkins 2013).

The online fan can be difficult to theorize because of her extremely layered relationship to media (as both affective object and interface), as well as due to the fact that the borders between fans and nonfans are permeable and extremely mutable. While the fans are by no means products of the so-called digital age, the way in which people engage with the fannish object (be it a film, book, television series, game, sports etc.), the practices of fandom have been deeply affected by the communication platforms offered by media technologies, especially networked ones. Statistically, fans are a diverse group. However, as Henry Jenkins notes, fandom traditionally consists of

> surplus consumers — female fans of male-targeted action adventure series, adult consumers of children's media, western consumers of Japanese popular culture, and so forth. Indeed, it is this attraction to works that are in some ways mismatched to our needs that encourages fans to rework and rewrite them (Jenkins 2007)

The online media fan, at least for the purpose of this work, is predominantly female, an opinion shared with scholars such as Hellekson and Busse (2006, 17). That is not to say that online fans are exclusively female – according to anecdotes and stereotypes, the opposite is true for sports fandoms, video game fandoms and other pursuits traditionally gendered as

[94] Fan studies is the "new academic field focused on the study of fandom and other forms of participatory culture" (Jenkins 2010). Scholars who work in fan studies or examine fan cultures often call themselves 'aca-fans' – academic fans – a term that alludes to the fact that most academics studying fans are also current or former fans themselves. Some nonprofessional aca-fans, such as the Tumblr-based statistician Toasty, provide a large and varied resource of statistical analysis of fandom activity by gender, race, sexuality, fandom, and other perspectives (Romano 2016).

[95] The term fan, an abbreviated form of 'fanatic' (Latin: *fanaticus*, meaning religious zealot) has always had certain negative connotations. The term originated in the late 19th century, when it was used to denote people who enjoyed watching sports rather than playing them. Although the term was initially used sympathetically, its meaning began to change when it was applied to female theater-goers who were accused of being more interested in the actors rather than the plays. Jenkins argues that the fan never lost its "earlier connotations of religious and political zealotry, false beliefs, orgiastic excess, possession, and madness" (Jenkins 2013, 12). In the current context of fan studies' expansion the figure of the obsessed, psychotic fan has fallen into disuse in academic spheres.

masculine. However, online platforms such as Livejournal or Tumblr are mostly populated by women, and this feminization is important to keep in mind when talking about online fandoms in general. On the one hand, the offline fan (and the sci-fi fan in particular) is conflated with nerd/geek culture and its codification as White, middle-class, heterosexual, and masculine (Stanfill, 2011). On the other hand, fandom is seen as a feminized practice, with the majority of fans who produce fanfiction, fanart, and video being female (Hellekson, 2009).

Online fandom is productive space par excellence, and this productiveness is put into sharp focus by the rich existing analyses of women's online fandom activities. Through their engagement with media and through media – i.e. producing transformative media works while engaging with technological media such as online platforms – fans subvert and challenge the often male-centric heterosexist canon (Leow 2011). For scores of racial and gendered minorities, affective engagement with media through transformative works such as online fandom has provided an avenue for explorations of desire, sexuality, agency, identity and community. Granted, in the case of online fandom, little attention has been paid to the specifics of user's engagement with technological media, mainly due to the lack of necessary conceptual framework and qualitative and quantitative data that can illustrate the ways and patterns in which fans use media technologies. Fans engage not only with the material substrate of media technologies, but also the 'soft' platforms of websites, forums, social media, blogs. The affective nature of their engagement epitomizes the material nature of fandom, of the way in which it entails not only the production of transformative works, but also consists in interplay between bodies and different types of media.

It can be useful, therefore, to draw attention to the role of technological media in the practice of fandom, and the way in which the actual material technological substrate is part and parcel of the production of a human-media entanglement strongly based on affective bonds. As Stein aptly puts it,

> Fan authors use a range of technologies, interfaces, and forms in their creative authorship, from the word-processing program Microsoft Word to write fan fiction, to Photoshop to create icons and manipulated figures, to pen, paper and digital camera to capture hand-drawn illustrations. In so doing, the original canon/fantext relationship is now compounded not only by the broader structures of genre but also by the varying technologies, software and interfaces used by the fan author (Stein 2006, 249)

For online fans, the ability to use media technology is a lingua franca, functioning as the requisite precondition for belonging to an online fandom in the first place. The intricacies of their media platforms of choice are also crucial aspects of their participation: speaking the

'language' of LiveJournal codes, command lines and clients; the rules and vernacular of Tumblr; the ability to play with the codes of Wordpress or the intricate pathways of Reddit. When the technology breaks down, there is a disruption in the fandom: Big Name Fans whose laptops are in the repair shop might cause minor upheavals along their followers, or an unannounced update to the Tumblr interface can leave users struggling to readjust. To be an online fan is to unavoidably be entangled with media technologies as part of the fannish process. And as much as fandom is discussed in academia (fandom studies being a legitimate and rather prolific discipline), it is rarely put under the microscope[96]. Early academic attempts to pathologize fans were swiftly called out by Joli Jensen, who criticizes the push among some academics to present fans as outliers, deviants or others that are born out of modern society's decay (Jensen 1992, 13). In the current climate, where most scholars writing about fandom identify as aca-fans, the impetus is, as Hellekson and Busse phrased it, to "indicate some of the strengths of fan culture, such as self-reflection, collective production and acceptance of conflict" (2006, 9).

And yet, the fan's dark etymology still resurfaces time and time again, especially in social critiques of gender and sexuality. In the past decades[97], several predominantly female online fandoms such as *Twilight*[98], *Fifty Shades of Grey*[99] or *One Direction*[100] were described as mentally ill and hysteric (Harman 2013; Pinkowitz 2011; Spines 2010; Wollaston 2013). Although first published over three decades ago, Joli Jensen's essay "Fandom as Pathology: The Consequences of Characterization" (1992) still resonates with contemporary fan discourse and experience. Her piece was published at a time when fandom was not yet the strange human-technology encounter that it is today. The fans she mentions are not the almost invisible hordes in front of laptops or bent over tablets that occupy the 'cyberspace' today. They are the pre-Internet era's 'deranged' film fans and violent sport fans, psychopathic and murderous figures that threaten the social order, according to the social scientists whose work she examines. Jensen distinguishes between two types of fans: the obsessed individual and the hysterical crowd, whose status as fans is a symptom of a

[96] There are, of course, some notable exceptions. The Twilight fandom, for example, has been under intense scrutiny by both academics who see it as an expression of postfeminism or regressive feminism, as well as media outlets that attempted to pathologize the adult female fans of the Twilight franchise.

[97] As much as five or six decades, considering the (distinctly female-lead) so-called fan-frenzy surrounding music media and musicians such as The Beatles or Elvis Presley.

[98] Twilight is a series of four fantasy novels for young adults, written by Stephenie Meyer, and published between 2005 and 2008.

[99] Fifty Shades of Grey is a 2011 erotic romance novel written by E.L. James. The novel was originally based on an online Twilight fan fiction written by James.

[100] One Direction was a British pop music boy band that garnered a large international following among teenage girls.

"psychological symptom of a presumed social dysfunction" (1992, 9). Jensen's article is an implicit critique of the raw biopolitical language that social scientists have used to describe fans: obsessed loners, comparable to serial killers (11), animalistic and depraved, crazed and frantic mobs (12), suffering from either a disease of isolation or a disease of contagion (13). She begins her analysis by noting that the literature on fandom is "haunted by images of deviance" (9). Aca-fans like Busse, Hellekson, Jenkins as well as fans themselves would disagree: fans are ordinary people who lovingly and intimately engage with media via media. Yet whether it is proper for fans to engage with media in this way is a point of contention.

Conclusion: The Gendered Techno-Somatic Individual

The controversial research study on the genetic roots of Internet addiction, performed by scientists at Bonn University (Montag et al. 2012), revealed not only that media addiction can be correlated with the occurrence of the CHRNA4 gene (deemed to be responsible for nicotine addiction as well), but also that "this effect was driven by females" (Ibid., 191). Biologically, it would seem, women are more inclined to form intimate bonds with technics. But unsurprisingly, women's role in the co-originary process of emerging technologies is often obscured to the point that women's disengagement from technology has been naturalized. In fact, it is women's symbolic association with nature that is employed as justification for their assumed non-technical character.

Starting from some contemporary illustrations of various reactions against women's intimacy with technology, I have tried to show the way in which the nature/culture boundary, despite having been thoroughly criticized in both theory and popular culture, still serves as the conceptual model for understanding the relationship not only between humans and technics, but gender and technics as well. Stiegler's conception of technics, which he built on a careful reading of Heidegger, Simondon, Leroi-Gourhan and others, is a significant and pervasive portrayal of the way in which technics as an abstract notion functions in Western metaphysics, as well as the consequences of reading technics in this way. His deconstruction of the human-technics division is powerful, despite the fact that on its own it is not capable of addressing the problem of the human being's blatant non-universality. Stiegler's originary technicity is a useful first step in describing the complicated dynamics of gender, race, class and so on *with* and *within* technics. As long as the human, as constructed and fluid as it may be, is understood as a transcorporeal, intra-active category (as per Alaimo and Barad), we

may be able to look at the way in which not only the human as a general concept, but also the specific categories of gender, race, sexuality etc. are also involved in a co-emerging relationship with technics. While it might seem that Stiegler's 'Man' that co-emerges with technics could be a reiteration of straight white masculinity as the norm, I concluded that originary technicity, whether intentionally or not, is in fact a strong critique of the hierarchical binaries that position technics as separate and in opposition to technics, and extend into the hierarchical male-female boundary. In the context of an originary technicity, both nature/culture and female/male binaries are made untenable.

Stiegler and Barad both speak in highly abstract terms about emergence/intra-action of the categories of humans, technics, knowledge, etc. However, their theoretical framework is very relevant in analyzing mundane phenomena such as a media addict engaged in surfing the web by pointing out the tenuous nature of the categorical separation between human and machine in these types of interactions. They both point to the fact that the media user cannot be seen outside of the transcorporeal milieu in which she is embedded, and that both discourse and matter in these phenomena must be seen as integrated into one another.

In order to illustrate the way in which gender (and non-masculinity in particular) is constructed through and within the notion of originary technicity, I have relied on both the historical example of women's hidden contributions to the emergence of mass media technologies such as the telegraph or the computer, as well as the contemporary example of women's intimacy with media through the practice of fandom. These examples are not only meant to exemplify the affective potential of women's engagement with media technologies, but also the fact that there has always been a strong intimacy between women and media, whether it was visible and legitimate, or not. The example of the telegraph, via the work of Lisa Gitelman, shows the mutual, complementary way in which femininity and technics can shape one another. I have used the example of fandom to show the way in which media technologies presuppose an affective relation that is involved in the performance of gender, desire and love in mediated environments.

