Life after New Media

Mediation as a Vital Process

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Introduction: New Media, Old Hat

In *Life after New Media*, we set out to examine the current debates on "new" or "digital" media. In doing so, we want to make a case for a significant shift in the way new media is perceived and understood: from thinking about "new media" as a set of discrete objects (the computer, the cell phone, the iPod, the e-book reader) to understanding media predominantly in terms of processes of mediation.

The argument developed in our book, as reflected by its title, *Life after New Media: Mediation as a Vital Process*, is threefold:

1. In an era when being on Facebook or Twitter, having a smartphone or a digital camera, and obtaining one's genetic profile on a CD after being tested for a variety of genetic diseases has become part of many people's lives, we maintain that there is a need to move beyond the initial fascination with, and fear of, "new" media—and beyond the belief in their alleged "newness," too.

2. There is also a need to look at the interlocking of technical and biological processes of mediation. Doing so quickly reveals that life itself under certain circumstances becomes articulated as a medium that is subject to the same mechanisms of reproduction, transformation, flattening, and patenting that other media forms (CDs, video cassettes, chemically printed photographs, and so on) underwent previously.[1]

3. If life itself is to be perceived as, or, more accurately, *reduced to* a medium, we need to critically examine the complex and dynamic processes of mediation that are in operation at the biological, social, and political levels in the world, while also remaining aware of the limitations of the stand-alone human "we" that can provide such a rational critique.

Yet is this proposed move "beyond new media" not a little premature? It was barely a decade or so ago that a new disciplinary alignment emerged at the crossroads of the arts, humanities, and social sciences that was given the name "new media studies"—although the use of the term "new media" can be traced much further back, at least

to Harold Innis and Marshall McLuhan.[2] The first phase of "new media studies" was predominantly focused on technology's function in new media platforms and devices (the use of the Internet by children, the global spread of mobile telephony, etc.) and on a radical division between analog and digital media (letters vs. email, film vs. CCD camera sensors[3]). Understandably, much energy during that first phase was spent on developing descriptions and definitions—concerning what these new media really did, how new they actually were, and how they differed from "traditional" or "broadcast" media. It should be noted that the question of the relation between media and technology was elided in many of those debates, a state of events that resulted in the frequent conflation of "new media" and "new technology." Media also tended to become equated with the computer—or, to cite Lev Manovich, "media became new media"[4]—thus erasing the specificities of, and distinctions between, existing old and new media. Entities such as data and information, and processes such as interactivity, convergence, and digitization, became the focus of the rapidly developing discipline of "new media studies."

Many theorists of new media have attempted to make a mark in this emerging field by setting themselves against its earlier definitions and proposing ways to move on and beyond them. For example, Wendy Hui Kyong Chun, one of the editors of the anthology *New Media, Old Media*, argues against a noncritical adoption of the "new media" term by saying, "The moment one accepts new media, one is firmly located within a technological progressivism that thrives on obsolescence and that prevents active thinking about technology-knowledge-power."[5] Yet Chun does not recommend abandoning the term altogether. Instead, she recognizes that "new media" has already been consolidated into a field with its own emerging canon and institutional space. At the same time, Chun argues strongly against perpetuating the myth of the singular uniqueness of new media, insisting instead that the new "contains within itself repetition."[6] To a certain extent, it can be argued that "new media" was already born as a problem, and that the majority of the theorists who have used this term have always done so somewhat reluctantly, with a sense of intellectual compromise they are having to make if they want their contribution to be recognized as part of a particular debate around technology, media and newness. Through running the master's program in Digital Media at Goldsmiths, University of London, and through working on our own publications in the field of "new media studies,"[7] we have become increasingly aware of both the disciplinary seductions and the conceptual limitations of this term.

Generally speaking, scholarship in media studies fits into two methodological frameworks. Those from the social sciences and communications-based disciplines typically approach the media through a mixture of empirical research and social

theory, with questions of political structures, economic influences, social effects, and individual agencies dominating the debate. Those from the humanities in turn predominantly focus on what different media "mean"; that is, they tend to look at media as texts and at their cultural contexts. Of course, there are also those who have never felt comfortable to be pigeonholed in this way and for whom questions of language and materiality, of culture and politics, have always needed to be studied together. (Work undertaken from the perspective of the actor-network theory influenced by Bruno Latour, of the materialist philosophy of Gilles Deleuze, and of science and technology studies has contributed toward blurring the distinctions between the two frameworks, or "camps.")

It is at this point that we enter the debate on new media in our book. However, our aim in *Life after New Media* is to do something other than merely provide an extension or corrective to the current field of "new media studies." Instead of developing an alternative definition or understanding of new media, we propose to refocus the new media debate on a set of processes that have so far escaped close analysis by media studies scholars. In other words, with this book we are not so much interested in moving the debate on new media *on*, but rather in moving on *from* the debate on new media and, in doing so, focusing on the concept of mediation. The distinction is of course primarily heuristic—that is, provisional and strategic—and the purpose of separating mediation from media will be to clarify the relation between them. Mediation does not serve as a translational or transparent layer or intermediary between independently existing entities (say, between the producer and consumer of a film or TV program). It is a complex and hybrid process that is simultaneously economic, social, cultural, psychological, and technical. Mediation, we suggest, is all-encompassing and indivisible. This is why "we" have never been separate from mediation. Yet our relationality and our entanglement with nonhuman entities continues to intensify with the ever more corporeal, ever more intimate dispersal of media and technologies into our biological and social lives. Broadly put, what we are therefore developing in *Life after New Media* is not just a theory of "mediation" but also a "theory of life," whereby *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.*

Our theoretical inspiration for this argument predominantly comes from the work of two philosophers: Henri Bergson (and the materialist-vitalist philosophy subsequently developed by Deleuze) and Jacques Derrida (and his deconstructive thinking around concepts, processes and the ethicopolitical nexus). It is with Bergson and

Derrida that we start approaching media as a series of processes of mediation. This entry point will take us toward the examination of the temporal aspects of media—its liveness (or rather, lifeness),[8] transience, duration, and frequently predicted death. Our primary reason for turning to Bergson is that he allows us to raise questions about the more traditional perception of media as a series of spatialized objects (the iPod, the computer) and also about mediation—that is, multiple, entangled processes of becoming. However, we have to bear in mind that the process of mediation is also a process of *differentiation*; it is a historically and culturally significant process of the temporal stabilization of mediation into discrete objects and formations. In the encounter with Bergson's notion of "creative evolution," Derrida's notion of "différance" functions as a kind of interruption or "cut" to the incessant flow of mediation, facilitating as it does the discussion of the symbolic and cultural significance of this interruption. The negotiation between the Bergsonian (or perhaps, more appropriately, Bergsonian-Deleuzian) and the Derridean philosophical traditions is nevertheless of interest to us here only as far as it allows us to think, move with, and respond to the multiple flows of mediation. It is not therefore an intellectual exercise in its own right, just as the book is not *about* Bergson, Deleuze, or Derrida in any straightforward way. Our attempt to read media as "mediation," both critically and creatively, is informed by a rigorous playfulness toward philosophy, borrowed from the long line of feminist critical thinkers such as Donna Haraway, Rosi Braidotti, and Karen Barad, or, indeed, from Bergson, Deleuze, and Derrida themselves. As well as drawing, specifically, on Bergson's intuitive method, we recognize our allegiance to what Braidotti terms a "nomadic, rhizomatic logic of zigzagging interconnections."[9] The latter logic manifests respectful irreverence toward one's predecessors. Resisting the injunction to speak in our masters' or mistresses' voices, we are therefore seeking methods of thinking and writing that can allow us to see and make a difference.

One of the central issues that concern us in this study of the temporal aspects of media is the relation between events and their mediation. Our argument is that events are never merely presented and *re*presented in the media, and that any such representations are always to an extent performative. Philosophers such as Derrida and Bernard Stiegler, as well as many media scholars, associate media—especially television—with the *illusion* of liveness. Liveness is particularly linked with television news and the coverage of disaster and catastrophe. Generally, it is regarded as a sleight of hand. Yet if we regard such illusory liveness as performative—that is, as being able, to an extent, to bring about the things of which it speaks; things such as "the credit crunch" or "war on terror," say—then not only will we be able to explore questions such as "Did Robert Peston (BBC Business Editor) cause the recession in the UK?" but we will

also avoid a reading of media that is overly constructionist, static, and—ultimately—lifeless.

As a continuation of the previous argument, we suggest that mediation gives us insight into *the vitality of media*. By the latter, we mean something more than just the *liveness* of media that we know about through television studies of catastrophes and other "newsworthy" occurrences. We are referring instead to the *lifeness* of media—that is, the possibility of the emergence of forms always new, or its potentiality to generate unprecedented connections and unexpected events. This issue raises the following set of questions for us: if we are saying that the events we have looked at are, to differing extents and in different ways, performed through their mediation, then how should we respond to them in our critiques? Are our critiques not also forms of invention? Or, more broadly, can we think of a way of "doing media studies" that is not just a form of "media analysis" and that is simultaneously critical *and* creative? Could it allow us to challenge the opposition between "media theory" and "media practice" that many university media departments have adopted somewhat too comfortably over the years, at worst privileging one over the other, at best aiming at some kind of dialectical resolution that in the end only reaffirms the division?

In the light of such an argument, any attempt to root media analysis in fixed entities such as "the social," "subjectivity," "economy," "politics," or "art" must therefore be seen as nothing more than a pretense. It is not that many traditional forms of media analysis do not recognize the need for this pretense. Nevertheless, what *Life after New Media* argues is lacking in many such analyses is a serious engagement with the consequences of this recognition, in ways that would be both critically rigorous and adventurously inventive. This is perhaps an appropriate moment to insert a personal double confession into our introduction. The writing of this book has coincided for us with the consolidation of our longstanding ambition to enact knowledge production and media production differently: Sarah Kember has a literary agent and has published her first novel, *The Optical Effects of Lightning*, and Joanna Zylinska has completed a master's degree in fine art photography and started exhibiting her work. Yet at the same time, these incursions into what academic conventions traditionally designate as "practice" have reaffirmed our commitment to rigorous scholarship and to attentive readings of texts and concepts—even if they have pushed further our desire for experimentation and boundary crossing. By drawing on different instances of media enactment, we thus hope to have outlined in this book a more dynamic, networked, and engaged mode of working on, in, and with "the media," in which critique is always already explicitly accompanied by the work of participation and invention. *Life after New Media* closes off with our proposal for "creative mediation"

understood as a mode of "doing media studies" otherwise. The book thus emerges out of a complex system of intertwined intellectual, social, economic, and artistic influences that have been shaping the interdisciplinary field of new media studies for nearly two decades now and that have been shaping us as scholars, writers, and teachers within this field. It is an experiment in producing knowledge differently, in exercising academic borrowing and hospitality, in asking questions about "media production" of both ourselves and others, in literally writing and thinking in multiple voices and tongues. As well as providing a name for the ever changing mediascape, mediation for us stands for this dynamic entanglement of ideas, voices, and minds.

Chapter 1 makes a case for a shift from thinking about "new media" as a set of discrete objects to understanding media, old and new, in terms of the interlocked and dynamic processes of mediation. It also outlines what is at stake in this shift from thinking about media solely as objects of use, to recognizing our entanglement with media not just on a sociocultural but also on a biological level. Introducing the work of the philosophers Martin Heidegger and Bernard Stiegler, we read mediation as an intrinsic condition of being-in and becoming-with the technological world. We then offer to see mediation as the underlying, and underaddressed, problem of the media.

If "the media narrate ordinary life by anticipating it, with such force that its story of life seems ineluctably to precede life itself," for the philosopher Bernard Stiegler, public life is actually "produced by these [media] programs."[10] Chapter 2 focuses on two media "events," or "crunches," that are linked by the prospect of global or even cosmic disaster: the "credit crunch" of 2007–2009 and the "big crunch," otherwise known as the Large Hadron Collider (LHC) Project at CERN, Switzerland. Although the latter was purposefully designed in 2008 with a view to recreating the conditions that prevailed immediately after the Big Bang, public apprehension has centered on the possibility that black holes will be formed, signaling the end of the world. As the experiment in particle physics that stresses the contiguous nature of space-time at the origin of life, the universe and everything else, the LHC project offers perhaps the *definitive event* by means of which we might effectively intuit the process of mediation—or the existence of life after new media.

Since the event of mediation is, like time (or, indeed, life itself), both invisible and indivisible, any attempt at its representation must ultimately fail. In chapter 3, we offer a challenge to representationalism by looking at photography, its historical ambitions, and its various techniques. Photography is understood here as a process of cutting through the flow of mediation on a number of levels: perceptive, material, technical, and conceptual. The recurrent moment of the cut—one we are familiar with not just via photography but also via film making, sculpture, writing, or, indeed, any

other technical practice that involves transforming matter—is posited here as both a technique (an ontological entity encapsulating something that *is*, or something that *is taking place*) and an ethical imperative (the command: "Cut!"). The key question that organizes our argument is therefore as follows: if we must inevitably cut, and if the cut functions as an intrinsic component of any creative, artistic, and especially photographic practice—although this is still only a hypothesis—then what does it mean to *cut well*? In introducing a distinction between photography as a practice of the cut and photographs as products of this process of cutting, we also aim to capture and convey the vitality of photographic movements and acts.

Chapter 4 compares media visions of the transnational or even cosmic future discussed in the earlier chapters with the viewing point of the domestic present. Arguably, our homes, like our bodies, have always functioned as "intelligent" media. They foreground location and identity as a counterforce to dislocation and differentiation. This set of associations is clearly reflected in the idea of "the smart home," which is embedded with networked computational objects and speech-based autonomous agents who travel so that we can remain in place, safe and protected from a hostile environment. The smart home promises mobility without movement, and fulfills "a long-standing dream of artifacts that know us, accompany us"[11] and comfort us. Intelligent mediation, centered increasingly on the home, is not, as it is sometimes presented, about celebrating hybrid human-machine agency. It is more about positioning "us" as threatened but ultimately reassured subjects, with our private, individualized patterns of media consumption. We argue that intelligent mediation thus becomes a facet of neoliberalism, functioning as the reinforcement of self-interest in the face of both alterity (of what, in a cosmic sense, we might become) and adversity (or what, in the more immediate economically prescribed future, might become of us).

In our attempt to envisage different sociopolitical contexts and different futures, in chapter 5 we explore the possibilities of a less conservative, more inventive approach to the mediated self. It is premised upon a rupture with neoliberal logic and with the reaffirmation of a unitary, autonomous, and authentic subject—a rupture enacted by taking the issue of time and its passage more seriously. The prospect of self-mediation also redefines stability in terms of the inevitable limitations of becoming. In this chapter, we will explore the limitations of transformative self-mediation through a reading of cosmetic surgery (including extreme surgical transformations and the normalizing role of makeover TV shows) and face transplant surgery. Our reading is consistent with a posthumanist, particle physics–based approach informed by theorists such as Karen Barad. If facial surgery is an instance of biotechnological self-mediation writ large, because it is literally inscribed on the body as a medium, then

self-mediation is a process that moves "us" both home and away, consolidating and authenticating our experience even as it extends and imperils our identity.

Chapter 6 pursues the ethical implications of this ultimate instability and transience of the mediated cultural subject. It investigates what exactly is entailed in the recognition that "nobody and no particle of matter is independent and self-propelled, in nature as in the social."[12] It also asks what moral frameworks become available within the context of ongoing dynamic mediation, and whom ethical responsibility concerns if we are all supposedly "becoming Facebook" (no matter whether we are "on" it or not). In the light of the above, we outline what we term "an ethics of mediation"—which, in line with our expanded understanding of mediation as a way of being and becoming in the technological world, with all its biodigital configurations—can also be dubbed "an ethics of life."

Positioned as a kind of critical summary, chapter 7 engages with the idea of "creativity" in the context of both life's supposed creative potential and the work on creativity from the context of creative industries, in preparation for our attempt to offer a different mode of doing critical work "after new media." Such a mode is indicated in Bergson's intuitive method and is echoed in the work of many feminist philosophers. The second part of this chapter adopts the format of a "live essay" in which one of the crucial oppositions in media studies—that between "theory" and "practice"—becomes a subject not only of critical interrogation but also of a performative event. Drawing on our own media practices (creative writing and photography, respectively), we hope in this way to have taken some steps toward enacting, rather than just proposing, "life after new media."

1 Mediation and the Vitality of Media

False Problems and False Divisions

This chapter makes a case for a shift from thinking about "new media" as a set of discrete objects to understanding media, old and new, in terms of the interlocked and dynamic processes of mediation. It also outlines what is at stake in this shift from thinking about media solely as things at our disposal to recognizing our entanglement with media on a sociocultural as well as biological level. This argument will lead us to pose the following question: if media cannot be fully externalized from subjects, or "users," then how might "we" engage with "them" differently? We will also consider the political and ethical implications of such engagements.

After outlining the key debates on new media within media, communications, and cultural studies, we will turn to the work of philosophers Martin Heidegger and Bernard Stiegler to explore the relationship between "media" and "technology" and to advance a proposition that mediation is an intrinsic condition of being-in, and becoming-with, the technological world. With this proposition, we will offer to see mediation as the underlying, and underaddressed, problem of the media. As the role of this chapter is first of all to provide a theoretical framework—a toolbox of concepts we will be working with throughout the course of this book—we will also seek to distinguish between the question of mediation and the question of media. This distinction is primarily heuristic—that is, tentative and pragmatic—and the purpose of separating mediation from media will be to clarify the relation between them. Henri Bergson's philosophical method of division and reintegration, as reappropriated by Gilles Deleuze, will be of particular use to us here. This "method" proposes three things: (1) that we distinguish between "true" and "false" problems, (2) that we distinguish between differences in degree and differences in kind, and (3) that we consider the object of our inquiry in terms of its temporality.[1] This last law, or rule,

is the most important one for Bergson, and it will be the principal means by which we will seek to distinguish between media and mediation.

Having offered a preliminary investigation of the concept of mediation, we will then present mediation as the underlying and underaddressed problem of the media. We will do so by highlighting, and then bracketing, the "false" problems and false divisions associated with debates on new media. To continue with our use of the Bergsonian heuristic, these problems and divisions are "false" not in any ontological sense related to some originary idea of truth, but rather because they limit the understanding of the complex and multifaceted phenomena and processes by imposing clear-cut distinctions and categories all too early. This process of fragmenting the world into particular categories, often arranged into sets of oppositions, is not only reductive and therefore unhelpful; it also has serious political and ethical consequences for our understanding of the world, its dynamics, and its power relations. Thinking through and against such false problems and oppositions is therefore also a political intervention into "the media"—one that is different from studies of the political economy of media and communications, for example, but that is not any less serious or important.[2] In addition to the false problems (which we identify in discussions on new media that focus on a singular problem, such as newness, digitization, interactivity, convergence, or data, at the expense of all the others), the field of new media is arguably also marred by a number of "false divisions"—or what cultural theorists trained in poststructuralist thought tend to refer to as "binary oppositions." Such false divisions that have so far shaped debates in new media studies include determinism and constructionism; technology and use; theory and practice; structure and agency; information and materiality (an extension of the division between language and materiality); and subjectivity and objectivity.

Even where these false divisions have been identified as such—and of course many writers are aware of their limited currency—it has proven difficult to avoid them.[3] The reason for this difficulty partly lies with the residual effects of disciplinarity and the associated requirement to take a set of key concepts within a given discipline and then elevate them to a transcendental position, as a result of which everything else gets questioned or even dismantled except for these foundational concepts (for example, "data" and "information" in computer science; "subjectivity" in psychology; "society" in sociology). Another reason for the survival of such false divisions lies perhaps in the prevalence of social science perspectives in media, communications, and cultural studies, perspectives that are fundamentally positivist and humanist, and that stake empirical claims on partial perspectives of "black-boxed"—that is, isolated, protected, and simultaneously obscured—aspects of the media. "Politics" and "the social" are

just two examples of such privileged terms within the dominant, social sciences–informed tradition of media and communications.

Our own argument in the book is that although *media constitute differences in degree*[4] that should not be elided under any overarching concept, *mediation* nevertheless *constitutes a difference in kind*. It cannot be isolated and hence stabilized in any straightforward manner because its mode is fundamentally that of time. The interdisciplinary nexus of media, communications, and cultural studies—within which questions of new media are most readily addressed—has not so far offered an adequate account of mediation as a process because it has not taken the temporality of media seriously. We aim to address this rather substantial shortcoming in the pages that follow. This chapter will end with a proposition to see mediation as the expression of media temporality, or what we will term the "lifeness" of media.

"What Is New about New Media?" and a Few Other Old Debates

Many commentaries on emerging media—"Everyone who is anyone is on Facebook!"; "Apple has revealed an iPad!"; "the Internet causes obesity in children!"—tend to fall into one of the two extremes: technophilia or technophobia, utopianism or dystopianism, that is, either a celebration of or cynicism about the advent of the supposedly new. Similar sentiments, albeit articulated in a more restrained manner, tend to inform a high number of academic arguments about new media and their supposed influence. This limited dualism, or simple binary or oppositional thinking, is not, however, restricted to *feelings about* new media: it also structures many *ontological conceptualizations of* them (analog vs. digital, closed vs. open, centralized vs. distributed, readerly vs. writerly, mass vs. participatory). The majority of debates on new media thus tend to perpetuate the "false divisions" discussed previously. The old versus new division plays a special role among those oppositions in that it not only brings together affect and matter but also inscribes media into a progressive developmental narrative. In other words, it introduces the question of time into debates on media while simultaneously freezing this question by immediately dividing "media time" into a series of discrete spatialized objects, or products that succeed one another. Thus we are said to progress *from* photography *to* Flickr, *from* books *to* e-readers.

As mentioned in the introduction, the alleged "newness" of the products and processes that get described as "new media" should not be taken at face value—not only because of the rather problematic historical trajectory of progressive media development this narrative adopts, as persuasively argued by Lisa Gitelman in *Always Already New: Media, History, and the Data of Culture*,[5] but also due to the ideological

implications of any such designation. We could perhaps go so far as to say that in descriptions of this kind, "newness" functions predominantly as a commercial imperative: it demands that we keep upgrading our computers, cell phones, and communication and data storage devices in order to avoid obsolescence—the obsolescence of both our equipment and of ourselves in a world whose labor and social relations are being presented as increasingly fluid. Defining "new media" in terms of their convergence and interactivity—two key characteristics frequently evoked in relation to this concept—links this imperative for connectivity with the neoliberal fantasy of ultimate consumer choice. The promoted interactivity of devices such as Apple's iPad or Amazon's Kindle is therefore perhaps first of all an expression of the ideology of "added value," one that sets the supposedly passive consumption of "old media" against a more active and engaged consumption of new media. (This argument works better with the iPad as a multimedia device or the computer as an omniproductive machine than it does with Kindle.) We may recall at this point the always already interactive and converged nature of "old media," such as radio, newspapers, or books. Due to their relative longevity, books are a particularly interesting example of "old media." The universe constituted through and within them, be it a philosophical plane of immanence or a fictional world of a novel, has always required an active participation and contribution from the reader, not to mention the efforts of all those who have been involved in their editing, design, production, and distribution. Arguably, books are thus as hypertextual, immersive, and interactive as any computerized media.