In conclusion, originary technicity serves not only as a means of critiquing some of contemporary media theory that posits media simply as tools and means of communication, but also of the masculinist bias in technology that exists not only in popular culture, but often in the philosophy of media and technology as well. While, as seen in Chapter 1, important steps in this respect have been taken by theorists such as McLuhan and Kittler, it is the crosspollination of Stiegler with the more gender-attentive insights of Hayles, Alaimo and

Barad that makes originary technicity (perhaps better renamed as 'originary technogenesis') an important tool for feminist approaches to media and technology.

The question that remains, then, is how to also bridge the theory/practice divide that surrounds originary technicity – which can be a daunting task in the case of such complex and abstract work as that of Barad or Stiegler. Karen Barad maintains that theory *is* practice, because theories are "living and breathing reconfigurings of the world" (Karen 2012, 206), while Stiegler explores some of the social implications of his work on technics in his rather uncharacteristic book *Taking Care of Youth and The Generations* (2010). The next chapter will follow in the footsteps of this impetus and look at the specific ways in which the current Western biopolitical framework integrates the techno-somatic individual (and therefore media addiction) into itself, and to seek possible solutions that would allow for a refiguration of media addiction into a more productive notion of intimacy with media.

Chapter 5: Intimacy and attention in postindustrial capitalism

Introduction

In her meditation on the impact of technology on social relations, Sherry Turkle regretfully notes that "technology proposes itself the architect of our intimacies" (Turkle 2011, 1). Technology meets our gaze and replaces our previously authentic relationships with other humans and the world with something else, but our relationships with machines cannot ever attain the semblance of authenticity. Turkle's personal definition of authenticity hinges on one's "ability to put oneself in the place of another, to relate to the other because of a shared store of human experiences" (6). She points towards a significant issue that arises time and time again in discussions on media: if we shift our intimacies towards media technologies, what becomes to our other, historically and socially mandated intimacies? What happens to human bonds of love, friendship, loyalty – as well as their biopolitical doubles like reproduction? What if our very notions of authenticity have changed as well as the way we interact with media? For Turkle, authenticity, which is an essential part of the process of being human, is becoming a "threat and obsession, taboo and fascination" (4). In other words, our authentic humanity is being threatened by a terrible yet fascinating creature of our own making: technology. Even if technology had once been a human invention, Turkle sees it as a contemporary actor with its own agenda and desires that replace our own. For Turkle, technology is untrustworthy and inhuman, and the key to managing it is to re-examine our priorities, and shift our attention from anthropomorphic media back to humanity. Turkle, as many other media theorists, share a concern with media's ambiguous state between humanity, nonhumanity and inhumanity, and is quite justly invested in observing the dynamics between humans and their media[101].

[101] But while Turkle is interested in locating agency as an asset that passes between humans and media, insights from Alaimo, Hayles and Stiegler lead us to consider a more inclusive portrait of the human-technics relation. As seen in Chapters 3 and 4, technics and media are always already, and incessantly embroiled in an originary transcorporeal relationship of co-construction and co-evolution with the category of the human and its various angles and differentiating axes.

For Turkle, the co-construction and co-evolution of humans with technics is one of the defining traits of the contemporary era, and an outcome of the shifts that occurred in the domain of technics with the advent of digital technologies. The human-machine entanglement is, according to Turkle, a replacement of a purer and more authentic way of being that is now in grave danger. She notes that Western societies display an increasingly widespread phenomenon of "turning away from family to focus attention on their screens" (Turkle 2011, 146). Turkle implies that there is an alternative to the counterfeit relationships that humans forge with media – that there is a past to which it is possible to return, in which we can re-establish the authentic human bonds that we have lost in the machine world. Turkle does not discuss or admit the possibility that there might not be a non-machinic past to return to, and that 'authenticity' in the contemporary digital economy presumes a bond with both humans and technics. Rather than being inseparable from it, Turkle's humans are freely circulating through a social and political system in which technology is an actor, but one which may presumably be avoided.

The 2014 documentary *Love Child* might have been a pertinent example for Turkle's arguments against media, but it also illustrates the various transcorporeal vectors that lend themselves to the emergence of media's simultaneous threat and attraction. *Love Child* is a South Korean-American documentary that relates the case of a South Korean couple whose young child died of neglect while her parents were playing an online multiplayer game, and raises questions around the way in which close relationship with media affect social bonds and relationships. The documentary does not mean to give an exhaustive treatment to media addiction, but proposes to approach a phenomenon that is presented as becoming more and more mundane. Importantly, *Love Child* is also a careful look at the integration of humans and media into the flows of capital, and at how media use is not just an individual pursuit, but also embedded in an ecology of bodies, institutions, flows of affect, capital and labour.

Love Child is the story of Sarang, a South Korean baby girl who died of malnutrition. Sarang's death, while already tragic, was made to seem even more sordid by the fact that at the time of her death, her parents were playing a computer game. The couple spent their days playing the game *Prius Online*, and after a typical ten hour-long session, they returned home to find their child dead. Sarang's death was the first known case of gaming addiction-caused fatality in South Korea, and it raised some unprecedented legal and social questions: should the couple's case be handled similarly to other addictions, where the patient's judgment is seen as impaired? Should the burden of guilt also rest on the couple's social environment, which did nothing to help them out? According to the lawyer who defended the couple, lack

of social and family support should also be blamed for their gaming addiction. The unnamed couple had been shunned by their families, who approved neither of their marriage, nor of their love of video games (Veatch 2014). The tragedy is therefore narrated not only as a child's death, but also as the kind of degradation of social relationships that concerns Turkle. However, the viewer is left to question whether this social degradation can be attributed to the influence of media over the socius, or on the pressures exerted by the flows of capital in which both the game and Sarang's parents were embedded.

The documentary as well as various news articles about Sarang present her parents as ambiguously addicted to *Prius Online*. The couple were known to spend as much as twelve hours in a row playing *Prius Online* in a PC Bang. However, the addiction diagnosis is complicated by the fact that playing the game was the couple's sole source of income. The couple practiced 'gold farming' – playing a game for a living and exchanging virtual currency for real currency. Many massive multiplayer online role playing games (MMORPGs) allow players to conduct financial transactions and earn money in-game, thus turning play into profit. Gaming and video game development occupy a significant role not only in South Korea's economy, but also worldwide[102]. Economically speaking, using media such as video games is a productive act – perhaps not in the individual sense, but as part of the capitalist system of production. On a nation-wide, as well as global level, playing games even for ten hours a day like Sarang's parents is ultimately an act of productive labour that accrues revenues for software developing companies and Internet providers alike. The player of games and the consumer of media is essentially a productive subject that serves as a pillar of postindustrial capitalist systems. And yet, this is the same subject whose productivity slips into addiction. Addiction, by very its definition, is constructed as unproductive: it is a deviance from heteronormative productive behaviour, by virtue of being an attachment to an improper object that cannot properly substitute heterosexual reproductive intimacy and modes of sociality (Keane 2011, 202). Gaming, and gaming addiction (and by extension media addiction more generally), is then situated at the tenuous convergence of fruitless play and capitalist productivity.

This chapter is concerned with yet another one of the incongruities that drive media discourse, the industry of media, as well as the biopolitical managing techniques that are concerned with media use: the dual juncture of productivity and unproductivity, and the way in which media use as labour is ingrained into the fabric of techno-somatic individuality,

[102] The global PC and console games revenue in 2014 was $ 46.5 billion (Statista 2014)

while also always being on the verge of being pathologized for robbing the individual of its authentic humanity. I argue that in addition to raising questions about the authenticity of social bonds in postindustrial capitalism, media is the expression of an instrumentalization of the techno-somatic individual by the conjoined systems of biopower and capitalism through the notion of attention. Attention, as the expression of cognitive labour as well as of affective attachment to humans and nonhumans alike, is biopolitically constructed as a source of value that is mobilized by the flows of capital, but also an expression of the proper kind of intimacy that must occur between humans and media. Paying attention to one's biopolitically and economically mandated productive task, like Sarang's parents and the Google Glass Addict, can quickly tilt into an improper intimacy that actively harms not only the individual, but the population as a whole as well.

Thus, I argue that the discourse on media addiction is one of several ways in which the pastoral techniques of the politics of life itself seeks to normalize attention in the interest of a productive techno-somatic individuality. Therefore, in order to make even the smallest intervention into the prevalent biopolitical codification of media addiction, we necessarily need to refigure the notion of attention, and its connection to the discourse of productivity/ unproductivity. The pathologization of media intimacy, such as in the cases of Google Glass addiction, or more pandemic Internet or gaming addictions, is the result of mutations in the way in which attention functions within an ecology of media, as well as the attempt to contain these mutations. Thus, in order to arrive to a critique of media addiction as the negative biopolitical paradigm that governs the techno-somatic individual's standing in relation to media technologies.

The first section will examine the way in which the user of the media is being drawn into (and simultaneously produced by) the machine of postindustrial capitalism, not only as an instrument and source of labour, but as a living commodity. The next section frames attention as a resource and commodity, as well as the politics and economics that wove around it in the so-called digital age. The last section seeks to reconceptualise the widespread notion of attention economy so as to incorporate the transcorporeal nature of media use, which has been discussed in Chapter 3. Understanding attention as an ecology rather than an economy based on and individualized and commodity-oriented concept of attention can allow us to proceed towards a more ethical and accountable reconfiguration of media addiction and the role of media use in the construction of the techno-somatic individual.

1. Instrumentalizing the human in the 'digital age'

For theorists like Heidegger, Jacques Ellul, Turkle and even Kittler, technology contains the threat of mastery over humanity, with users as a pool of potential sovereign subjects. The inhuman presence of media, which at once threatens and reaffirms the existence of the human subject as *human*, and fuels the biopolitical techniques that seek to preserve not only the human subject, but also to manage and preserve the population according to their own logics. For Heidegger, Ellul and Kittler, technology exerts a symbolic mastery that destabilizes the very meaning of humanity. Instead of being the apex of biological evolution, the human is subservient to the inhuman technical principle, becoming, as McLuhan opined, the "sex organs of the machine world, as the bee of the plant world, enabling it to fecundate and to evolve ever new forms. The machine world reciprocates man's love by expediting his wishes and desires, namely, in providing him with wealth" (McLuhan 1964, 57). McLuhan, whether intentionally or not, points towards two of the most significant traits of contemporary media: (1) their inextricable link to capitalist modes of production, and (2) the user's continuous objectification, or becoming-object, within the framework of techno-capitalism.