As Gary Hall explains in *Digitize This Book!* by drawing on the work of the historian Adrian Johns, until the mid-eighteenth century, the book constituted an unstable object, with Shakespeare's folio, for example, including more than six hundred typefaces and many inconsistencies with regard to spelling, punctuation, and page configuration. "Early in the history of the printed book, then," writes Hall,

readers were involved in forming judgments around questions of authority and legitimacy: concerning what a book is and what it means to be an author, a reader, a publisher, and a distributor. The development and spread of the concept of the author, along with mass printing techniques, uniform multiple-copy editions, copyright, established publishing houses, editors, and so forth meant that many of these ideas subsequently began to appear "fixed." Consequently, readers were no longer "asked" to make decisions over questions of authority and legitimacy.[6]

However, the inherent instability of the "old medium" of the book never disappeared altogether, according to Hall; it just became obfuscated—and is particularly difficult to see amid the debates about the (inter)active and allegedly more creative and collaborative nature of "new media."[7] Yet the delegation of decision-making processes to computer algorithms (the logic and hierarchies behind Google's search

engine; Amazon's recommendations such as "Customers who bought this item also bought X," etc.) raises some serious questions for this professed interactivity of new media. Arguably, it offers a freedom of consumer choice *in place of* any actual interactivity, creative engagement, and what Hall refers to in his book as responsible and ethical decision making.

Significantly, when *The Guardian* reported in July 2010 that according to the online bookseller Amazon, "sales of digital books have outstripped US sales of hardbacks on its Web site for the first time," it also commented that this announcement "will provoke horror among those who can think of nothing better than spending an afternoon rummaging around a musty old bookshop."[8] Even though the article also included the information that the "hardback sales are still growing in the US, up to 22% this year," it was decisively framed through the familiar old-new dichotomy, with the former bringing up associations of mustiness, outdatedness, and not moving on "with the times." While the melancholy if sympathetic figure of the leisurely reader was depicted here as "rummaging," no doubt languorously and somewhat clumsily, through the bookshop, we were supposed to imagine the reader of e-books as whizzing through the pages on her digital device. The latter reader thus won the contest of time, of reading as (inevitable) speed-reading, but also of being au courant with a media practice that requires a new set of technological devices to "keep up" with the times and also requires one to not shy away from what the future "brings."

Questions about future media and about the future of the media ("Will our homes become more intelligent?"; "Will the Internet kill broadcast journalism?"; "Will users become more inclined to pay for online content?") are part and parcel of the debates about the "newness" of media. What is most problematic about futurism in as far as it predicts and speculates about the social, psychological, and economic *effects* of new media is not so much the extent to which those predictions and speculations are accurate. Incidentally, they usually are not. As the Polish writer Stanislaw Lem ironically commented in his *Summa Technologiae*, "Anyone can have some fun by just putting in a drawer for a few years what is currently being described as a believable image of tomorrow."[9] And thus, when Alan Turing predicted in 1950 that by the year 2000 the idea that machines could think would become commonplace,[10] or when Fred Ritchin announced in the early 1980s that digitization would bring about "the end of photography as we have known it,"[11] they were evidently both wrong, but that is not the major problem with those predictions. What is even more problematic from our point of view is that these speculations about media futures were relying on a kind of linear, cause-and-effect thinking that carries the name of *technological determinism*. Marshall McLuhan's prognosis that high-resolution TV would no longer be

television, "which depends on seeing as causes the details of a technology that may well change,"[12] fell into a similar trap.

In *New Media: A Critical Introduction*, Martin Lister and colleagues oppose *technological determinism* to *social constructionism* and, in doing so, reveal another limited dualism which underpins new media debates. At the heart of the opposition between determinism and constructionism lies the question of technology and, with it, of technological agency. To briefly recap, technological determinism proposes that technology *causes* changes in culture and society. From this perspective, the Internet is presented as having revolutionized the way we communicate, or, in the words of new media writer Nicholas Carr, "the way we think, read and remember."[13] For others, such as Clay Shirky, media consultant and author of *Here Comes Everybody: The Power of Organizing Without Organizations* (2008) and *Cognitive Surplus: Creativity and Generosity in a Connected Age* (2010), the Internet is said to have transformed the very fabric of society by changing the way people collaborate. Social constructionism (also referred to as constructivism), on the other hand, regards technology as merely the *effect* of ongoing changes in culture and society. Here, the Internet would be positioned as having emerged in order to meet the needs of the American military, with the original ARPANET developed for the purposes of the US Department of Defense as a decentralized military research network aimed at surviving a nuclear strike. In other words, the Internet is seen as only the means to specific governmental and military ends.

Following Lister and colleagues, the question of technological determinism can be traced back to the debate between Marshall McLuhan and Raymond Williams in the 1960s and 1970s. We are making a quick stopover by this well-rehearsed debate because the work of those two thinkers was foundational to and still informs the way media and technology are being talked about and understood in many academic and mainstream debates today. Lister and coauthors demonstrate how the first position gives sole power, or agency, to technology, while the second position awards power and agency to human cultures and societies. One is therefore technicist, the other humanist—but both are deterministic. Determinism, then, can be understood as an attempt to decide "how far new media and communications technologies, indeed, technologies in general . . . actually determine the cultures that they exist within" and conversely "how cultural factors shape our use and experience of technological power."[14]

Lister and colleagues dramatize the question of technological determinism through the work of McLuhan and Williams. If McLuhan is presented as übertechnicist in many media, communications, and cultural studies accounts, then Williams occupies the very antithesis of that position. "While McLuhan was wholly concerned with

identifying the major cultural effects that he saw new technological forms . . . bringing about, Williams sought to show that there is nothing in a particular technology which guarantees the cultural or social outcomes it will have," write Lister and coauthors.[15] The question of determinism, then, is set out from the beginning in terms of *all or nothing*. From that perspective, technology is seen as either having major social effects or none at all! The authors of *New Media: A Critical Introduction* inevitably simplify McLuhan and Williams's positions in their attempt to frame technology as a key question for our times. However, in taking recourse to such an inevitably reductionist theoretical model, they draw out a very important point. In the battle between McLuhan and Williams—which is a battle between determinism and constructionism, between technicism and humanism, between machine agency and human agency—it was Williams who won. That is, according to Lister and colleagues, he gained prominence in the context of *British* cultural and media studies—if not within the technicist cyberculture studies, European media theory, or North American mass communications, where the influences may have remained more McLuhanite. (We can also mention here the significance of works by Neil Postman, Friedrich Kittler, or Jean Baudrillard for those latter contexts.) The effect of this somewhat Pyrrhic victory was the loss of the question of technology from within the main trajectories of media, communications, and cultural studies. Consequently, the question of technology in the Williams-inspired, partial, but still influential approach became synonymous with technological determinism, and with McLuhan himself, so it disappeared from debates about culture and media. This disappearance, we might say (a point with which Bolter and Grusin would probably agree), was something of a mistake.

It was a mistake because—banal as it sounds, but this is actually an important philosophical point, which we will expand upon further—media cannot be conceived as anything else than hybrids, and technology is part of that hybridity.[16] This mistake may perhaps be rectified by a return to McLuhan, a return that will work through or even attempt to bracket his alleged determinism, but that will retrieve his valuable foregrounding of hypermediacy and the body. (In many ways, McLuhan's work anticipated Bolter and Grusin's "remediation" thesis.) Lister and colleagues refer to McLuhan's "physicalist" emphasis, that is, his sense of technologies as physical prostheses or extensions of the body. This emphasis, they say, is "precisely what humanism in cultural and media studies has been unable to address,"[17] and it potentially opens up, or perhaps rather reopens, the question of the relation between "biological and technological things."[18] The question of technology is then, simultaneously, the question of biology. It is a question that "we" (or some of us at least), according to the authors of *New Media*, have been unable to ask for too long. Even if the way that Lister and

coauthors extrapolate from the British intellectual context to speak about the study of media and culture generally or even universally is problematic, their attempt to refocus the debate on new media around core philosophical questions—those of the ontology of media, and their kinship with other objects or, indeed, life forms— deserves further attention.

Remediation and Its Discontents

Following in Lister and colleagues' footsteps, we want to spend some time looking at Bolter and Grusin's theory of *remediation*. By now a staple in new media studies, both celebrated for its brilliance and criticized for its generality and forced ubiquity, this term refers to the way in which the computer "refashions older media" and in which older media "refashion themselves" in the context of the computer. According to Bolter and Grusin, old and new media co-exist, but one type of media does not necessarily "swallow up" the other. If "immediacy," or realism, is a defining characteristic of old media—in the sense that in a Hollywood blockbuster things "look" like they are real, trying to make us forget for two hours that we are watching a movie; and "hypermediacy," or the collage effect of media forms and styles associated, for example, with the aesthetics of websites is a defining characteristic of new media, then they also, currently and historically, coexist. Remediation offers a critique of the teleology of technological convergence because it does not cut off the present from the past, the new from the old. Old media come around again in this framework, as a result of which history is seen not as linear and progressive but rather as nonlinear and cyclical. After Foucault, Bolter, and Grusin opt for the idea of history as genealogy—that is, the tracing of the contingent emergence of ideas and knowledge systems through time—rather than as teleology, a progressive and purposeful linear development of events.

The concept of remediation obliges us to consider interactive TV, for example, in the context of the history of television, or cell phones in the context of the history of the telephone. Tying new media to old media is, Bolter and Grusin say, a "structural condition" of all media. More than that, though: by incorporating a concept of hyper-mediacy, remediation requires that we consider one medium and its history in relation to other media (and their histories). Bolter and Grusin write, "Digital visual media can best be understood through the ways in which they honor, rival, and revise linear-perspective painting, photography, film, television, and print. No medium today, and certainly no single media event, seems to do its cultural work in isolation from other media, any more than it works in isolation from other social and economic forces."[19]

We can think here of a number of media events that have been hypermediated in this way at the beginning of the twenty-first century: the flu pandemic, the Arab Spring, or the global credit crunch. As we will argue in more detail in the next chapter with reference to the third of these examples, all of these events reveal a complex relationship between the event "itself" and its mediation, foregrounding the significance of technological, social, economic, geographical, and other influences or forces well beyond those controlled by the human. This complexity demands an interdisciplinary nonhumanist theoretical framework that would facilitate such a multifaceted understanding. As Lem figuratively puts it in his *Summa Technologiae*, a more humanist mode of thinking along the lines: "The human spirit, having experienced failures and successes throughout the course of history, has eventually learned to read from the Book of Nature,"[20] used to be dominant in the fields that provide explanations of science and technology, with media typically being positioned as delimitable entities and effects of the existent situation. What Bolter and Grusin's concept does, then, is open up the possibility of a nonhumanist reading of media as dynamic, complex, and interwoven processes beyond the singular control of the human (even if the authors themselves, as we will show later in this chapter, do not fully follow the consequences of this realization).

Veering between understanding mediation as a hybrid process on the one hand, and presenting it in terms of relatively discrete media on the other, Bolter and Grusin do indeed stop short of embracing the full radicalism of their remediation thesis. In saying that "Our culture wants both to multiply its media and to erase all traces of mediation,"[21] they end up reducing culture to a unified being with its own rather uncomplicated volition. This anthropomorphization of culture is only one problem with their argument. Another lies in the ascription of relatively transparent affects and effects to human actions. And thus, when discussing the automation of the technique of linear perspective in media such as photography, film, TV, and computing, they say, "A photograph could be regarded as a perfect Albertian window" to the point of both concealing the process and eliminating the artist, thus offering "its own route to immediacy."[22] Drawing on the work of André Bazin and Stanley Cavell, they argue that all of these media forms are aimed at satisfying our "obsession with realism" and "our culture's desire for immediacy."[23] The media are thus seen here as fulfilling a particular socio-cultural need, and as arriving only in response to this already preformed need. Seemingly conflicted about whether to position desire for media development in individual subjects or in this nebulous entity called "culture," Bolter and Grusin also introduce some degree of hesitation with regard to what and who these emergent media are actually responding to. Yet, in tracing the double logic of

remediation that both multiplies media and erases traces of mediation, they ultimately remain too focused on human intentions and desires—as evident, for example, in their declaration that "Today as in the past, designers of hypermediated forms ask us to take pleasure in the act of mediation"[24]—and not enough on effects and acts of the media themselves. In the multilayered processes of remediation, they locate agency firmly on the side of the human, with the media environment receding into the role of a background for a human engagement with media objects. We could say that the history of media is for them a consequence of an ongoing practice of a guild of illusionists, all focused on confusing or deceiving us with their box of tricks: "the goal of the computer graphics specialist is to do as well as, and eventually better than, the painter or even the photographer."[25] In saying this, Bolter and Grusin thus erase any traces of technology as *tekhnē*, that is, art or craft, creation, and hence as artifice, from the production of these images.

Consequently, they end up reducing the very process of mediation to actual media—transparent or hypermediated—which then function as a third party in the subject's desire or quest for authentic experience and, ultimately, as a validation of an autonomous self. As their book in many ways provides an inspiration for our study of mediation as both a key process and underaddressed problem within media, communications, and cultural studies, it is important for us to recognize the inconsistencies in their account. However, it is equally important to highlight the conceptual opening made by their focus on media dynamics that goes beyond singular media objects. Witness the following account they provide: "*All* mediation is remediation. . . . at this extended historical moment, all current media function as remediators. . . . Our culture conceives of each medium or constellation of media as it responds to, redeploys, competes with, and reforms other media."[26] Remediation becomes for Bolter and Grusin a name for the "*mediation of mediation*," with each act of mediation depending on other acts of mediation. This leads them to posit the "*the inseparability of mediation and reality*."[27] Referring to poststructuralism and in particular to the work of Jacques Derrida, the two authors acknowledge that there is nothing *prior to* mediation. Yet their argument takes a rather surprising turn when they bring in a somewhat loose and hence problematic notion of the "real" (in which sometimes it stands for the viewer's experience and at other times for entities existing in the world) to declare that "all mediation remediates the real. Mediation is the remediation of reality because media themselves are real and because the experience of media is the subject of remediation."[28] Needless to say, this conclusion, with its rather fixed notion of what counts as "the real," "subject," and "experience," undoes any poststructuralist intimations of their earlier argument—only then to be redeemed, perhaps in a truly poststructuralist

manner, by a rather significant footnote (or, to give the MIT Press designers their due, "sidenote"), in which the authors of *Remediation* claim that "media and reality are inseparable."[29]

Significantly, although it does pay attention to early media forms, the concept of remediation does not pin new technologies back onto their historical antecedents in order to conduct a comparative analysis: instead, it considers both change and continuity of media. The question of *what emerges* through processes of remediation is as important as the question of *what is being remediated*. Thinking about the media in processual terms creates problems for the traditionally more dominant humanist approach discussed earlier, whereby the question of technology was elided in favor of the question of its human use. This humanist approach gave rise to arguments such as those by Carolyn Marvin in her book *When Old Technologies Were New.* Marvin's argument is notable as far as it creates problems for technologically deterministic ways of thinking by tracking new technologies such as the computer back to their origins—in this case, in the Victorian telegraph. She writes, "In a historical sense, the computer is no more than an instantaneous telegraph with a prodigious memory."[30] But Marvin does not tell us enough about the singular significance of that prodigious memory or about the material differences and the specific affordances of the computer and the telegraph. She does provide a thorough account of the social history and the uses of the media that were considered "new" toward the end of the nineteenth century (telegraph, telephone), but says arguably too little about their status *as technologies* and about their limited though not negligible agency. The statement she makes that "The history of media is never more or less than the history of their uses"[31] is representative not only of her approach but also of the broader Williams-inspired intellectual trend in media, communications, and cultural studies discussed previously. This statement assumes a one-way traffic from media as discrete objects to humans as their masters, producers, and users. Indeed, Marvin insists that a historical account needs to lead us away from *media themselves* "to the social practices and conflicts they illuminate."[32]

Gitelman's *Always Already New* deserves a mention here as both a continuation and an overcoming of "the Marvinesque perspective." This is evident in Gitelman's statement that "media are curiously reflexive as the subjects of history"—which is another way of saying that "there is no getting all the way outside or apart from media to 'do' history to them; the critic is also always already being 'done' by the media she studies."[33] Reluctant to grant any essentializing agency to "the media," Gitelman correctly points out that media are nothing without their human "authors, designers, engineers, entrepreneurs, programmers, investors, owners, or audiences."[34] However,

in her upfront repudiation of "the idea of an intrinsic technological logic," she is less inclined to study this media-user entanglement from its other side, that is, to explore to what extent and in what way "human users" are actually formed—not just *as users* but also *as humans*—by their media. Although the concept of "media" is helpfully loosened up in Gitelman's argument—when she claims that it is a mistake to write about "the telephone," "the computer," or "the Web" as if they were unchanging objects with self-defining properties—she is still prepared to grant "the media" a relatively stable ontology as long the object has been adequately isolated and historicized (or, as Bergson would have it, "solidified"): "telephones in 1890 in the rural United States, broadcast telephones in Budapest in the 1920s," and so on.[35] For Gitelman, then, (a post factum) "specificity" offers a way out of the instability dilemma.

Many thinkers working at the boundaries of media theory and computing have taken significant steps toward arguing for the need to study the "media themselves" and the dynamic logic they activate, rather than focusing on questions of their *human* representation, *human*-centered meaning, or *human* use. For example, in her study *My Mother Was a Computer*, Katherine Hayles develops her earlier ideas on medium specificity and looks at the relationships between language and code in different media. Acknowledging the significance of Bolter and Grusin's notion of remediation, she nevertheless criticizes them for locating the starting point for the cycles of immediacy and hypermediacy "in a particular locality and medium."[36] Hayles proposes instead the concept of *intermediation*, which promises to examine agency at the boundary between biological and technological things, human users and their computers. Karen Barad's concept of *intra-action*—as opposed to *inter*-action—goes even further in that regard because it recognizes that there is actually no "between" as such and that human and nonhuman organisms and machines emerge only through their mutual co-constitution.[37]

This essentially McLuhanite emphasis on the connectedness rather than isolation of media as developed in different theories of re-, inter-, and intramediation has led some commentators to propose that we are currently living in a "media ecology."[38] Even though we recognize the logic behind this assertion, in our book we focus more on the temporal aspects of media that remediation foregrounds rather than on the more frequently discussed spatial or environmental ones.[39] By highlighting the dynamics of media, the concept of remediation paves the way for an examination of processes of *mediation* that are complex and heterogeneous and that take heed of what McLuhan termed the "all-at-onceness" of the "world of electric information."[40] This "all-at-onceness" poses a challenge to many forms of conventional media analysis—in which problems such as technology, use, organization, and production are frequently studied in isolation.

Although the question of technological use should not be discounted, it cannot be given primacy if, *with* Bolter and Grusin, but perhaps also *against them*, we regard remediation as a process which incorporates multiple agencies (technologies, users, organizations, institutions, investors, and so on). As Lister and colleagues point out, Williams's notion of use may work well enough for the analysis of a given technology, but it works less well "if we consider the extent to which technology becomes environmental."[41] It is not simply the case that "we"—that is, autonomously existing humans—live in a complex technological environment that we can manage, control, and use. Rather, we are—physically and hence ontologically—part of that technological environment, and it makes no more sense to talk of *us* using *it*, than it does of *it* using *us*. McLuhan therefore had a point when he argued that, as Lister and coauthors put it, "the human sensorium is under assault from the very media into which it extended itself."[42]

Originary Technicity, or We Are Media[43]

If we take this process of technological extension seriously enough—not just on the level of theoretical argument but also through our experiential being with technologies and media such as cell phones almost permanently attached to our ears, pacemakers, virtual reality goggles, human growth hormones, or Botox—we are obliged to recognize that we human users of technology are not entirely distinct from our tools. *They* are not a means to *our* ends; instead, they have become part of us, to an extent that the us/them distinction is no longer tenable. As we modify and extend "our" technologies and "our" media, we modify and extend ourselves and our environments. This position requires a better, more philosophical understanding of "technology," beyond that of "a neutral tool for the accomplishment of pre-given ends . . . judged by an economic criterion of efficiency."[44] For this, we need to turn to the work of the German philosopher Martin Heidegger.

In his oft-cited essay "The Question Concerning Technology," Heidegger bemoans the fact that in modern times technology has been reduced to the way for humans to organize (or "enframe") nature and bring it under their command. This way of ordering "demands that nature be orderable as standing-reserve."[45] This process of enframing is also a "concealing" because, for Heidegger, it removes us from the more creative, less instrumental relationship with technology we had in the past (which this particular philosopher, like many others, locates in ancient Greece). The historical accuracy of this designation aside, what Heidegger achieves by this excursion to the Greeks is excavating the original meaning of technology as *tekhnē* and *poièsis*, that is,

bringing-forth and presencing.[46] Technology for Heidegger is therefore an inherently world-forming process, both on a biological and cultural level. He writes, "Through bringing-forth the growing things of nature as well as whatever is completed through the crafts and the arts come at any given time to their appearance."[47] Yet this process, and human participation in it, are now seriously constrained. In the words of Mark Poster, "As a result of the unconscious quality of modern humans' relation to their framing of things, they do not perceive the setting up of the scene in which they act and take their own cultural shapes."[48] Consequently, "our own being in the world is invisible to us."[49] It is Heidegger's ambition to restore our original relationship with technology, which will also be a way for us to live a more conscious and more free life.

Significantly, when Heidegger declares that "the essence of technology is by no means anything technological,"[50] he is not retreating to some kind of pretechnicist utopia where man used to be at one with "nature." For him, we always remain "chained to technology, whether we passionately affirm or deny it."[51] This is more than just a comment on our spiritual and physical slavery to the forces beyond us: as taken up by Bernard Stiegler's rereading of Heidegger (which we will discuss shortly), this notion points to our *originary technicity*, our way of being-with and emerging-with technology. It is in seeing beyond the instrumental dimension of technology that the human can establish a better relationship to it or even to see himself as part of the technological set up for the world. The essence of technology for Heidegger lies in what he terms a "revealing" of the potentiality of matter, that is, of whatever "does not yet lie here before us, whatever can look and turn out now one way and now another."[52]

Yet, according to Poster, Heidegger's understanding of technology applies more to older technologies represented by machines such as the hydroelectric plant than to information technologies enacted by, for example, the Internet. (To grasp the latter, Poster turns to Deleuze and Guattari, and in particular to Guattari's *Chaosmosis*.) Even if the information age can indeed be dubbed, to cite Poster, "the new order of huma-chines," it still does not absolve us—technologically dependent humans—of the responsibility of having to figure out ways of being in this humachinic world, with its hybrid ontologies and uncertain ethics. More interesting, perhaps, in worrying about "modern humanity's way of being,"[53] Heidegger can be said to offer a double opening—beyond the humanism of technological use (whereby the perception of technology as a means to an end is only a "fixing," not an "essence")[54] and beyond the determinism of technological "destining." His declaration that the human is "chal-lenged, ordered" to "exploit the energies of nature"[55] implies that the human belongs

"even more originally than nature within the standing-reserve." Heidegger is thus prefiguring here Stiegler's thesis of originary technicity. There is technological force at work in the universe that is a challenging and that "gathers man into ordering."[56] As a result, the human has to "respond . . . to the call of unconcealment even when he contradicts it."[57] This having to respond to the environmental force preceding his own existence not only places the human in the condition of dependency and coemergence: it also turns the human into an ethical subject, where ethics is understood as response to what is differentiated from the self and what simultaneously exerts a demand on the self.[58]

In a similar vein to Heidegger, in his *Technics and Time, 1*, Stiegler goes back to the Greeks—in particular, the myth of Prometheus—in an attempt to retrace the history of technological development and thus retell and reimagine what technology means, and what kind of relation we can have with it. The story of Prometheus is for him not just about playing with dangerous objects—fire, weaponry—or making "dangerous discoveries," but rather about the willingness to challenge the established ontological and epistemological order in which man is positioned as a self-contained being, fully present to himself. The myth supposedly illustrates man's technical being. Technology is positioned here as a force that brings man forth and is fully active in the process of hominization: it is not just an external device that can be picked up, appended, and then discarded at will. For Stiegler, the human drive toward exteriorization, toward tools, fire, and other prostheses—toward *tekhnē*, in other words—is due to a technical tendency that is embedded in the older, zoological dynamic, a tendency that was arguably already identified by Heidegger. It is due to this inherent tendency that the (not-yet) human stands up and reaches for what is not in him. It is also through visual and conceptual reflexivity—seeing himself in the blade of the flint, memorizing the use of the tool—that he emerges as always already related to, and connected with, the environmental matter that is not part of him.