This section will examine the way in which the media user (through a process that can be described as a 'becoming' techno-somatic individual) is being instrumentalized within postindustrial capitalism, or more specifically, in the capitalist subsumption of new/digital media. While the previous chapters of this work were intent on exploring the onto-epistemological construction of the idea of media across historical and cultural contexts, in the following stages digital media will occupy the centre stage. Digital media, such as its most obtrusive representatives the computers, the Internet, smartphones, video games and assorted gadgets, are issued of the same transcorporeal process of technicity as other technical entities from rudimentary wheel to complex telegraphs. The contemporary biopolitical category of media addiction, as seen in the previous chapters, can be read into a genealogy of thought about technology, from Plato onwards, and its very existence is conditioned upon the onto-epistemology of media technology in Western thought. However, as numerous media theorists from Kittler (1999) to Lisa Gitelman (2006) have stressed, media theory must always attend to the material specificities of media, and not just their overarching principles. As such, it is necessary to turn to the specific context of *digital* media – precisely those media that are the scapegoats of many of the most prevalent media addictions of our times: Internet Addiction, Social Media Addiction, Video Game Addiction and so on. The first subsection will situate the techno-somatic individual within the history of

labour and biocapital within postindustrial capitalism, in order to point out the way in which the increasingly indistinct boundary between labour and labourer shape our understanding of the techno-somatic individual as media user. The second subsection will situate the techno-somatic individual within the context of contemporary digital economy in order to clarify the way in which digital media use is being syphoned into the workings of the capital.

Biocapital in postindustrial capitalism

The human, as a biological and social category, is the instrument and objective of biopolitical techniques of management. In chapter 1, I showed how biopolitical techniques are concerned with minimizing and restraining potential threats to the techno-somatic citizen, who is the constitutive unit of, as well as a synecdoche for the species as a whole. Addiction, a disorder of desire that manifests as an improper intimacy with a nonhuman entity, is one such threat that needs to be governed – but never neutralized, since its continued existence serves to reaffirm the existence of a *proper* type of techno-somatic individuality. Contemporary biopolitics, or the 'politics of life itself', has partially adopted a pastoral approach when it comes to disorders of both the body and of desire – it constructs and relies on the norms of a proper, healthy form of life, which becomes a moral imperative for the preservation of the 'best possible self', which is beneficial not only for the happiness of the individual, but for the survival of the species/population as well. These biopolitical techniques nominally exist for the sake of the population's and the individual's well-being, and therefore can be interpreted as a system of support in the service of the category of the human[103]. However, on the flip side, the politics of life itself instrumentalizes the human as a normative category, which serves as the sine qua non of the biopolitical system. Foucault calls the instrumentalized form of human life 'human capital' or biocapital (Foucault 2008, 232). In the Marxist conception of labour, the logic of the capital is to forget or ignore the living body of the worker, abstracting it into labour power measured in time and paid in wages. The horror of capitalism lies in its ignorance of the living worker, of the fact that labour is "extorted" from the worker, and "cut off from its human reality, from all its qualitative variables" (Foucault 2008, 221).

According to Foucault the neoliberal frameworks are critical of the abstraction of labour from the worker's body. However, the cause of this abstraction is not thought to be

[103] And in some cases, the nonhuman as well. Arguably, some of the popular discourse concerning the rights and agency of animals and the environment can still be understood as essentially anthropocentric, despite its efforts to elude human exceptionalism, because it return to the notion that a 'humane' relationship with the nonhuman is ultimately of benefit to the human race.

capitalism itself, but rather classical economics' failure to stage an adequate analysis of labour (Ibid.). A non-abstracted theory of labour should attend to the situatedness of the worker: it is imperative to

> adopt the point of view of the worker and, for the first time, ensure that the worker is not present in the economic analysis as an object—the object of supply and demand in the form of labour power—but as an active economic subject (Foucault 2008, 223)

In other words, in modern capitalism, "the income cannot be separated from the human individual who is its bearer" (Ibid. 227). For this reason, the techniques of biopolitics as well as capitalism are necessarily concerned not simply with abstracted labour, but also with the bearer of the labour herself: the human, who is transformed into human capital, biocapital. Foucault notes that this human capital is either innate or cultivated. It pertains to the genetic make-up of the individual, which predispose her to certain illnesses, conditions and addictions, and which in turn determines whether the individual herself is "will not be harmful for themselves, those around them, or society" (Ibid. 228). The constructed aspect of biocapital involves the affective, intellectual and economic work of ensuring that one is of adequate social status and capable of securing a heterosexual partnership that results in the expansion of the human capital, i.e. reproduction.

Biocapital, then, is indispensable for neoliberal capitalism. The genetic traits of bodies, their molecularized components and potentials, as well as their learned abilities and skills shape them into resources for the intertwined flows of capitalism and biopower. As Foucault argues in the *History of Sexuality*, capitalism

> would not have been possible without the controlled insertion of bodies into the machinery of production and the adjustment of the phenomena of population to economic processes. But this was not all it required; it also needed the growth of both these factors, their reinforcement as well as their availability and docility; it had to have methods of power capable of optimizing forces, aptitudes, and life in general without at the same time making them more difficult to control.(Foucault 1978, 140-141)

In the specific case of the media and technology industry, the role of biocapital is an especially crucial one. The users of technology and media, the audience, performs a specific kind of labour that has been "effectively subsumed within the capitalist logic of accumulation" (Caraway 2011, 694). Media, and the Internet most prominently, allow capital to turn the 'free labour' (Terranova 2004) of their users into value, by blurring the distinctions between working/consuming/producing. Using media, while it might not correspond to the traditional Marxist understanding of labour, is a form of productive labour in the sense that it contributes to the reproduction of capital. For the techno-somatic

individual, all engagement with media, be it as a 'tool' at the workplace or as an improper intimacy in the guise of ten hours spend surfing the web, is a form of productivity that results in capital.

Techno-somatic individuality and digital economy

While Rose's term the politics of life itself is a valuable reconceptualization of the contemporary biopolitical as well as economic climate and the shifts that have occurred and are still occurring in conjunction with the molecularization of the life sciences and digitization of technics, the impact of new media technologies has been such that it merits its own term of analysis: the digital economy. Much contemporary discourse on media, especially digital media, revolve around the digital economy, and several scholars have appealed to the existence of a digital economy in order to understand the impact of digital and networked technologies from the 90's onwards (Castells 1996, Coyle 1999, Tapscott 1996). Colloquially, the digital economy is used to talk about the transformations catalysed by digital media in the field of business and economics, while at other times it narrowly denotes the conducting of business through various digital technologies. Either way, digital economies are an important concern politically – the European Commission, for example, is committed to encouraging the dissemination of digital economic tools among European businesses. In one article, the EC mentions that they consider digital economy the "single most important driver of innovation, competitiveness and growth, and it holds huge potential for European entrepreneurs and small and medium-sized enterprises (SMEs)" (European Commission 2016). The digital economy is seen either as a complimentary offshoot of 'traditional' economic systems, which facilitates business through tools such as electronic invoices, ICT standardization or various computer skills, or as a synonym for the way in which economic systems functions in the contemporary technical context.

It is important to keep in mind the digital, networked, 'new-mediatic' nature of the contemporary technical context because, as seen in Chapter 3, media use must be understood in a transcorporeal, fluid and intra-active way. Media use cannot be accurately understood or represented through a subject-object model, but rather, as seen from the work of Stiegler, Hayles and Alaimo, technics and the category of the human are unstable and momentary products of an intra-active process. In other words, any analysis or approach to media use must be mindful of the situated nature of that interaction, including the specificity of the media themselves. Digital media, networked media and new media are all labels that seek to codify the contemporary technical context in which there is an increasing rapprochement of

the user and the medium, as well as a growing connectedness between not only user and media, but also media among themselves, and users among themselves. In short, these terms express the assembled, entangled nature of current media ecology.

In this sense, for Tiziana Terranova the digital economy is the name we give to our growing realization of the way in which "the reality of the Internet is deeply connected to the development of late postindustrial societies as a whole" (Terranova 2004, 75). The digital economy is not a new type of economic system, but merely the acknowledgement that digital media – new media – are becoming seamlessly and irreparably integrated into the workings of political, social and economic systems. In other words, the digital economy is merely another aspect of the politics of life itself, with its credo of molecularization, pastoral care, and quasi-compulsory media literacy. The biopolitical fiction of the techno-somatic citizen is an instrument and raw matter for both biopolitical techniques that govern the politics of life itself, as well as the postindustrial capitalist system.

In her detailed exploration of the politics what she calls the network culture, Tiziana Terranova coined the notion of 'free labour' in order to describe the way in which the notion of labour has shifted in the context of digital technologies, particularly the Internet. She argues that free labour reflects the "the tendency of users to become actively involved in the production of content and software for the Internet" (Terranova 2004, 4). In the context of Internet use, it is no longer possible to draw rigid boundaries between producers and consumers. The example of the fan, discussed in the previous chapter, exemplifies the way in which the consumer of media often becomes a producer as well – of other media, of value or of affective flows. For Terranova, the free labour of media users constitutes a crucial yet often unacknowledged source of value in advanced capitalist societies (Ibid. 73). However, this does not mean that the media user becomes the postindustrial reiteration of the oppressed Marxist worker, nor that digital technologies and their networked culture, with their virtually unlimited potential for information sharing and transgression of space and time, can disable capitalism from within[104]. Terranova stresses that the reconfiguration of the boundaries between production and consumption, cultural expression and labour, demands its own analytical framework because it is the hallmark of a postindustrial, networked, technologized capitalism that is specific to the contemporary era.

[104] Like the early cyberutopian theorists of the early 90's, who believed that the Internet will lead to a reconfiguration and implosion of the social – of class, gender, race, sexuality – some political theorists in the 90's also viewed new media through a utopian lens, believing that the economy of the Internet is based on 'gift relations' instead of an exchange of commodities for money, which would ultimately lead to a process of overcoming capitalism from the inside (Terranova 2004, 77).

For Terranova, free labour is a compromise between the "cultural and affective desire for creative production" (77), which is one of the defining traits of the techno-somatic individual and her position within the biopolitical system (as seen in Chapter 1), and the current capitalist emphasis on knowledge as an added value (Ibid.). I would argue that knowledge itself it less important than the ability to juggle and manipulate information, as seen in the case of the Google Glass addict whose addiction was jumpstarted by a desire to be more productive at his job by augmenting his information-processing skills with the help of the device. Media technologies, or rather, the flows of capital that weave around them, compete for the fleeting attention of the audience (Terranova 2004, 128).

From the point of view of media technology as a capitalist enterprise, the user is little more than an instrument for the production of value. In this view, neither the Google Glass addict nor Sarang's parents possess full agency in their media usage, but are rather entrained into the movement of value and affect between bodies, technologies and intertwining systems of exchange, production, biopower. More than that, as seen in the previous chapter, this process of instrumentalization at the same time inflects or reaffirms norms of gender, race, sexuality, and uses them as fuel for the emergence of more complex technological configurations. The case of telegraphists and human calculators shows the way in which norms of gender shifted in order to accommodate women's lucrative inclusion into the public space of the work market, while also relying on a set of female stereotypes allowed them to justify the erasure of women from the history of these fields due to their innate female unsuitability to the domains of technics.

The next section will address the notion of the attention economy and its entanglement with not only the use of media technologies, but the wider context of the life (of a proper techno-somatic individual) within the intensely digital and networked nature of Western postindustrial capitalism.