In both *Technics and Time, 1* and an interview that constitutes part of the film *The Ister* Stiegler provides a careful exposition of the Platonic dialog *Protagoras*. The dialog tells the story of the creation of mortal beings, including man, and the role that two Greek gods, Prometheus and Epimetheus, played in this process. Epimetheus—a god that Stiegler presents to us as quite absent-minded and not particularly clever—takes it upon himself to furnish all newly created earthly creatures with "qualities." So he distributes strength to the lion, speed to the gazelle, and hardness to the turtle and its shell, making "*his whole distribution on a principle of compensation, being careful by these devices that no species should be destroyed.*"[59] By the time he gets to man, however, Epimetheus discovers he has run out of qualities, leaving man unprovided

for—"naked, unshod, unbedded, and unarmed."[60] This is the moment when Prometheus comes to the rescue by offering to steal from Hephaestus and Athena the gift of skill in the arts, coupled with fire—"for without fire there was no means . . . for anyone to possess or use this skill." In other words, Prometheus gives man *tekhnē*, while simultaneously completing the creation of the human as a technological being— a being that has the power to create but that also needs to rely on external elements to fully realize his being. Thanks to this newly gained "art," writes Plato, "men soon discovered articulate speech [*phonen*] and names [*onomata*], and invented houses and clothes and shoes and bedding and got food from the earth."[61]

Through his rereading of the myth of Prometheus and Epimetheus, Stiegler provides an alternative story about technology, nature, and the human. Yet he does more than that: he proposes a new framework for man's self-understanding in the technical world. If we really want to get to grips with the question of technology today, claims Stiegler, we must return to the Greeks because they have already framed it very accurately within their own tragic, religious terms. Stiegler's historical excursion therefore has contemporary resonances—not just because Greek philosophy still informs our current notions but also because in that particular myth the Greeks managed to articulate the dramas, tensions, and anxieties of "human becoming" in a world that was constantly evolving. It is in a dynamic, connected model of the world that Stiegler locates the possibility of developing a less hysterical and more responsible understanding of *tekhnē*. What is, however, significant about the *current* moment—and by "current," Stiegler refers to the modern period inaugurated by the Industrial Revolution of the late-eighteenth/early-nineteenth century—is the speed of technological development. It has increased exponentially over the last two centuries, getting out of sync with the speed of the development of other areas of life: social, cultural, spiritual, legal, and so on. This acceleration of the technological development—which is evident in the emergence of machinic production, railway networks, computation, cybernetics, and, last but not least, globalization—has serious consequences for the philosophical order that has been in place since Plato and the Greeks. It is precisely this order that has allowed for the emergence of the hegemonic consensus in modernity, a consensus that sees technics as having no ontological sense, as only an artifice that must be separated from Being.[62] So, even though we have always been technological, a radical change has taken place over the last century, with the speed of technological transformation and intensity of technical production constantly increasing and getting ahead of the development of other spheres of life.

Picking up a Heideggerian thread, Stiegler's work highlights a deconstructive logic at work in the dynamic relation between technology and the human.[63] There is also

something unique about the way in which the story of the human as a technical being is told in his early work, which is why we are focusing on this by now quite well known account here. Simply put, in *Technics and Time, 1*, Stiegler seems much more aware that he is telling us a story. He goes back to a number of established oral and written texts not so much with an intention of informing his readers what the world *is like* (a far more dangerous, and, one might argue, hubristically naïve desire that he nevertheless cannot resist in the further volumes of *Technics and Time*) but rather with a willingness to reflect on and think through some of the stories that others have told about the origin of the human: Greek myths, paleontological theories, earlier philosophical accounts. The same stories—including the key narrative about the fault of Epimetheus—are then reframed via another narratological form, that is, the interview with the philosopher included in the video essay *The Ister*. This very act of conscious reiterative storytelling is significant here. The stories about the origin of the human we are told join a long line of technical prostheses such as flint stones and other "memory devices" that have played an active role in the very process of the constitution of the human. In the pre-Platonic, premetaphysical times that the myth of Prometheus and Epimetheus deals with—a myth that Stiegler retells for us—this tragedy is exacerbated by the fact that there is no possibility of redemption from this condition of openness man exists in, other than through the inevitable finality of death.

Yet an interesting breach is created in this theory of originary technicity as outlined by Stiegler, a theory that may perhaps be described—not necessarily in a derogatory manner—as "softly determinist." Drawing inspiration from the work of Emmanuel Levinas and his notion of ethics as originary openness to, and responsibility for, the alterity of the other, as well as from Heidegger's declaration that the human "ek-sists . . . in the realm of an exhortation or address,"[64] we can perhaps go as far as to suggest that this originary technicity is also an ethical condition.[65] If, as Stiegler has it, "the being of humankind is to be outside itself," the always already technical human is a human that is inevitably, prior to and perhaps even against his "will"—productively engaged with an alterity. Being in the world therefore amounts to being "in difference," which is also—for Levinas, as much as for Stiegler—being "in time": that is, having an awareness and a (partial) memory of what was before and an anticipation of what is to come. The idea of the originary self-sufficient, total man living in the state of nature is exposed here as nothing more than a myth, whereby the state of nature stands "precisely [for] the absence of relation."[66] As such, it marks the impossibility of the human (and also of tool use, art, language, and time), as well as of ethics. Originary technicity can thus be understood as a condition of openness to what is not *part of* the human, of having to depend on alterity—be it in the form of gods,

other humans, fire, or utensils—to fully constitute and actualize one's being. But this imperative to get outside of oneself and to be technical, that is, to bring things forth, to create, is perhaps also an ethical injunction to *create well*, even if not a *condition* of ethical behavior.

Introducing Levinas—the philosopher whose work is most readily associated with responsibility for the alterity of the human other that makes a demand on the self and that exerts a response from him or her—into our discussion of mediation and technological becoming may seem out of place here. Yet Stiegler's conceptualization of the human as always already technological, and therefore as responding to an expanded set of obligations, offers an opportunity to make Levinas's ethical theory applicable to what we can tentatively call "posthuman agencies."[67] As well as staging an encounter (though not a seamless one) between the Bergson/Deleuze and Levinas/Derrida positions on difference, *Life after New Media* therefore offers an attempt to think about the ethics of connectivity that does not posit any absolute difference of the parties and agents involved in an ethical encounter *in advance* but also recognizes the ethical significance of the process of *cutting through* the seamlessness of life and of the temporal stabilization of agents in this process. Contra Levinas, the processes of material differentiation do not have to be prior to ethical connectivity: the two can rather be seen as dynamically co-constituted. (Chapter 6 considers the ethical questions opened up by the position of originary technicity in more detail; Chapter 7 discusses the significance of creativity as an ethical imperative to "cut well" through the process of mediation.)

From Remediation to Mediation

The theory of originary technicity leads to one of the key propositions of our book: namely, that we have always been technical, which is another way of saying that *we have always been mediated*. This is not to suggest that terms such as "technologies" and "media" can be used interchangeably in any context. Indeed, one of the frequently unasked questions in new media studies concerns precisely the relation between media and technology. For Lev Manovich, the two seem to be the same thing. He thus defines new media as embracing "The Internet, Web sites, computer multimedia, computer games, CD-ROMs and DVD, virtual reality."[68] For Lister and coauthors, in turn, the term refers to "those methods and social practices of communication, representation, and expression that have developed using the digital, multimedia, *networked* computer and the ways that this machine is held to have transformed work in other media: from books to movies, from telephones to television."[69] Where Lister and colleagues'

definition incorporates the concept of remediation and recognizes the vitality of older media, Manovich seems to shy away from such nonlinear logic. Lister and colleagues' language of *recombination* contrasts against Manovich's language of *substitution* (specifically, of media by the computer). Let us reiterate here that by raising questions for such a linear narrative of new media development—from, say, Russian avant-garde cinema to computing—we are not denying the significance of the study of media as specific objects with specific histories. It is the way in which Manovich *collapses* the distinction between different historical media, where for him "all media become new media," that raises questions for what we understand not just as the specificity of new media (that is, the recognition that the way analog music production and distribution works is qualitatively different from its digital, networked counterpart), but also as their singularity, where the latter stands for "the temporal and affective performativity of their functioning."[70] Yet, given that "the content of media is always other media" and that the process of remediation is ongoing, we need to do more to combine our knowledge of media objects with our sense of the mediating process that is continually reinventing them.

This idea leads us to suggest that "remediation" can perhaps be better thought of as "mediation," as this latter term highlights the ongoing aspect of the mediating process without circumscribing it too early either by human desire and action or by specific media. Our understanding of mediation nevertheless differs from the way this term is currently used in many academic debates. In its most frequent applications, "mediation" is a term from Marxist theory that refers to "the reconciliation of two opposing forces within a given society (i.e., the cultural and material realms, or the superstructure and base) by a mediating object."[71] The way this term is taken up in media studies is as a "mediating factor of a given culture" that takes the form of "the medium of communication itself." As Aeron Davis explains in his book *The Mediation of Power*, "mediation" is a term applied to the study of social and political processes. The following kinds of questions are typically asked in analyses of what he terms "social shaping": "how do individuals and institutions use media and communication, and, conversely, how do media and communication shape individuals and institutions? How, in other words, do individuals in their use of media, inadvertently alter their behaviors, relations and discursive practices?"[72] (Davis's own contribution to the debate lies in his study of how mediation works in "elite actors and sites,"[73] rather than in ordinary people.) The traditional thinking of mediation is therefore quite structuralist: on identifying some stable structures in society that are usually then placed in an oppositional, dialectical relationship (say, elites versus ordinary people), mediation is mobilized as a third intervening and negotiating factor. However,

throughout the analysis, the very system—with its structuring elements (individuals, institutions, media)—remains firmly in place, even if some reorganization within the given structures (for example, change of individual behavior) and within the powers they are seen as yielding occurs as a result of such mediation. This rather static notion of mediation lends itself to the study of "effects" because it is premised on a set of determining assumptions around subjects, objects, and the relations between them. It is also usually rather humanist, in the sense that the key agents participating in, or undergoing, mediation are human—even if the term mediation refers to a nonhuman entity such as "labor" or "capital." Mediation is therefore primarily a tool for enacting some sociopolitical ends.

In his article "Mediatization or Mediation? Alternative Understandings of the Emergent Space of Digital Storytelling," Nick Couldry provides an overview of the use of the term "mediation" in various disciplines. He writes:

> As a term, "mediation" has a long history and multiple uses: for a very long time it has been used in education and psychology to refer to the intervening role that the process of communication plays in the making of meaning. In general sociology, the term "mediation" is used for any process of intermediation (such as money or transport). . . . Within media research, the term "mediation" can be used to refer simply to the act of transmitting something through the media.[74]

Couldry then goes on to acknowledge a somewhat cruder application of this concept in media studies since the early 1990s, whereby mediation stands for "the overall effect of media institutions existing in contemporary societies, the overall difference that media make by being there in our social world."[75] "Mediation" therefore seems to be just equivalent to "media saturation."[76] Couldry himself is more inclined to follow Roger Silverstone's definition of this term, wherein mediation "describes the *fundamentally, but unevenly, dialectical process* in which institutionalized media of communication (the press, broadcast radio and television, and increasingly the world wide web), are involved in the general circulation of symbols in social life."[77] It is clear from Couldry's definition that mediation is still very much about the workings of institutional media (be it in their mainstream or "alternative" guises): a process that for him occurs against the predefined canvas described as "the social." If for Couldry "mediation" remains an important term for grasping how media shape the social world,"[78] we are still here within the logic that carves out (or spatializes), and hence separates, entities such as "media" and "the social world" in order to analyze the relationships between them via an intermediary layer of "mediation." This is a rather static model, one that positions media as a primary term, a thing than then gets "mediated" and becomes part of a "media flow" as a result of something (interpretation, circulation,

etc.).[79] In our own understanding of mediation, however, we postulate a reversal of such a static position. For us, mediation is the originary process of media emergence, with media being seen as (ongoing) stabilizations of the media flow.