2. Excursus: Attention and the attention economy

The term attention comes from the Latin verb attendo, attendere: to attend to; to direct something towards something else. One of the original meanings of attendo was to stretch a bow when aiming at a target – an act that demands flexing muscles, coordinating the movements of one's limbs just so, fixing the gaze on the target, but also requires opening oneself to the environment: sensing the direction and speed of the wind, estimating the incline of the terrain, being in tune with one's surroundings. Attention is sensory, but goes

beyond the body of the individual holding the bow and the arrow. In Alaimo's terms, attention was a transcorporeal yielding of the subject to its environment, thus creating and living through an entanglement that blurred the boundaries of humanity and nonhumanity. The current lay definition of attention as a mental capacity for concentration cannot express the complexity of the assemblages and tangled bonds that emerged through one's attending to the bow and arrow, for example. Instead of an embodied process of annexing into the environment, the attention that is not deployed adequately in the case of Sarang's parents and the Google Glass addict is an attention that isolates its subject and object from the outside, creating a unilateral an ethical responsibility between the two. Sarangs' parents paid attention to their game and on earning money to support themselves, which left their child outside of their attentional sphere. The Google Glass addict, paid too much attention on augmenting his job performance, to the exclusion of attention to the demands of proper, healthy, neurotypical techno-somatic citizenship.

This section is a necessary digression on the topic of attention, which heretofore has been mentioned and alluded to several times. Attention, as argued by Tiziana Terranova and many others, is a key recurring theme in discussions of the contemporary 'digital economy' as well as in the politics of digital media (Terranova 2012, 1). Attention is indeed part of the conversation about improper forms of intimacy, whether this intimacy is posed in terms of addiction or other pathologized conditions. As seen in Chapter 3, media theorists like Katherine Hayles argued that the management of attention is part of the regulation of embodied cognitive capacities that arise within the process of media use. Attention is therefore eminently biopolitical, and its theorizations and deployment in popular discourse should be examined through the lens of techno-somatic citizenship. Attention has been theorized by psychologists, cognitive scientists and philosophers, and their insights are imprinted onto contemporary popular discourse on attention as well, and chiefly onto discussions on deficits of attention. Attention Deficit Hyperactive Disorder[105] (ADHD) is one of the most prominent culminations of the pathologization of faulty attention, and are often connected to the prevalence of media use in contemporary Western cultures (Nikkelen et al. 2014). Because their connection to media use, attention deficit disorders are irremediably

[105] According to DSM-5, ADHD is a "neurodevelopmental disorder defined by impairing levels of inattention, disorganization, and/or hyperactivity-impulsivity. Inattention and disorganization entail inability to stay on task, seeming not to listen, and losing materials, at levels that are inconsistent with age or developmental level. Hyperactivity-impulsivity entails overactivity, fidgeting, inability to stay seated, intruding into other people's activities, and inability to wait—symptoms that are excessive for age or developmental level." (American Psychiatric Association 2013, 32). ADHD cannot be cured, but can be successfully managed.

enmeshed into the discourse on improper intimacies with media. While the exact link between ADHD and media use has been found to be inconsistent, many popular news outlets partake in the notion that media technologies cause or worsen ADHD[106]. News articles with titles such as "Is the Internet giving us all ADHD?" (Dewey 2015), foster a sense of direct causation between media use and attention disorders, and touch upon other longstanding anxieties about media as well. As seen in Chapter 1, media addiction takes the form of an anxiety over improper intimacies with media. Although these anxieties sometimes take the shape of a somewhat vague distress over new forms of sociality (Turkle), sometimes they are pinned down to specific biological, neurological or psychological symptoms (Carr, and to some extent Stiegler's recent work). Attention is one such specific phenomenon onto which media-related anxieties can be projected.

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Theorizing attention

This section will examine prevalent theorizations of attention in order to gauge the way in which the politics of life itself deploys them in the case of the government of media use. The place of attention in the dynamics of media use and capitalist reformulations is important to understand because the notion of attention is that aspect of media use that cuts across both the biopoliticization of media use (through the medicalization of media addiction and various media-related disorders of attention), as well as the commodification of attention within the digital economy. What follows is an attempt to located the place of attention theoretically, and to put together a working definition of it that can contribute to a fuller understanding of media use in contemporary postindustrial capitalism.

In one of the earliest Enlightenment treatises on attention, the 17th century French philosopher Nicolas Malebranche noted that humans cannot have direct access to the world itself, but only to ideas about the world through various mental representations. Attention was a way of making sense of these ideas, of making them a purer distillation of the real, "an act of will whereby one desires that an object be present to the mind with greater clarity and vividness . . . a "natural prayer" for a clearer and more vivid apprehension of an object that one already apprehends at least in an abstract way" (in Kremer 2002, 204). And so, since its earliest theorizations, attention has been linked to consciousness and experience, but more

[106] See Alderman (2010), Vitelli (2014), Main (2010), iKeepsafe.org (2016), Dewey (2015).

interestingly, with desire. It is the desire for the knowledge of an object, for intimacy with that object that, prompts the deployment of attention, for Malebranche.

Due to its ambiguity, attention has become a point of contention among those who have attempted to theorize it from a philosophical, cognitive or neuroscientific point of view. Part of this problem seems to stem from the fact that there was never a clear consensus on what kind of phenomenon attention is supposed to denote. Theorists of attention from Locke on[107] have intermittently defined it as mode of thought, a type of perception, a skill, a part of memory, a type of action. Attention, like many other travelling concepts, is fuzzy and several important contemporary works on it seem to embrace this fact. Two main approaches to attention stand out: attention as a subjective, affective experience, and attention as a quantifiable skill which is either biological or socially constructed. The first approach theorizes attention as a 'natural kind' phenomenon - it does not have any kind of quantifiable essence that can be defined and understood through conceptual analysis, but is only observable through the range of processes in which it occurs (Prinz 2011, 8). In other words, attention cannot be defined, but it is possible to look at cases where attention is taking place (Prinz 2012, 91). Scholars such as Michael Posner, one of the most influential researchers in the field of the psychology of attention, claims that attention is not locatable in the brain with perfect precision, but is it a neural organ system, a distributed network whose connections make it possible to examine how attention works. His conclusion is clear: the organ system theory of attention seems to prove that while attention networks are common to everyone, their efficiency is quantifiable and differs from individual to individual (Posner 2012, 27).

Both of these approaches are significant in the context of a biopolitical and economical mobilization of attention in the interest of proper techno-somatic individuality. The two cases of faulty attention mentioned above, Sarang's parents and the Google Glass addict respectively showcase the two ways in which attention can be conceptualized and managed. The medical as well as social discourse deployed in the case of Sarang's parents configures attention as an affective as well as social phenomenon that coalesces in a transcorporeal setting. The couple's improper deployment of attention, which ultimately led to their child's death, was produced through the interferences between their lack of social support, economic factors, the social position of gaming within their social context, as well as their affective attachment to the game itself. The case of the Google Glass addict, on the other hand, implicitly mobilizes attention by drawing on its polar opposite: distraction. The side-

[107] And followed by Berkeley, Dugald Stewart, Alexander Bain, G. F. Stout and William James.

effects of Google Glass use entailed "decreased awareness of physical surroundings, visual interference, binocular rivalry with latent misalignment of eyes and headaches" (Yung et al. 2015, 59). He would lose his "train of thought" (Ibid.) and absent-mindedly tapping at his temple, as if he were using the device. Yung et al. repeatedly emphasise his strong attachment to the device, neglect of other functions necessary for proper performance of techno-somatic individuality. In the conclusion of their research paper, Yung et al. mention that the patient's case was consistent with the research on substance abuse, which shows how people use drugs as coping mechanisms, social motivations and to escape personal deficiencies (Yung et al. 2015, 90).

In the case of both the Google Glass addict and Sarang's parents, failures of attention are linked to failures of re/productivity as well. The Google Glass addict was ultimately unable to fulfil his duties as techno-somatic citizen, and his addiction rendered him unproductive and ultimately in need of the pastoral care and management of the Substance Abuse and Recovery Programme (see Chapter 1). Sarang's parents had to submit themselves to the disciplinary apparatus of biopolitics, but they were still embroiled into a medical, moral and pastoral discourse that mourned their inability to be productive and re-productive members of society. In their case, their child's death is engulfed into the incongruity between economical productivity (the parents' 'gold mining' in order to support the family) and biological and moral reproduction (caring for their child). Attention is irremediably synchronized with productivity.

In a beautifully evocative passage, William James noted that

> everyone knows what attention is. It is the taking possession of the mind in clear and vivid form of one out of what seem several simultaneous objects or trains of thought. Focalization, concentration, of consciousness are of its essence. It implies withdrawal from some things in order to deal effectively with others, and is a condition which has a real opposite in the confused, dazed, scatter-brained state which in French is called distraction, and Zerstreutheit in German. (James 1890, 256).

James also points towards the productive aspect of attention, by pointing out that the act of paying attention entails withdrawal for some things in order to deal 'effectively' with others. Distraction, then, equals a lack of productivity and a failure of the techno-somatic individual – which is something that much discourse on ADHD also seeks to explore and ultimately remedy. Distraction, whether as a moral/intellectual failure or a pathological condition that must be managed through the techniques of the politics of life itself, is against the capitalist ethos of productivity and self-fulfilment through productivity. Lack of attention, then, whether deliberate or accidental, is a lack or failure that must be remedied. But

interestingly, intense attention to one specific instance is not automatically a desired skill for the techno-somatic individual. Sarang's case shows how intense focus on one specific activity can result in inattention to others – with tragic results, this case. That is, paying attention always implies a perceptual lack.[108].

These varied theorizations of the notion of attention point towards an important tension between the understanding of attention as a subjective experience and encounter with the world, and as a necessary component of the biopolitical organization of productivity (and therefore of techno-somatic individuality). The nature of attention, as a concept that is being deployed for various purposes in the discourses of the digital economy, is essentially paradoxical. One the one hand, attention is seen as an intra-action that occurs at the level of the individual's encounter with its milieu – an ecology of attention – , and as such, it is a notion that allows a non-normative conception of subjectivity. On the other hand, attention can be seen as a quantifiable resource/commodity that can be increased or decreased, given or taken away. Interestingly enough, these two chief formulations of attention are both utilized to some extent by the pastoral techniques of the politics of life itself. However, it is the conception of attention as a quantifiable commodity that allows the production of the medicalized discourse of media addiction, and contributes to the ascension of media addiction and improper media intimacies as a biopolitical model of contemporary human-technics relationships.