In order to develop a better understanding of the relationship between mediation and media, as well as between media and technology, we should pursue further the consequences of the theory of originary technicity, starting once again with Heidegger. Rather than go along with Poster's assessment that Heidegger's theory does not have much to offer if we want to understand information technologies or new media, we want to suggest that it can provide a framework for understanding historically specific and uniquely singular media within the wider technological framework. For us, media need to be perceived as particular enactments of *tekhnē*, or as temporary "fixings" of technological and other forms of becoming. This is why it is impossible to speak about media in isolation without considering the process of mediation that enables such "fixings." By saying that the logic of technology (as well as use, investment, and so on) underpins and shapes mediation, we are trying to emphasize the forces at work in the emergence of media and in the ongoing processes of mediation. If, to return to Bolter and Grusin, remediation is the mediation of mediation, and if this process is ongoing—even if historically specific—then mediation seems to us a more apposite term, philosophically, with which we can describe the being and becoming of media. The definition of "media" as temporary "fixings" of technological as well as, say, political becoming must also incorporate the communicative aspect that the term "media" is traditionally associated with. Yet what we have in mind here is more than facilitation of a dialog or discourse between two human entities. Media "communicate" in the sense of *always remaining turned toward what is not them*, in being a delimitation of the standing reserve of technology that has to be temporarily cut off but that must never be forgotten. *Every medium thus carries within itself both the memory of mediation and the loss of mediations never to be actualized.*

The potentiality of mediation inherent both in the existing media and in the technological enframing (what Heidegger calls *Gestell*, which we can also translate as "setup") of the world points to the inherently creative character of mediation, even if this process of creation has to entail erasure, forgetting, overcoming, and at times violent transformation. If mediation is partly a technological process, then it partakes of the force of *poièsis* that Heidegger identifies in all *tekhnē*: a force that brings-forth or "presences" the world.[80] It does so by means of *physis* (nature) or through the activity of an artisan or artist. Arguably, many contemporary media successfully blur the Heideggerian distinction between "the growing things" and things completed "through the crafts and the arts": we can think here of "biomedia," which involve "the

informatic recontextualization of biological components and processes," whereby "the biomolecular body is materialized as a mediation,"[81] bioart such as Stelarc's *Extra Ear: Ear on Arm*, soon to be equipped with a radio transmitter, and the Tissue Culture and Art Project's "semiliving" sculptures, artificial life, or even the social networking sections of the Internet that go under the name of Live Web (LiveJournal, Facebook, Flickr). The very process of media emergence involves creation, whereby human creative activity is accompanied (and often superseded or even contradicted) by the work of nonhuman forces. This process is also hybrid: it interweaves different entities, or rather it stabilizes, or "fixes," entities in the process of interweaving them. It is therefore not just that all media are remediated, as Bolter and Grusin have it; *mediation can also serve as a name for the dynamic essence of media*, which is always that of becoming, of bringing-forth and creation. However, in that process of ongoing mediation, with its inevitable ebbs and flows, singular stabilizations, fixes, or cuts to this process *matter*. Not only are these singular fixes or cuts responding to the wider historicocultural dynamics; they also, in their subsequent incarnations as "media," acquire a cultural significance.

The creative aspect of media flows is taken up by Scott Lash and Celia Lury in their book *Global Culture Industry: The Mediation of Things*, which also attempts to outline a different approach to mediation. Intended as an update to the Frankfurt School theories for the age of globalization, the book traces the circulation of media and art objects in the global world under two headings: "the thingification of media" and "the mediation of things." Interestingly, the authors go beyond the earlier static model of the relationship between media and their mediation in suggesting, after Adorno, that the media object "does not pre-exist its mediation" because the object of cinema, for example, "is itself constructed—coordinated, organized and integrated—in mediation, in mass movement."[82] Yet in insisting on the inherent mediation, movement, and hence vitality of contemporary media objects (the *Toy Story* movie, Swatch watches), Lash and Lury inscribe their theory in a rather linear framework of development. This vitality and movement seem to be for them signs only of the global age. Globalization here becomes a (philosophically if not materially) external impetus that changes the way the media universe is organized. Their frequent repetition of the "no longer" phrase in their book—as in media reproduction no longer allegedly being mechanical, no longer being "about" identity, standardization, or representation (claims that easily open themselves to being challenged)—closes the door to the philosophical positioning of mediation as the originary logic of media, while also raising questions as to the possible origins and source of that vitality. The underlying, although perhaps unintended, conclusion of *Global Culture Industry* is that it is only with

globalization that media become truly moving, that they gain a new level of intensity, that they are "lively" at last.

The Vitality of Media

In the final section of this chapter, we take a closer look at the question of the vitality, or "lifeness," of media, without equating the latter with the period of intense capitalism or globalization the way Lash and Lury seemingly do. Engaging with the ideas concerning duration, creativity, and life developed by Bergson, we shall posit a thesis that mediation can be seen as another term for "life," for being-in and emerging-with the world. This thesis arises out of a body of work rooted in cybernetics and systems theory, whereby the media are understood primarily in terms of an ecology and a dynamic system of relations rather than as a series of discrete objects. Yet we also have reservations for some overenthusiastic applications of systemic thinking to the question of mediation. This is why a notion of "the cut"—as both a conceptual and material intervention into the "media flow" that has a cultural significance—is important for us in understanding what it means to be mediated, and in taking responsibility for this process, from within the process itself. (Chapter 3 discusses the notion of "the cut" with relation to photographic and other media practices in more detail; chapters 4, 5, and 6 develop issues of agency and responsibility with regard to mediation in its attempt to outline "an ethics of lifeness.")

A rarely cited article in mainstream media, communications, and cultural studies, "A Theory of Mediation" by Gary Gumpert and Robert Cathcart, deserves closer attention precisely due to the effort on the authors' part to outline the conceptual force of "mediation" beyond its more established meanings as a channel that carries information, an awareness of media producers, or a set of media effects, while also pointing to the inherent logic of mediation in what Lister and coauthors call "technological and biological things." Drawing on McLuhan's theories, Gumpert and Cathcart start by postulating that media become "inseparable from the human communication process"[83]—a state of events that disallows any idea of the full self-determination of the human. Indeed, for the two authors, humans can never escape "the determining ends of their technologies."[84] The determinist tenor of this latter phrase is modified by their recognition of the more complex and interlaced dynamics of agencies and forces at work in the media environment. They write, "There are always forces outside ourselves that limit or change our alternatives. Part of these forces are the technologies we have become dependent on. . . . No one today can operate apart from the influences of mediation, because our functional, cultural, social, and

psychological identities are, in large part, dependent on the instrumentalities of media."[85]

Interestingly, Gumpert and Cathcart's definition of media is not limited to those media that have broadcast or mass potential. The authors are critical of the "limited concept of mediation that ignores several millennia of technological development and influence"[86]—cave paintings, clay tables, papyrus, architecture—and argue that a "theory of mediation should reconcile the current bias by stressing the development and continuity of media technology and its effects."[87] The most significant aspect of Gumpert and Cathcart's theory is their proposition that "human and media development are intertwined in a helixlike embrace."[88] They then go on to outline an intriguing parallelism between biological and technical evolution—an idea that has also been explored by thinkers such as Leroi-Gourhan, Simondon, Lem, and Stiegler but that gains a new inflection when linked with the concept of mediation. Gumpert and Cathcart write:

To the extent that humans' mental processes allow them to make complex and varied extensions of themselves, one might see the development of media technology, in the loosest sense, as a form of biological development. We may infer that the principles of biological evolution can be used to explain media evolution. We could call this a biotechnological explanation of mediation.[89]

The literalness of this proposition, or its scientific "truth," is of less interest to us than its conceptual and rhetorical force, that is, the idea that looking at analogies between biological organisms and media in terms of their complexity, adaptability, and specialization may allow us to shift the perspective of what counts as media, or even lead to the recognition of the *poietic*, creative impulse, beyond that of human volition, in what Heidegger called "the growing things of nature as well as whatever is completed through the crafts and the arts."[90] *It is here again that our strategic distinction between media and mediation becomes important because, arguably, it is also a distinction between appearing "live" and becoming "life-like."*

We want to suggest that mediation, according to the way we understand it, gives us insight into the *lifeness*, or *vitality*, *of media*. By this we mean something more than just the *liveness* of media, which we know about through television studies of catastrophes and other "newsworthy" occurrences (which we discuss in chapter 2). We are referring instead to the possibility of the emergence of forms always new or potentiality to generate unprecedented connections and unexpected events. Media only intimate at lifeness through their appeal to "live coverage," the lively, flashing "look" of their animations and their representationalist aspirations aimed at closing the gap between the viewer and the screen; they ultimately foreclose on life because they reduce it to a linear and predictable set of outcomes. Consequently, they end up

undermining "the vitality of evolutionism"[91] while also foreclosing in advance any true radical creativity and inventiveness that life is capable of generating. The apparent *live*ness of media is therefore only a mask for their enhanced social and economic utility. Yet if media can only appear to be "live," mediation can serve as an opening onto the underlying temporality of media, that is, its lifeness. To make sense of this latter concept, we turn to Bergson's intuitive method.

Bergson proposes a method or means of comprehending time through intuition. Intuition bridges instincts and the intellect, physical actions, and reactions with our habits of thought. Although it is predominantly affiliated with instinct, and is a biological more than a psychological tendency, intuition reconnects ordinary, scientific, or philosophical knowledge with life, where life is understood by Bergson to be synonymous with time, movement, and the process of creative evolution. Intuition therefore enables us to apprehend that which is in process. It is not *itself* equivalent to a process, but it is nevertheless a movement out of our own duration that enables us to connect with a wider one.[92] We are able to connect by recognizing our relationality with that which we perceive or observe. In as far as its central premises are those of process and relationality, intuition should be distinguished from affect, which—at least in its current derivation—frequently seems to operate more in terms of causation and mutuality.[93] Where affect is a synonym for the mutual effects of subjects and objects, minds and bodies, intuition signals their irreducibility. It is this irreducibility that for Bergson is denied in all forms of intellectual knowledge.

Our intellects tend to divide the object world, as a result of which we conceive of change as a succession of states from A to B, from youth to old age, from past (represented as "analog") to present (which gets equated with "digital"). We immobilize what is mobile, turn time into space, in order, Bergson suggests, to master it. Through measurement and prediction, we are able to act and intervene as if from outside and above. Having cut reality up into manageable parts, we then reassemble it, recreating movements that remain resolutely "false," or mere semblances of movement with no real duration. Notable examples, for Bergson, include Spenser's evolutionary theory and the "cinematograph." Bergson is opposed to habits of thought that he terms "mechanism" and "finalism,"[94] and that we might better understand as cause-and-effect determinism and teleology. They may be useful, principally by enabling us to act in a world rendered knowable and therefore controllable, but they are still misleading, and propose a view of time as space—which for Bergson is simply erroneous. Time is indivisible, continuous and unknowable, at least to the intellect. In order to "know" it, we must rediscover another, perhaps atrophied kind of knowledge, one more aligned with our instincts and by no means easy to access.

Intuitive knowledge, or contact with duration, is not (unlike affect) a given. It is achieved with difficulty, and even then it is fleeting—and thus impossible to sustain. Not to be conflated with "a feeling, an inspiration" or a "disorderly sympathy,"[95] it is perhaps more like a moment of insight that moves theory on[96] or contributes to knowledge not least by challenging its very foundations. Intuitive knowledge comes at the cost of ready-made categories and concepts. It is literally thinking "out of the box." Antithetical to knowledge-as-we-know-it, intuition opens us to the possibility of knowledge-as-it-could-be[97] and eschews generalities for specificities, representations for a certain realism toward events in process. It also implies a different mode of communication—more analogical, imagistic, metaphorical—that might seem anathema to the conventional scientist or even the more professionalized humanities scholar, but not, perhaps, to the philosopher-feminist or the artist.

Bergson's distinctions—between true and false problems, differences in degree and differences in kind—are not absolute but rather methodological. Through intuition, he seeks to distinguish between entities in order to understand the relation between them better. However, his concepts of time and space, life and matter, remain, at least in parts of his work, problematically unrelated, and this may have encouraged, in subsequent academic work inspired by his writings, a habit of thinking in terms of process without the specificity, "precision," or singularity that Bergson himself stresses in *The Creative Mind: An Introduction to Metaphysics*. We should note that in his emphasis on process, Bergson is not interested in explaining the "totality of things."[98] He is rather interested in the particular "thing" that demands not a mere restatement but rather a reinvention of the philosophical problem[99] and that involves an effort to become conscious of becoming that extends the self in the direction of the other.[100]

Given that the particular "thing" of which Bergson speaks is not fixed—at least if it is living, organic—it may be conceived of not so much as an object but as an event. As Derrida puts it in an interview titled "Artifactualities,"

The event is another name for that which, in the thing that happens, we can neither reduce nor deny (or simply deny). It is another name for experience itself, which is always experience of the other. The event cannot be subsumed under any other concept, not even that of being. The "there is" ["*il y a*"] or the "that there is something rather than nothing" belongs, perhaps, to the experience of the event rather than to a thinking of being.[101]

Bergson also identifies the event or eventness of the thing as an experience predicated on the sacrifice of familiar concepts and categories of thought. "The truth is," he says, "that an existence can be given only in an experience."[102] He rejects "words" in favor of "things,"[103] or, more precisely, he rejects the equivalence between words and things that characterizes language as a nomenclature and representation as

realism. Seeking to bypass language by referring to the *inexpressibility* of intuitive knowledge, Bergson posits intuition as the "direct vision"[104] of the mind and of life (if not matter).

Our adherence to Bergson's philosophical method does not extend to this double separation: of the event from language and mediation, and of life (understood, ultimately, in spiritual terms) from matter. Instead, we will expose Bergson's three basic laws or rules of intuition to Derrida's argument about the irreducibility of the event and its mediation, and to Barad's insistence on the dynamism of matter across all scales, down to and including, in our case, particles—the "building blocks" of life. For Derrida, it is not so much that the event can only be experienced; it is that the event constitutes experience that, in turn, is always already mediated by teletechnologies, such as television and other telecommunication networks, but also language itself. This experience does not have to be fully conscious and will always, to some extent, escape articulation. Yet, for us to try and make sense of it, to incorporate it into the theoretical framework of "mediation," we need it to become part of the work of *différance*, whereby we recognize that terms such as "media," "event," and "experience" "have not fallen from the sky fully formed, and are no more inscribed in a *topos noētos* [the eternal world of ideas], than they are prescribed in the gray matter of the brain."[105] If we take mediation as our central problem and seek to establish its difference in kind from media by emphasizing its temporality, we do not do so at the expense of singularity. Indeed, we are driven by a requirement or even an ethical injunction to cut across the flow of media in order to say something about them.[106] Doing so requires us to always consider time in relation to space, matter in relation to life. Even if the states of media are contingent actualizations of the process of mediation, the fact remains that, as Derrida has it, "there is not *only* process."[107]

Mediation is therefore also a differentiation, a "media becoming," that is always at the same time a process of "becoming other." Our book's philosophical trajectory is not therefore faithfully "Bergsonian." Instead, we aim for a critical encounter between Bergson's notion of "creative evolution" (and Delezue's embracing of its spirit) with Derrida's notion of "différance," in which there can be heard echoes of both deferral and distantiation and which suspends any absolute point of departure in the production of meaning.[108] Indeed, it is around the notion of differentiation that we part company with Bergsonism. Bergson accounts for difference as immanent differentiation from within that drives the production of "forms ever new." This idea comes head to head in this volume with the Derridean understanding of difference as a (quasi)transcendental place of absolute alterity that cannot be subsumed by the conceptual categories at our disposal because these very categories rely on the process

of differentiation, on not-being-other-categories. Even if the two philosophical traditions—the "immanentist" one as encapsulated by the work of Spinoza, Bergson, and Deleuze, and one of transcendence as developed by philosophers such as Heidegger, Levinas, and Derrida—both share an interest in the possibility of change,[109] we will attempt to negotiate between "differentiation within" the flow of live, biotechnical media on the one hand, and, on the other hand, the cut or interruption to this flow of difference that comes from a position of a formal outside, and that calls us to a response and responsibility toward the other.[110] The negotiation between the Bergsonian and Derridean philosophical traditions is nevertheless of interest to us only as far as it allows us to think, move with, and respond to the multiple flows of mediation.

Derrida's term *différance*—a word that looks like a "kind of gross spelling mistake"[111] but that loses its "erroneous" status when pronounced and thus introduces both error and play into discourse—points to precisely such spatiotemporal meanderings and negotiations. "In the delineation of *différance*," writes Derrida, "everything is strategic and adventurous. Strategic because no transcendent truth present outside the field of writing can govern theologically the totality of the field."[112] Any pretense toward rooting media analysis in "the social," "subjectivity," or indeed the unproblematic notion of "media" must therefore be seen as nothing more than pretense. It is not that many traditional forms of media analysis do not recognize this pretense, or the need for it, but what we find lacking in many of them is the kind of adventurousness Derrida is talking about, where this strategy of spatiotemporal differentiation is not orientated toward a final goal or theme but is rather a "strategy without finality, what might be called blind tactics, or empirical wandering if the value of empiricism did not itself acquire its entire meanings in its opposition to philosophical responsibility."[113]

What will therefore hopefully emerge through this process of playful yet philosophically rigorous intervention in this book will be a more dynamic, networked, and engaged mode of working on, in and with "the media," where critique is always already accompanied by the work of participation and invention and where empiricism becomes a serious strategy of both "doing things with words" and "doing things with things."

Notes

Introduction

1. Although we will argue throughout this volume, and in chapter 2 in particular, for the configuration of media and liveness, mediation, and life, we will also seek to avoid Bergson's "false division" between life and matter. This division is "false," or problematic, because it enables him to abstract life from material and symbolic forms—including, in our case, media forms. Our claim is that although media continue to stake their claim to liveness (live TV, live Twitter feeds, etc.), by virtue of being inseparable (though different *in kind*) from processes of mediation, media are co-constitutive of life itself—which, under certain circumstances, and through a sequence of reductionist operations, can subsequently also take a media form (a CD with one's genetic profile; synthetic biology database, etc.).

2. See Benjamin Peters, "And Lead Us Not into Thinking the New is New: A Bibliographic Case for New Media History," *New Media and Society*, 11, no. 1–2 (2009): 13–30.

3. CCD stands for "charge-coupled device," in which electrical charge can be manipulated to obtain translation of signal into digital value. It is frequently used in digital cameras.

4. Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 25.

5. Wendy Hui Kyong Chun, "Introduction: Did Somebody Say New Media?" In *New Media, Old Media*, ed. Wendy Hui Kyong Chun and Thomas Keenan (New York: Routledge, 2006), 9.

6. Chun, "Introduction," 3.

7. See, for instance, Sarah Kember, *Cyberfeminism and Artificial Life* (London: Routledge, 2003), and Joanna Zylinska, *Bioethics in the Age of New* Media (Cambridge, MA: MIT Press, 2009).

8. The term "lifeness" we propose in the book is aimed to go beyond what we will argue is quite a static view of media as espoused by terms such as "live TV," "live news," and so on, in an attempt to convey what we see as the dynamic vitality of mediation processes.

9. Rosi Braidotti, *Nomadic Subjects: Embodiment and Sexual Difference in Contemporary Feminist Theory* (New York: Columbia University Press), 17.

10. Bernard Stiegler, *Technics and Time, 2: Disorientation*, trans. Stephen Barker (Stanford: Stanford University Press, 2009), 186.

11. Lucy Suchman, *Human–Machine Reconfigurations* (Cambridge: Cambridge University Press, 2007), 206.

12. Rosi Braidotti, *Transpositions* (Cambridge: Polity Press, 2006), 6.

Chapter 1

1. See Giles Deleuze, *Bergsonism* (New York: Zone Books, 1998), 13–35.

2. See Gary Hall, *Digitize This Book! The Politics of New Media, or Why We Need Open Access Now* (Minneapolis: University of Minnesota Press, 2008), 210, 214.

3. Joost Van Loon's book *Media Technology: Critical Perspectives* (Maidenhead, UK: Open University Press, 2007) represents for us precisely such an example of an unfulfilled promise to engage in a serious and rigorous manner with the notion of mediation.

4. The comparison here is between media and mediation. If we apply the same method to a single medium such as photography (see Sarah Kember, "The Virtual Life of Photography," *Photographies*, 1, no. 2 (September 2008): 175–203), we can investigate its specific ontology or identify it as a difference in kind from other media.

5. In her critique of dominant narratives about the media, Gitelman points out that media "tend unthinkingly to be regarded as heading a certain 'coherent and directional' way along an inevitable path, a history, toward a specific and not-so-distant end. Today, the imagination of that end point in the United States remains uncritically replete with confidence in liberal democracy and has been most uniquely characterized by the cheerful expectation that digital media are all converging toward some harmonious combination or global 'synergy,' if not also toward some perfect reconciliation of 'man' and machine" in *Always Already New: Media, History, and the Data of Culture* (Cambridge, MA: MIT Press), 3.

6. Hall, *Digitize This Book!*, 161.

7. Martin Lister makes a similar argument about photography in his introduction to his edited volume *The Photographic Image in Digital Culture* (London: Routledge, 2005). He argues that photography, always a heterogeneous medium with a complex and problematic relation to the truth, was assigned a more homogeneous and significantly less complex status with the advent of digitization and the presumed effects the latter was having on photographic truth.

8. David Teather, "End of Story for Hardbacks? Amazon's Ebook Milestone," *The Guardian*, July 21, 2010.

9. Stanislaw Lem, *Summa Technologiae* (Lublin: Wydawnictwo Lubelskie, 1984), 8. An English translation of this book by Joanna Zylinska is forthcoming from the University of Minnesota Press in 2012.

10. Alan Turing, "Computing Machinery and Intelligence," *Mind* 59 (October 1950): 433–460.

11. Fred Ritchin, "The End of Photography As We Have Known It," in *Photovideo: Photography in the Age of the Computer*, ed. Paul Wombell (London: Rivers Oram Press, 1991), 8–15. For a discussion of photography and digitization, see Sarah Kember, *Virtual Anxiety. Photography, New Technology and Subjectivity* (Manchester: Manchester University Press, 1998).

12. Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media*, (Cambridge, MA: MIT Press, 2000), 187.

13. Nicholas Carr, *The Shallows: How the Internet Is Changing the Way We Think, Read and Remember* (New York: WW Norton & Co, 2010).

14. Martin Lister, Jon Dovey, Seth Giddings, Iain Grant, and Kieran Kelly, *New Media: A Critical Introduction*, 2nd ed. (New York: Routledge, 2008), 4.

15. Lister et al., *New Media*, 77.

16. See Bolter and Grusin, *Remediation*, 19; Lister et al., *New Media*, 95. This point is particularly important when we consider the degree to which media are recombined not only with information but with biotechnologies (see Sarah Kember, "Doing Technoscience as (New) Media," in *Media and Cultural Theory*, ed. James Curran and David Morley [New York: Routledge, 2006]).