Economies of attention

This section will examine the dynamics of affect and attention within the digital economy. The attention economy is a term that has gained some earnest foothold in field such as marketing, e-business and its various offshoots, and it has been garnering more and more interest in the humanities as well. In the introduction of a special journal edition on attention, Crogan and Kinsley note that the attention economy expresses the "techno-cultural milieu in which contemporary Western societies operate and in which the 'web-native' generation

[108] This phenomenon has been well documented scientifically. To illustrate: in the case of the animated optical illusion called 'Hinton's lilac chaser' , the observer is presented with a small black cross surrounded by a circle of successively blinking purple dots. When the observer focuses their attention on the black cross for approximately thirty seconds, the purple dots seem to disappear – a phenomenon called the Troxler Effect. Other similar optical illusions are considerably more unsettling. In an experiment conducted in 2010, people were asked to look at their mirror reflections for ten minutes, in a dimly room. Almost all of the subjects reported perceiving a distortion of their facial features, and a considerable number reported seeing "fantastical and monstrous beings" (Caputo 2010, 1007). This is particularly significant, considering that attention has a long-standing association with ideas of truth and authenticity (Descartes linked attention to an epistemology of truth, arguing that only when paying attention can the mind discern pure ideas that do not allow any place for doubt (Mole 2009)).

lives" as well as "the contemporary bio-political reality of the commodification of our cognitive capacities" (Crogan and Kinsley 2012, 1-2). Crogan and Kingsley also note that it is difficult to draw up an exhaustive list of the ways in which the notion of the attention economy is being mobilized contemporarily (Ibid. 4), but that the way in which attention is commodified, regulated and trained is intensely political and occurs within specific social and economic contexts. In the interest of brevity, this section will trace the connections between the attention economy and media use only – and especially the way in which attention is mobilized in the already described cases of media intimacies and addictions. More precisely, I am interested in how attention figures in the discourse on faulty media intimacies and Internet-produced negative neutral shifts that are present in cases such as Turkle's ethics of media use, Carr's neurobiology of digital media use, as well as the cases of the Google Glass Addict and Sarang's parents. I argue that these examples can help stage a critique of the commodity-based notion of the attention economy, and its purported capacity to describe the nature of media use and media production in the contemporary media ecology. Instead of conceptualizing attention as either a commodity or a subjective process, it might be more useful for a critique of media anxiety to reconceptualise attention as an ecology rather than an economy, as argued by Yves Citton. An ecology of attention allows for a less desubjectifying understanding of attention in the case of media use.

The notion of the attention economy is based on the assumption that attention is limited, and therefore a resource/commodity that various institutions and individuals are competing for. The attention economy, then, is a way of codifying the increasing demands on user's attention within the context of the contemporary media technical context. When these demands are not met accordingly, the result is a 'crisis of attentiveness' – a shift in attentional modes and processes that the pastoral techniques of biopolitics are not yet able to grasp. In his book on the visual culture of the 19th century, theorist Jonathan Crary describes one such crisis of attention was entailed by the technological and economic effects of modernity (Crary 2001). The following section lays out some of the assumptions and implications of the use of the attention economy in order to understand the relation between bodies, media, postindustrial capitalism and the politics of life itself

The digital has been associated with attention and disorders thereof since the 90's, the heyday of the Internet's expansion and popularization on a global scale. The work of Michael Goldhaber, a theoretical physicist and theoretician of attention, has had a lasting and visible impact on the way in which the digital economy and the economy of attention have been mobilized and utilized by business, marketing and advertising specialists, and even software

developers. Goldhaber linked the 'cyberspace' with attention as early as 1997, when he argued that attention constitutes the "new natural economy" of cyberspace: the Internet made it so that information is virtually infinite, therefore attention is the scarce resource that allows the new media-pervaded economy to function (Goldhaber 1997). Goldhaber saw attention as a limited resource spread thin in the ever-expanding media landscape of the late 90's, and envisaged it as the drive that would sustain entire economic structures. Economy, for Goldhaber, was no longer simply economy – it was an attention economy. In Goldhaber's framework, media technologies would be engaged in a ceaseless competition for the most amount of attention that users could provide. By this logic, attention was something that the user could either provide or not – it was a quantifiable, limited resource, as well as a rational and conscious activity that the user decides to pursue.

The attention economy, as a codification of attention, must therefore be seen on the background of prevalent discourses on digitality as its technological context. However, an attention economy has been forming before the advent of new media. In his analysis of role of attention in the Western culture of the century, Jonathan Crary argues that the industrialization of visual culture prompted new modes of attentive norms and practices, which in turn lead to a shift in modes of subjectivity (2000, 2). One of his main theses is that there is a paradox between "an imperative of a concentrated attentiveness within the disciplinary organization of labour, education, and mass consumption and an ideal of sustained attentiveness as a constitutive element of a creative and free subjectivity" (Ibid.). Jonathan Beller, in his work on visual media and capitalism, comes up with a similar argument but takes his analysis one step further: the changing landscape of attentive norms embedded into visual culture are part of the developmental logic of capital, and thus "its attendant attentional productivity sustains the perpetuation of extant gendered, nationalized, waged, and enslaved labour" (2006, 4)[109]. The work of these two key scholars of attention shows that there has been a continued and sustained connection between attention, media, and capitalist systems since modernity. They also show through case studies and anecdotes

[109] One of the central premises of works such as Crary's and Beller's seems to be that the most powerful model of the attention process is expressed through a visual interface orienting the sight of the human subject, most commonly through the techniques of the spectacle, is how attentional regimes are performed; that is, media technologies, from cinema to television or print, use the gaze in order to shape the ways in which attention is deployed. The eyes are the windows through which attention flows and is mobilized by various institutional apparatuses. As an example, cinematic techniques produce and then capture attention through the transmission of affect, and shape subsequent deployments of attention by 'training the eye' to participate in biopolitically ordered discourses of racialization, gendering, sexualization. Laura Mulvey's work on the male gaze also exemplifies this phenomenon, in which visual attention is enmeshed in the production of, in her case, gendered and racialized bodies.

that attention is most decidedly a shifting concept that is under the sway of whichever norms of productivity happen to govern media use and production at the time. That is to say, the construction of attention is under the jurisdiction of the logic of the capital. However, that does not mean that attention as a neurophysiological or affective phenomenon can be entirely grasped by either capital or biopolitical techniques of management.

According to Tiziana Terranova, the current iteration of the attention economy is also its first and original iteration; historically, the contemporary attention economy is the first of its kind. In her view, the capitalist model of attention economy emerged at the same time as digital media. The larval form of the attention economy seemed less harsh and demanding - its main target was information, which was plentiful in the early stages of the development of the Internet and other digital communication networks (Terranova 2009, 1). It seems that early digital economy was infused with a tacit kind of vitalism: information was seen as an artificial form of life, prone to proliferation. Digital media were thought to produce at the time (in the late 80s and early 90s) a new type of bios, a cybernetic ecosystem that followed a Darwinian trajectory of natural selection and evolution. The shift to a scarcity-oriented economy of attention put an end to this creative energy, leaving in its stead a "tension between the previous, abundant, inventive bios of organic life and the new centrality accorded to the bios of a special organ, the brain, but one that is strangely deprived of its capacity for creation and innovation" (Ibid., 2). The brain whose attention is syphoned off within the attention economy does not need to be a creative brain., and it belongs to an intellectual proletariat whose means of production are by no means their own. Scarcity is the keyword of the emerging attention economy, and attention, in 'developed' countries, tends to be especially scarce, argues N. Katherine Hayles: "the sheer onslaught of information has created a situation in which the limiting factor is human attention. There is simply too much to attend to, and too little time to do it" (Hayles, 2012: 12).

Regardless of its theoretical conception and political and economic deployment, attention is a point on which several issues hinge: the relation between the individual body and the social body, the techno-somatic citizen's care of the self, and the continuous restructuring of the co-constitutive relationship between the human and media technics. One of the most salient ways in which these issues are contemporarily being discussed is through a discourse of immunity/contagion, which operates simultaneously as a metaphor for the analogies between biological and technological functions, and as a social and political practice. However, it seems like the biopolitical management of attentive bodies can hardly be disentangled from a discourse of commodity consumption and production. As Crogan and

Kinsley pointed out, "the subsuming of the general intellect into the protocols of capital is thus the subsumption of humanity" (2012, 9) – an idea that is congruent with the capitalist instrumentalization of the techno-somatic individual through cognitive labour, and also, as seen in Chapter 1, with Foucault's argument that capitalism uses the populations as a machine for the production of wealth, goods, individuals (2001, 1012).

The attention economy is valuable concept in that it makes an important connection between the ecology of contemporary media technologies, and the user's capacity to engage with them. Yet, the framing of the media-human engagement in terms of an attention that is limited, quantifiable and acts as a resource or commodity in an economic sense is entirely at odds with media's transcorporeal and technogenetic nature (see Chapter 3). Attention, as seen by Goldhaber and other theorists of the attention economy, is not possible in the context of an entangled and intra-active media ecology. However, the concept of attention itself is impossible to abandon, due to its rootedness into both medical and economic discourses of media use and more. Attention is a biopolitical category that structures and regulates the economic aspect of techno-somatic individuality, and therefore might require critique and reformulation in order to avoid being a repressive, rather than productive and liberatory technique of the politics of life itself.

As a starting point for such an intervention, it would be possible to reconceptualise the attention economy as an ecology of attention instead, without constraining it to a commodity-consumption model that sets strict boundaries on how attention can be used, and how it is valued. One alternative is to reconceive attention as relational, transcorporeal: extending across the body and its milieu. I do not claim that such a reorganization of attention should be implemented in all areas of lived experience where attention and its theorizations have some stake. However, in the particular case of improper media intimacies, a reframing of attention might also lead towards an alternative understanding of medical categories such as media addiction as well.

3. Ecologies of attention and media milieus

The previous section has started to stage a short critique of the attention economy by pointing out the ways in which it is incompatible with a transcorporeal conception of media. The notion of the attention economy, through its reliance on a post-Marxist analysis of attention as a limited resource, with technology users acting as sources of labour, as resource and as commodity, cannot accommodate the vast array of embodiments and modes of living

that arise from the conjunction of human and technology. Bernard Stiegler, in one of his more recent works, also positions himself against the uncritical adoption of the attention economy as a descriptor of our relationships (existing or ideal) with media technologies. Stiegler's *Taking Care of Youth and the Generations* (2010), while not explicitly concerned with techno-human ontologies, builds upon his previous project laid out in *Technics and Time I* and seeks to understand the practical implications of media-human relationships in the context of a non-individualized, processual and co-constitutive understanding of technics and humanity. In this implicit Stieglerian ontology, attention (just like other aspects of embodiment, such as gender, as seen in Chapter 4) is a co-constitution of, and with technics. Attention is the unfinished relational outcome of a media-infused environment.

The relationality of attention can be read across many discursive formations and in a diversity of contexts, but one of its most powerful manifestation occurs in intensely technical environments. In a short but very influential article from 2007, Katherine Hayles argues that we have to adjust our understanding of attention in the contemporary networked and mediated environments. She noticed a shift in attentional processes that occurred side by side with the digital economy, of which it is co-constitutive. Whereas the prevalent mode of engagement with media in the past was 'deep attention', today's attentional forms are those of 'hyper-attention'. Deep attention, which occurs for example when someone is intensely focused on reading a paperback book, implies "concentrating on a single object for long periods . . . ignoring outside stimuli while so engaged, preferring a single information stream, and having a high tolerance for long focus times" (2007, 187). Hyper attention[110], on the other hand, is the attentional mode demanded by the multitude of the digital economy: "switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom" (Ibid.). Hayles acknowledges that both attentional modes have their uses and failings, and she frames them as adaptations to one's environment. She even goes so far as to say that evolutionarily speaking, hyper attention is the 'natural' attentional mode of a living being that must be able to distribute its attention to multiple potential threats within its environment. Deep attention is

[110] Hayles provides two examples to bolster her theory of deep versus hyper attention: a college student immersed in a book, and her younger sibling playing a video game. Deep attention is the one that is manifested when someone reads a novel, while hyper attention is deployed in one's interaction with digital, networked media. While I do not disagree with Hayles' theoretical findings, I disagree with her example – video games, as seen in the example of Love Child, the countless published anecdotes by self-confessed gaming addicts, and many scientific papers on gaming addiction show that playing videogames, whether they are online or not, requires a deep investment into the process that equals Hayles' deep attention. Rather, hyper attention is a way of coping with the sheer multitude of overlapping media forms that infuse the environment.

a luxury afforded by a secure environment, and is seen as a hallmark of 'developed' societies. Hayles argues that deep attention has become the norm educational settings, while hyper attention is seen as its improper, failed double (2007, 188). The generational aspect of this cognitive division lies in the brain's plasticity[111]; as Hayles argues, "Children growing up in media-rich environments literally have brains wired differently from those of people who did not come to maturity under that condition" (2007, 192).

In the conclusion of her essay, Hayles touches upon the biopolitical implication of these two distinct modes of cognition as well as their hierarchical organization through educational institutions. She emphasises the need to embrace the diversity of attentional modes and accept them as a co-evolution with the environment, rather than privileging one over the other, which results in the often needless construction of various medical categories for each 'disorder' of attention. Although she does not explicitly mention technogenesis (which she coined in her later work *How We Think*), we can ascribe deep attention and hyper attention to a technogenetic process that is embodied, but also "extends beyond the body's boundaries in ways that challenge our ability to say where or even if cognitive networks end" (Hayles 2012, 17).

This section will examine the possibility of an ecology of attention that is open ended and transcorporeal, allowing some leeway for the techno-somatic individual to forge intimacies with media technologies without them being deemed improper and subjected to the regulatory gaze of biopolitical techniques, whether pastoral or disciplinary. I will explore the techno-somatic individual's relation to the media ecology in which it is situated, and argue that the disciplining and regulation of improper media intimacies occurs because of a deep attentional engagement with an improper object. While hyper attention is indeed seen as an inferior cognitive mode in certain settings, it is seen as the norm in the case of engagement with new media. Instead, the biopolitical concern that crystallizes the category of media addiction occurs when deep attention and hyper attention overlap – when one's deep attentional intimacy with media, and the hyper attention that the media demands become inseparable. Relational attention

Swiss philosopher Yves Citton is one of the foremost critics of the attention economy and one of the first scholars to propose his version of an ecology of attention instead. Citton's

[111] Neuroplasticity is the phenomenon through which "the brain continues to reorganize itself by forming new neural connections throughout life" (Liou 2010). Neural pathways that are used more often than others become stronger and inactive neural pathways are able to take over functions from neural pathways that have been damaged or lost. Neuroplasticity was discovered in the mid-20th century, and contrasts with the earlier belief that the brain was plastic only in early childhood and remains relatively unchanged afterwards.

work[112], like that of Hayles, focuses on trying to understand the mutations in the nature of attention that occurred in postindustrial capitalism, as well as on our attempts to understand these mutations, and mobilize them. Citton fully acknowledges the need to attend to attention in the contemporary digital economy, but argues that it is not wise to uncritically throw attention into a rigid economic formalism that would turn the capture and commodification of attention into an exact science (2014, 23). However, it must be kept in mind that "attention is the most crucial resource of our times. We cannot reorient ourselves towards it unless we try to improve our understanding of the stakes of its circulation, its capture and its power"[113] (Ibid. 28). An ecology of attention would entail retaining attention as an important axis of analysis, while also broadening its confines.

The first thing to do, according to Citton, is to unmake the subject/object division that governs most definitions of attention. Instead of understanding attention as something experienced or directed by the human brain as a subject towards an thing or problem as its object (Ibid. 36), but rather as a collective and relational endeavour. Attention, for Citton, must be seen as "collective attentional regimes through which we are directed to perceive our world"[114] (Ibid. 39). The attentional regimes that Citton speaks of take the shape of an ecology of attention, within which subjectivity is continuously constructed and re-constructed in relation to the object of attention through minute affective and cognitive resonances (Ibid. 40). Most importantly, attention is a form of relationality:

> [attention] is the vital mediator that maintains our relationship to our milieu and fuels our survival; a being cannot keep existing unless it manages to 'pay attention' to that which its form of life depends on. The being must attend to that which allows it to live, it must 'attend' in order to care for itself. The process of paying attention is prior to all other actions; it involves the weaving together of one's observations and gestures that are necessary in order to maintain sustainable relations with our milieu[115]. (Citton 2014, 45-46)

[112] The original French title of the book is *Pour une Écologie de l'Attention* (2014). The English translation will be released in December 2016 by Polity Press. All of the following quotes from the book are my own translation, and not from the official forthcoming English edition.

[113] "L'attention est bien la resource cruciale de notre époque. Nous ne pourrons nous y réorienter qu'en tentant de mieux comprendre les enjeux de sa circulation, de sa capture, de ses pouvoirs."

[114] "Régimes attentionnels collectifs à travers lesquels nous sommes conduits à percevoir notre monde"

[115] "Elle constitue le médiateur essentiel en charge d'assurer ma relation à 1' environnement qui alimente ma survie : un être ne peut persister dans l'existence que dans la mesure où il parvient à « faire attention » à ce dont dépend la reproduction de sa forme de vie. Il doit «veiller à» (to attend to, beachten) ce qui lui permet de vivre, il doit s'en soucier pour pouvoir en prendre soin (care). C'est une véritable activité - préalable de toute forme d'action ultérieure - que de faire attention : cela implique de tisser ses observations et ses gestes en respectant le degré de tension propre à entretenir des relations soutenables avec notre milieu."

It is important to note that Citton emphasises the ethics of care that are implied in the act of paying attention. Attention is a process of becoming intimate – whether with an specific object, an activity, thought, parts of one's milieu. Moreover, this act of intimacy is one that is actively embroiled in the construction of the milieu itself. To return to Karen Barad's notion of intra-activity (further explored in Chapter 3), attention is an intra-active process that co-dependently *produces* both the object and the subject. Citton's reading of attention also entails the same kind of reconceptualization of agency that is prescribed by Alaimo's transcorporeality and Hayles' technogenesis: instead of the self-governing and rational individual who directs or retrieves her attention based on a rational decision, we have an individual within a milieu, whose attention is born in the background of a collective of knowledge, social codes, affective fluxes and shared discourse (Citton 2014, 63). Such an attentional ecology encompasses both deep attention and hyper attention as attentional modes that are not morally or politically hierarchical, and by no means in binary opposition to one another. Moreover, an ecological conception of attention would allow for the possibility of deep attention and hyper attention to coexist even in relation to the same media - such as Hayles' example of the video game, which can be understood both in terms of deep and hyper attention.

Such a rearticulation of the phenomenon of attention in the guise of a relational ecology has profound implications over our consideration of new media use. The case of improper online video game play is able to showcase the possibility of reconfiguring attention in an ecological way. The Google Glass, for example, engages its users into an ecology that stretches well beyond the device itself. The developers of the Google Glass call the device an "extension of the self" (Starner 2013, 14), harkening back to Marshall McLuhan's prophecies from several decades ago. The Glass allows its user to become more productive by fragmenting and distributing attention – in other words, by increasing one's capacity for hyper attention. As Thad Starner, one of the Glass's developers noted, the intention behind the device was to create a tool that would allow the user to extend herself beyond the limitations of deep attention. Starner recalls that the inconvenience of forced deep attention was one of the driving forces of the Glass:

> During face-to-face meetings with a colleague or student, I could refer to my calendar and personal notes quickly enough to avoid interrupting the flow of conversation. However, if I needed some information during a brainstorming session, searching for it on AltaVista required me to pause and interrupt the conversation completely. I had to focus on the screen, page through 14 different hits until I found a likely link, click on the link, and then scan through the page searching for what I wanted, succeeding only about

> half of the time. The time between intention and action was so long that I gave up doing Web searches during a conversation unless the information was absolutely critical. (Starner 2013, 14)

The Google Glass, in its developers' view, allows the user to minimize the attention that needs to be devoted to certain tasks, thus maximizing productivity. In the words of its developers, the device was created in order to fit into a classic economy of attention, in which one's attention is a precious resource that must not be squandered, but carefully allocated to where it is most valued. But at the same time, the Glass was also designed with an ecosystem of media in mind, by extending the user's capacities beyond the limits of the body. In the case of the Google Glass addict, the extension was seen as the root of an addiction, and improper intimacy with the device which ultimately limited rather than improved the techno-somatic individual's capacities to attend to its mode of living. The addiction to technical media presents a curious and rather contradictory superposition of deep attention and hyper attention. Addiction itself, a form of intimacy, is characterized through deep attention to a specific object, substance or process, to the exclusion of much of everything else. In the case of media addiction, the type of attention that is rightfully demanded by the media object (according to Hayles, Stiegler and Citton) is hyper attention. And yet, the fragmented, switching and multiple hyper attention is being encompassed by an overarching intimate relationality akin to deep attention, with its commitment, focus and affective entanglement.