17. Lister et al., *New Media*, 94.

18. Lister et al., *New Media*, 95.

19. Bolter and Grusin, *Remediation*, 9.

20. Lem, *Summa Technologiae*, 205.

21. Bolter and Grusin, *Remediation*, 5.

22. Bolter and Grusin, *Remediation*, 25–26.

23. Bolter and Grusin, *Remediation*, 26.

24. Bolter and Grusin, *Remediation*, 14.

25. Bolter and Grusin, *Remediation*, 14.

26. Bolter and Grusin, *Remediation*, 55.

27. Bolter and Grusin, *Remediation*, 55, emphasis in original.

28. Bolter and Grusin, *Remediation*, 59.

29. Bolter and Grusin, *Remediation*, 58n7.

30. Carolyn Marvin, *When Old Technologies Were New* (New York: Oxford University Press, 1988), 3.

31. Marvin, *When Old Technologies*, 8.

32. Marvin, *When Old Technologies*, 8.

33. Gitelman, *Always Already New*, xi.

34. Gitelman, *Always Already New*, 9.

35. See Gitelman, *Always Already New*, 8.

36. Katherine N. Hayles, *My Mother Was a Computer: Digital Subjects and Literary Texts* (Chicago: University of Chicago Press, 2005), 33.

37. See Karen Barad, *Meeting the Universe Halfway* (Durham, NC: Duke University Press, 2007).

38. See, for example, Matthew Fuller, *Media Ecologies: Materialist Energies in Art and Technoculture* (Cambridge, MA: MIT Press, 2005).

39. Examples of media and communications books that expound such a spatial paradigm include Manuel Castells, *The Rise of the Network Society* (Oxford: Blackwell, 1996), and Nick Couldry and Anna McCarthy (eds.), *MediaSpace: Place, Scale and Culture in a Media Age* (New York: Routledge, 2003).

40. "Today, the instantaneous world of electric information media involves all of us, all at once. Ours is a brand new world of. Time, in a sense, has ceased and space has vanished," McLuhan on McLuhanism, WNDT Educational Broadcasting Network, 1966.

41. Lister et al., *New Media*, 95.

42. Lister et al., *New Media*, 94.

43. Some of the ideas on Bernard Stiegler's work included in this section of the chapter were originally developed in Joanna Zylinska, "Playing God, Playing Adam: The Politics and Ethics of Enhancement," *Journal of Bioethical Inquiry* 7, no. 2 (2010): 149–161.

44. Mark Poster, "High-Tech Frankenstein, or Heidegger Meets Stelarc," in *The Cyborg Experiments: The Extensions of the Body in the Media Age*, ed. Joanna Zylinska (London: Continuum, 2002), 20.

45. Martin Heidegger, "The Question Concerning Technology," in Martin Heidegger, *Basic Writings*, ed. David Farrell Krell (New York: Harper & Row, 1977), 304.

46. Heidegger, "The Question Concerning Technology," 293.

47. Heidegger, "The Question Concerning Technology," 293.

48. Poster, "High-Tech Frankenstein," 20.

49. Poster, "High-Tech Frankenstein," 20.

50. Heidegger, "The Question Concerning Technology," 287.

51. Heidegger, "The Question Concerning Technology," 287.

52. Heidegger, "The Question Concerning Technology," 295.

53. Poster, "High-Tech Frankenstein," 18.

54. Heidegger, "The Question Concerning Technology," 288.

55. Heidegger, "The Question Concerning Technology," 299.

56. Heidegger, "The Question Concerning Technology," 300.

57. Heidegger, "The Question Concerning Technology," 300.

58. For an exposition of this notion of ethics as a response to the alterity of the other, see Emmanuel Levinas, "The Trace of the Other," in *Deconstruction in Context*, ed. Mark C. Taylor (Chicago: University of Chicago Press, 1986), and Joanna Zylinska, "A User's Guide to Culture, Ethics and Politics," in *The Ethics of Cultural Studies* (London: Continuum, 2005).

59. Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins (Stanford: Stanford University Press, 1998), 187, emphasis in original.

60. Stiegler, *Technics and Time, 1*, 187.

61. Cited in Stiegler, *Technics and Time, 1*, 188.

62. *The Ister* (2004), directed by David Barison and Daniel Ross.

63. It has to be acknowledged that Stiegler's work runs against some of the very same "humanist" limitations that his work is frequently used to critique. This is evident in the way he reintroduces a number of problematic anthropological distinctions such as those between culture and nature, or human and animal, into his argument outlined in *Technics and Time*.

64. Heidegger, "The Question Concerning Technology," 309.

65. Ethics, for Levinas, is not something imposed from outside or above; instead, ethics is inevitable. An ethical event occurs in every encounter with difference, with the "face" and discourse of the other that addresses me and makes me both responsible and accountable (even if I ultimately decide to turn my back on this difference or even annihilate it). I am thus always already a hostage of the other, of his or her ethical demand.

66. Stiegler, *Technics and Time, 1*, 128.

67. This point has been argued before by Joanna Zylinska in *Bioethics in the Age of New Media* (Cambridge, MA: MIT Press, 2009), x–xi).

68. Lev Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 19.

69. Lister et al., *New Media*, 2.

70. Hall, *Digitize This Book!*, 214.

71. http://en.wikipedia.org/wiki/Mediation_%28Marxist_theory_and_media_studies%29.

72. Aeron Davis, *The Mediation of Power: A Critical Introduction* (London: Routledge, 2007), 13.

73. Davis, *The Mediation of Power*, 14.

74. Nick Couldry, "Mediatization or Mediation? Alternative Understandings of the Emergent Space of Digital Storytelling," *New Media and Society* 10, no. 3 (2008): 373–391, 379.

75. Couldry, "Mediatization or Mediation?" 379.

76. The concept of mediation has made an appearance in various publications on new media (Leah A. Lievrouw and Sonia Livingstone [eds.], *The Handbook of New Media* (London: Sage, 2006); Van Loon, *Media Technology*), but it has so far remained rather underdeveloped, with the concerns of the mediation "process" just being seen as a function of new media "objects."

77. Cited in Couldry, "Mediatization or Mediation?" 380.

78. Couldry, "Mediatization or Mediation?" 381.

79. Couldry describes mediation as "capturing a variety of dynamics within media flows" in "Mediatization or Mediation?" 380.

80. Heidegger, "The Question Concerning Technology," 293.

81. Eugene Thacker, "What Is Biomedia?," *Configurations* 11.1 (2003): 47–79.

82. Scott Lash and Celia Lury, *Global Culture Industry: The Mediation of Things* (Cambridge: Polity, 2007), 111.

83. Gary Gumpert and Robert Cathcart, "A Theory of Mediation," in *Mediation, Information and Communication*, ed. B. Ruben and L. Lievrouw (New Brunswick, NJ: Transaction, 1990), 23.

84. Gumpert and Cathcart, "A Theory of Mediation," 23.

85. Gumpert and Cathcart, "A Theory of Mediation," 24.

86. Gumpert and Cathcart, "A Theory of Mediation," 26.

87. Gumpert and Cathcart, "A Theory of Mediation," 26.

88. Gumpert and Cathcart, "A Theory of Mediation," 35.

89. Gumpert and Cathcart, "A Theory of Mediation," 31.

90. Yet the limitation of Gumpert and Cathcart's theory is ultimately revealed in their return to (and of) the human through the humanist backdoor in their media ecology, as is evident in their declaration that media transformation comes from the creative impulse in humans (or, as they put it, "the impulse to extend and replicate personal experiences" in "A Theory of Mediation," 27), without taking into account the creative force of media themselves. Now, the recognition of the human singularity within a given media ecology is not a problem per se, both in terms of the affordances and effectivities it opens up, and the philosophical reflection it allows for, provided that it is not confused with human primacy or species supremacy. Yet this singularity of the human and of human agency has to be reconciled with the multiple singularity of media and with the interwoven processes of mediation.

91. Sarah Kember, "The Virtual Life of Photography," *Photographies* 1, no. 2 (September 2008): 180. For a discussion of the foreclosure of creativity in evolutionary art and games, see also Sarah Kember, "Metamorphoses: The Myth of Evolutionary Possibility," in *Inventive Life: Approaches to the New Vitalism*, ed. Mariam Fraser, Sarah Kember, and Celia Lury (London Sage Publications, 2005).

92. Deleuze, *Bergsonism*, 32. Key elements of our approach to Bergson were outlined in Sarah Kember, "Creative Evolution? The Quest for Life (on Mars)," *Culture Machine: InterZone* (March 2006), http://www.culturemachine.net/index.php/cm/article/view/235/216. Bergson's intuitive method is applied to the question of the nonhuman and to the question of feminist ethics in

Sarah Kember, "No Humans Allowed? The Alien in/as Feminist Theory," *Feminist Theory* 12, no. 2 (2011): 183–199.

93. As Michael Hardt puts it, "Affects require us, as the term suggests, to enter the realm of causality, but they offer a complex view of causality because the affects belong simultaneously to both sides of the causal relationship. They illuminate, in other words, both our power to affect the world around us and our power to be affected by it," in "Foreword: What Affects are Good For," in *The Affective Turn: Theorizing the Social*, ed. Patricia Ticineto Clough with Jean Halley (Durham, NC: Duke University Press, 2007), ix.

94. Mechanism for Bergson is an approach within science and evolutionary theory in which nature is regarded as a machine "regulated by mathematical laws" (Bergson, *Creative Evolution*, trans. Arthur Mitchell [New York: Random House, The Modern Library, 1941], 51). Finalism tends to see reality as the realization of a plan. For Bergson, these approaches converge in that they are both "reluctant to see in the course of things generally, or even simply in the development of life, an unforeseeable creation of form" (51).

95. Deleuze, *Bergsonism*, 13.

96. See Elizabeth Grosz, *The Nick of Time: Politics, Evolution and the Untimely* (Durham: Duke University Press, 2004), 237.

97. This phrase is derived from Christopher G. Langton's paper "Artificial Life," in *The Philosophy of Artificial Life*, ed. Margaret Boden (Oxford and New York: Oxford University Press, 2006). The possibilities of artificial life are examined in Sarah Kember, *Cyberfeminism and Artificial Life* (New York: Routledge, 2003).

98. Henri Bergson, *The Creative Mind: An Introduction to Metaphysics* (New York: Kensington Publishing, 2002), 31.

99. See Bergson, *The Creative Mind*, 51.

100. See Bergson, *The Creative Mind*, 33.

101. Jacques Derrida, "Artifactualities," in Jacques Derrida and Bernard Stiegler, *Echographies of Television*, trans. Jennifer Bajorek (Cambridge: Polity Press, 2002), 11.

102. Bergson, *The Creative Mind*, 50.

103. Bergson, *The Creative Mind*, 83.

104. Bergson, *The Creative Mind*, 32.

105. Jacques Derrida, "Différance," *Margins of Philosophy*, trans. Alan Bass (Chicago: University of Chicago Press, 1982), 11.

106. See Hall, *Digitize This Book!*, 208–215, and Joanna Zylinska, *Bioethics in the Age of New Media* (Cambridge, MA: MIT Press, 2009), 30.

107. Derrida, "Artifactualities," 7.

108. See Derrida, "Différance."

109. See Daniel W. Smith, "Deleuze and Derrida, Immanence and Transcendence: Two Directions in Recent French Thought," in *Between Deleuze and Derrida*, ed. Paul Patton and John Protevi (London: Continuum, 2003), 61.

110. Paul Patton and John Protevi, "Introduction," in *Between Deleuze and Derrida*, ed. Paul Patton and John Protevi (London and New York: Continuum, 2003), 22.

111. Derrida, "Différance," 3.

112. Derrida, "Différance," 7.

113. Derrida, "Différance," 7.