The fundamental tension between deep attention and hyper attention that occurs in the case of new media use can be seen in critiques of various forms of media intimacy. In the case of a research article titled "Google Glass: A Driver Distraction Cure or Cause?" (2014), the authors intended to come up with a definite answer to whether the wearing of the Glass during driving would act as an additional burden on attention, or would actually reduce the driver's proneness towards distraction while driving. They conclude that

> Google Glass–delivered messaging moderates, but does not eliminate, distractive cognitive demands during driving. Specifically, although Google Glass–using drivers demonstrated better recovery from an unexpected event, the device's use did not lead to improved response to the event itself. Benefits may be offset by a passive cost to drivers in merely wearing the device. Technology can do much more than introduce distraction. Google Glass contains sensors that have potential to estimate driver attention and fatigue to provide valuable corrective feedback. (Sawyer et al. 2014, 1319)

These conclusions, are certainly interesting in the context of the anxiety-ridden discourse of the attention economy (see Carr 2010); however, it is even more important to note that studies such as these function on the assumption of an already existing tension between deep and hyper attention. As Hayles pointed out in her influential work on attention,

deep attention is the privileged attentional form of our times, an argument that she bolsters with the example of ADHD, which she sees as partly a sign of the crisis of attentional modes. As techno-somatic individuals shift towards hyper attention in order to fit within their co-constructed technical milieu, "compensatory tactics are employed to retain the benefits of deep attention through the artificial means of chemical intervention in cortical functioning" (Hayles 2012, 192). Hayles does not see this intervention as entirely unjustified: she argues that deep attention, developed as an adaptation to our cultural and social milieus over the course of millennia, is a "previous social achievement" and "a heritage we cannot afford to lose" (Ibid. 99), but one that must irrevocably coexist with the hyper attention that has emerged as a response to the demands of the politics of life itself and contemporary global capitalism and its drive towards the "continuous rearranging and repurposing of objects and people" (Ibid. 101). In order to successfully critique the biopolitics of media addiction, then, it is imperative to recognize the tension between the attentional modes that occur in the contemporary media ecology, as well as the way in which these attentional modes are enlisted into the techniques of production of the proper techno-somatic individual.

Conclusion

Previous chapters have shown how media addiction as a biopolitical category is constructed in dialogue with a historically situated set of discourses inhumanity, originary technicity and gender. This biopolitics of media use and its concern with the control and construction of the techno-somatic individual has an economic dimension as well, as argued by Foucault (2008), and discussed more thoroughly in Chapter 1. This chapter has sought to address the economic dimension of media intimacies by examining the way in which the techno-somatic individual's engagement with media is being simultaneously managed and monetized via the notion of attention. Throughout this work I sought to show how the techno-somatic individual, as a continually produced and always-under-construction biopolitical category, always leaves room for self-creation and agency through mutual embeddedness into one's environment. Media intimacy, as one of the potential dimensions of the techno-somatic individual which allows for alternative conceptions of intimacy itself, and possibly of gender and sexuality, was shown in this chapter to hinge on a refiguration of the economic and political category of attention. Media intimacy, then, as an alternative to media addiction, can be achieved by replacing the structures of attention economy with an ecology of attention

instead – a system that is germane to mode of thinking based on relationalities, ecologies, affinities, intimacies rather than a simple opposition between productivity and unproductivity.

In the first section sought to position the techno-somatic individual within the complexities of the digital age. The term digital age itself, in all its vagueness, heralds and demands a re-examination of the relationship between the expansion of new media through the fabrics of social, political and economic life, and the biopolitical expectations that hang on the continuous production of a techno-somatic individual that sustains the best interests of the species. I argued that in the contemporary media ecology, the 'proper' techno-somatic individuality is one that entails the instrumentalization of the human by the politics of life itself and the mechanisms of postindustrial capitalism, by erasing the difference between labour and commodity, production and consumption. The techno-somatic individual is inevitably a media user – and her media use is forcibly a tense and volatile middle ground between productivity and unproductivity, authentic humanity and a synthetic and improper intimacy with nonhuman media. In the digital age, and in its even more explicitly confining alter-ego, the 'attention economy', the techno-somatic individual's media use is inevitably entangled with its biopolitical productivity and reproductivity. The media addict is borne out of these overlapping tensions.

Section two shows how, through the notion of the attention economy, attention becomes one of the contemporary formulations given to the biopolitical constitution of human-media relationships. The attention economy, a conceptual model of attention as a quantifiable resource, has not only veritable financial and economic effects, but also biopolitical implications through its normativization of the way in which individuals' attention is being deployed. As pointed out by its critics such as Yves Citton and Katherine Hayles, such a model of attention and implicitly of media use leads towards rigid, unhelpful and often possibly unethical social and medical results. In the attention economy, attention is straddling the boundary between labour and commodity, and is the acceptable, 'proper' iteration of human-media entanglement, but it also exists in a fragile equilibrium that is easily overturned not only into distraction, addiction or obsession. By focusing the biopolitical discourse of media use on attention, it is possible to gloss over the instable and inhuman nature of media that is ingrained into contemporary and past media discourse, ensuring that it is an unavoidable and imperative component of the contemporary capitalist politics of life itself.

The last section takes up Citton's proposal of framing attention as an ecology rather than an economy. Rather than a quantifiable resource, attention to media can be read as a

relation that intertwines the user, media and milieu, and allows us to think the techno-somatic individual not as a passive resource to be sapped and managed, but an active participant in an encounter modulated by affect, desire and agency. This relational, transcorporeal and intra-active refiguration of the relationship between media and users is consistent with the ontoepistemological reading of media technology as technogenetic processes of intimacy with an inhuman other, and thus allows us to make the first few steps towards an ethical and political intervention into the problem of media addiction.

Conclusion

> So technology was always inscribed in nature, and nature controlled this difference. Technology played its role within the metaphysical frame of a teleology of nature, or what we might call occidental teleology. What happened in the 20th century is that there occurred a certain re-evaluation of the difference of techniques and nature, and now the side of technology starts to control the other side of the equation. That's a really interesting historical move; this is the technological destruction of occidental teleology and I think the whole nature/technology difference—the whole struggle with this difference we're experiencing under the title of non-modernity—has to do with the re-evaluation of this difference, and within this difference.
>
> (Erich Hörl 2016)

Over the past year, the Internet has been flush with news about Internet addiction: internet use, texting, gaming and social media contributes to school burnout in Finnish children and teenagers (Healthcorps 2016); the economic crisis is driving Greek people towards Internet addiction, drugs and gambling (Chrysopoulos 2016), over half of Portuguese are at risk of Internet addiction (PortugalPress 2016) sundry media outlets wistfully pose variations on the seemingly unanswerable question "is Internet addiction real?" (Commonsense Media 2016; Tsukayama 2016; Serenity Now 2016). Throughout its history of several decades, the symptomatology of Internet addiction has always included heavy psycho-somatic effects: it made its victims irritable, depressed and anxious (Young 1998), which was in turn correlated with "abnormalities in the dopaminergic system [and] increased sympathetic nervous activity" (Reed et al. 2015, 2). In late 2015, a study conducted by researchers at the Swansea University came up with a set of conclusions that grounded Internet addiction even deeper into a visibly embodied somatic arena. According to the study, problematic media use can be correlated with deficiencies in the body's immune system, even though no causal relation between the two could be established yet (Reed et al. 2015, 12). While the study certainly pointed out some interest links between the self-reporting of problematic media use and the self-reporting of a greater number of symptoms associated with decreased immune system function (Ibid. 13), it would be inaccurate to claim that media make their users sick. And yet, various news outlets, as well as a short film created by the researchers themselves asserted that "it does not seem to matter what you use it for, if you use the Internet too much, you are more susceptible to illness" (Hooson 2015).

This type of enthusiastic espousal of the discourse on media technology as a potential source of social, economic and bodily ills is not isolated to the Internet in particular, or even digital technologies in general. Media technology, when stripped down to its essences, is often and extensively understood in Western thought as capable and likely to inject the possibility of improper life into an embodiment whose wellbeing has direct bearing on a larger social, political and biological paradigm. I attempted to show that the threat of media technologies is deeply embedded into Western thought, and that its noxiousness is often expressed through the looming presence of the *in*human – a presence that goes beyond the binary of the human and nonhuman, and threatens to mutate both of them . This inhumanity, characterized through a radical distancing from the category of the human, can take the form of a vision of technology as a Master that dictates the nature and purpose of human existence (as in Heidegger and Jacques Ellul), as a different form of existence governed by its own intrinsic and unfathomable logic (Kittler, and to some extent Stiegler). At the same time, inhumanity can equally be expressed by positioning technics prosthetic tools with insidious influence over their users (as in Marshall McLuhan). In yet other cases, media's inhumanity is metaphorically poured into distinctly human-like shapes: haunted TV sets, telegraphs that contact the dead, the monster who is virally transmitted through media channels. Media technologies, simply put, are always in possession of a trigger that transfigures them from meaningful, useful inhabitants of the technosphere, and into destructive forces that threaten to extinguish a distinctly human essence: that of untouched, unmediated biological, affective and political life, a life that wills itself to be differentiated (sexed, gendered, raced) and performed without outside intervention.

As mentioned in the introduction, this work labours under the auspices of Karen Barad's theory of agential realism, and particularly relies on her notion of intra-action, the way in which things, thoughts, matter, ideas, categories always emerge within intra-active phenomena. All of these categories configurations are the products of the agential cuts that we make; they never exist independently of one another. In this vein, this dissertation is an exploration how certain things in our technosphere (and even the technosphere itself) bring each other into existence, sometimes fleetingly and at others with more lasting effects. I focused on the intra-activity of humans and media, and the various phenomena that stratify around them, grouped under the label of media addiction.

The media addict as biopolitical figure

The first task undertaken by this work was to gather a coherent collection of theoretical tools that would allow me to view the technology user, both as an individual subject and as a member of a wider social assemblage, in relation to its biological status as a living embodiment, as well as in relation to media technology. Thus I arrived at the figuration of the techno-somatic individual, who lies at the crossroads between the biopolitics of wholesome human re/productivity, self-management and desires that must be harnessed through pastoral techniques, and the media theoretical 'origin' stories that posit the nonexistence of humanity as such, but only of humanity in relation to technics. The primary topic of this work is precisely this humanity constituted through technics, and the regulations of its desires towards technics. The media addict, then, is the expression of both a fear of media, as well as a fear of a humanity that (r)evolves alongside of media. It is also an opening towards rethinking the twin subject-object binaries that reside within the coding of media use (technology as master, or technology as slave), and the agency of the media user within the media-human coupling.

In the contemporary context of the technosphere, the media addict coalesces as a significant and powerful expression of past and present anxieties about media. Our current media addictions revolve around the twin domains of the networked and the digital, but they are rooted into layers and layers of discourse on the ontology of media technologies. I sifted through some of the most relevant and prevalently echoed points in the thought of Heidegger, McLuhan, and Kittler in order to trace the imprints that their vision has left on contemporary discourse on media addiction. These small media-archaeological acts were necessary in order to pick apart media addiction and eventually reassemble it in such a way that would partly mitigate the pressures and tensions caused by its biopoliticized status. Although McLuhan and Stiegler are known for their rich contributions to the theory and philosophy of media, their work proved to be a fruitful source of thought about the life of humanity as species, of the population as mass, and of the individual as an embodied biological entity. The biopolitics of human-media relationships in Marshall McLuhan's prosthetic media theory, which has had a longstanding effect on contemporary media discourse, is a fascinating and perhaps underexploited avenue for discussion, which was nonetheless beyond the limits of this dissertation. McLuhan's cryptic assertion that "men have always been the sex organs of the technological world" (McLuhan 1994, 220) alludes to a refiguration of biopolitical thought in which the politics of the living mass are augmented with the politics of a quasi-

living and expanding technological mass. Even so, McLuhan and Stiegler's emphasis on the entanglement of the living and the technical, their fundamental difference and inseparability, prompts us to regard media technology not simply as a powerful inhuman influence, but also as a dimension of what Nikolas Rose calls the politics of life itself.

Media addiction, as biopolitical figuration, emerges through the confluence of postindustrial capitalist dogmas of cognitive and material productivity, the often surreptitious but always present cultural coding of technology as intrinsically masculine and divorced from the mundane and unacknowledged techniques that pervade lived experience, and the discursive insistence that technology is an 'other' that is separable from human existence. It is also fraught with congratulatory discourse on technology as a utopian path towards 'civilization' which must be pursued by all techno-somatic citizens in order to maintain their productivity, as well as a looming fear that media technologies would ultimately invade a purely human core, eroding and obscuring not only authentic intimacies and relationalities, but also the biological comfort of the species and its members. That is to say, in order to understand the construct of media addiction, we must attend to all of its dimensions: the impossibility/longing to evade the technosphere, the cognitive-capitalist and pastoral impulse of productivity, and the overarching assumption about which kind of humanity is entitled to inhabit the human-media entanglement. One of the peculiar mechanisms through which media addiction becomes quantifiable, configurable and manageable for the pastoral techniques of biopolitics is the precise management of attention, of the cognitive and affective point of contact between media and user. There is a broader discourse on the disciplining and government of attention, of which media addiction is a small but potent part: the pathologization of inattention in the form of Attention Deficit Hyperactive Disorder, the material-discursive assemblages of advertising, even the ways in which software is written in such a way as to best capture the flow of attention.

The media addict is the distilled form of all human-media entanglements, pushed to their most intense biological, social and economic potentiality, and serving as the biopolitical logic of managing the modes of life made possible through media. It is an exacerbated expression of a technological condition. To return to the evocative example of the Google Glass addict, the mode of life enabled by the device was one whose initial purpose was enhanced productivity (within a capitalist workplace), but ultimately resulted in a affects that were interpreted as bodily and psychological degradation. The Google Glass was seen as something that supplanted traditional intimate connectivities with other humans and the milieu. In its biopolitical systematization, media addiction cannot be interpreted as anything

other than a faulty intimacy, an intimacy that replaces and erodes the subject's potential to maintain proper, productive and reproductive intimacies. The tension between proper and improper media intimacies is put into even sharper relief in the documentary *Love Child*, explored in Chapter 4, where the stakes are not merely the body of the addicted subjects, but rather their incapacity to fulfil the requirements of biological reproductivity (i.e. caring for their child) and economic productivity (earning wages and contributing to the flows of capital through their gold farming[116]). In countries with economic difficulties, the fraught question of productivity and media use gains an even more sinister aura. Bogdan Ghirda, a young Romanian man from the small town of Caracal, described working in a 'virtual sweatshop' based in the US; in a short interview with *The Guardian*'s Tony Thomson, he describes that his job was to level up online multiplayer game avatars which were then sold off to other players (Thompson 2005). His wages were about one US dollar per hour. He considers the addictive nature of his work to be an advantage, because even after his shift ends he still feels like playing. In Bogdan's case, intimacy with media is an adaptive result to the conditions of the technosphere, in which, as mentioned in the Introduction, humans are "subcomponents essential for system function" (Haff 2014, 301). He started his addictive work at the virtual sweatshop because "the money [he makes] here . . . is around the same that [he] made in the bar but this is much better" (Thompson 2005). The user thus enters into an intimate bond with media for the sake of survival, but when desire, pleasure and affective surplus threatens to become the defining trait of the bond, at the expense of the focus on mere livability, that is the point when the media addict as a biopolitical figuration materializes.

Media ontology as an ethical project

The exploration of the media addict as biopolitical subject position, entailed an effort to underline the co-constructed and inevitable nature of media addiction in a milieu where media technologies are infusing the deepest reaches of lived experience. However, that is not to deny the lived experience of media addicts, and the neurological, bodily, or psychological aftermath of various kinds of media use. Rather, my goal was to structure an analytical framework for media addiction that would also acknowledge the immediacy, inexorability,

[116] Gold farming is the practice of playing massive multiplayer online games in order to acquire in-game currency and then exchange it to actual currency. Players from poor backgrounds often invest a lot of time into harvesting in-game currency, which is then sold to players with disposable income who want to conserve their time. The dynamics of gold farming often lead to so-called 'virtual sweatshops' in which Western companies "the low pay in poor countries to provide services for wealthy western players" (Thompson 2005).

and always-already thereness of media technologies in the technosphere, as well as their imbrication into the user's existence. Such an approach allows us to see a common ground between the most eager Google Glass user, and a Thoreau-like adepts of natural living, between a NASA technician and a person pushing a wheelbarrow, between the Large Hadron Collider and a handwritten poem on a piece of paper. In short, theorizing media addiction allows us to sketch out an ontology of media, understood as a Baradian kind of ethical project. Media ontology, which accounts not only for understanding of media but of the media user as well, is an

> ethico-onto-epistemology (an entanglement of what is usually taken to be the separate considerations of ethics, ontology, and epistemology), "individuals" do not pre-exist as such but rather materialize in intra-action. That is, intra-action goes to the question of the making of differences, of 'individuals," rather than assuming their independent or prior existence. "Individuals" do not exist, but are not individually determinate. Rather, "individuals" only exist within phenomena (particular materialized/materializing relations) in their on-going iteratively intra-active reconfiguring (Barad 2012, 11)

Thus, the ontology of media is also the ontology of the human: the way in which we assign meaning to the later brings about a shift in our understanding of the former, and vice versa. The two ontological categories, the human and media technology, not predetermined but intra-active and subject to an on-going project of reconfiguration. Thinking through the ontology of media therefore allows us to rethink the ontology of the human to some extent: the originary technicity of biological bodies, the always technical pursuit of life, the way in which media technics are involved in the differentiations and interpellations of human subjectivity. Media theory has been sensitive to the way in which media produce and are used as vehicles for the circulation of gendered, racial and sexual representations, as well as the way in which they are involved in performative processes of gendering, racializing, sexing etc. But it is also important to keep in mind that media technology, both as an abstract concept as well as material configurations do not only reflect, but are inscribed with dominant codes of gender, race, sex and other differentiations. I focused on the gendered inscriptions within the ontology of media technology because gender is one of the most visible and exploited entry points into the struggle for dominance and ownership of media technology. There are many pertinent examples of phenomena that showcase the way in which technology is envisaged to be a masculine pursuit at its core. That does not mean that media technologies are necessarily thought to belong to *men*, but that media use, production and ownership has historically been associated with the performance of masculinity, and constructed in opposition to the feminine.

While much valuable feminist scholarship has tackled the relationship between gender and technology, the onus is often on the representation of gender and sexuality in media, the overwhelming dominance of straight white men in the tech industry and research, discrimination against 'others' in these fields, or the performativity of gender, race or sexuality through and within given media. However, less attention has been paid to the place of gender in ontological media projects. I find that a closer examination of not just gender, but also other differential becomings in relation to media ontology is necessary not only for the sake of pointing out the way in which media ontologies tend to be constructed in relation to a 'universal' humanity that glosses over difference, but also because it leads to an actual rearrangement of the meaning (and therefore substance) of media by understanding it as intra-active not only with a 'universal' human, but with *difference*: with gender, for example, which is then acknowledged to be an intra-active, shifting category that emerges through its intra-action with its milieu – media technologies included. Barad's argument about the necessity of agential realism in scientific practice can be extended to all forms of knowledge production and engagement. In her words, an intra-active, "performative understanding of scientific practices, for example, takes account of the fact that knowing does not come from standing at a distance and representing but rather from a direct material engagement with the world" (Barad, 2007, p. 49). It is therefore imperative to *not* leave our categories of humanity and media technology unexamined, break them apart and examine our assumptions regarding them, and instead focus on their material engagements.

Stiegler's theory of originary technicity provides an opening into the re-examination of masculine bias in media ontology, but it is not sufficient on its own, because it does not allow us to think through the fleshliness, bodily embeddedness and affective relationality that are attached to the figure of the human in all its differentiations. Feminist new materialism, on the other hand, which is already aligned with Stiegler's quest of theorizing the relationalities between the human and the (technical) nonhuman, provides us with the means to see the ties that bind the human to its milieu and continuously transform it. Stacy Alaimo's theory of transcorporeality, although developed in order to rethink the meaning and place of the human in a changing ecological landscape, is one made of the material interconnections of human corporeality with the more than human world and pushes us to forge new political and political approaches that acknowledge that the human and its milieu cannot by any means be taken separately (Alaimo 2012). Such a theory and praxis accepts the fundamental co-construction of human and technics, while also acknowledging the somatics of human corporeality, the techno-somatic individual's efforts to seek out the potential for addiction in

its genes, cells and synapses, the material agencies of media technologies, their technospheric processes, as well as the ways in which our ontologies of media are always constructed in relation to an exterior, and they are often based on a series of exclusions.

In its quest to explore media addiction and its ontological and ethical ramifications, this project has raised many more interesting questions and avenues of inquiry that it initially proposed. While it raises the possibility of crystallizing a distinct biopolitical figure in the figure of the techno-somatic citizen, which emerges from readings of Foucault, Foucauldians and Nikolas Rose, it lacked the temporal and spatial resources to stretch the boundaries of this figure into other directions of biopolitical thought, such as that of Roberto Esposito, Peter Sloterdijk and Hardt and Negri, particularly their insights into biopolitics as a dynamics of immunity and community (Esposito, Sloterdijk), and the new subjectivities of the multitude (Hardt and Negri). Such theoretical angles might allow us to examine media addiction in the context of the idea of contagion (bodily, affective and digital), which are a persistent undercurrent of discourse on technology use.

One other area that presents significantly more challenges that the scope of this dissertation could hope to address is the matter of gender and the ontology of media addiction. Despite the rich scholarship on gender and technology, as well as the growing research on media addiction, there has not been much crossover between these two fields. What is it about media addiction, conceived in its modern incarnation of Internet, gaming or gadget addiction, that leads towards its construction as a predominantly masculine concern? How are media intimacies that are constructed as feminine (e.g. social media addiction, addiction to mobile games) positioned in relation to the intimacies that are deemed as more cerebral and at the same time concerning, such as gaming addiction? How does the ontological hierarchy of media technologies reflect, segue into, or construct contemporary codifications of gender, race and sexuality? Media intimacy *qua* fandom, briefly discussed in Chapter 4, also merits a more in-depth exploration due to the way in which it can exemplify media intimacy practices that eschew the tenets of heterosexual intimacy and lead towards novel modes of engagements with material technological configurations and discourse. Relatedly, the material configurations of media intimacy, the way in which media technologies as material, agential objects are drawn into and participate in intimate engagements, is another avenue that can potentially contribute not only to media theory, but new materialist thought as well.

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