Introduction

What does contemporary technology make of the human being?

This pressing question may sound like a lament over the defiguring of the beautiful, classical image of humanity. It can also sound like a jubilant cry of delight at the prospect of finally overcoming the obsolete figure of humanity and moving toward a better trans- or posthumanity. The question of the fate of technological humanity has not disappeared over the course of the last century, and this seems to reaffirm the need to ask ever anew what the marvelous new technologies make of the humanity that made them in the first place.

The starting point of the following work, however, is the claim that such considerations tend to move in circles in which it is impossible to see how technology, interpreted as a neutral instrument of human intentions, could actually amount to anything other than a reaffirmation of the very humanity that employs it. As long as technology is considered in an instrumental framework, the most marvelous and the most monstrous technologies that could be imagined still bear the (wise or unwise) intentions of the human being. They thus retain the human even when they promise or threaten to exceed its image.

The very question of technological humanity is marked by a fundamental inadequacy when it is based on the circle of intent and instrument. The instrumental conception of technology downplays the ambiguity that results from the fact that technology tends to escape its user's intentions by following its own internal logic (its *pharmakon* effect discovered by Jacques Derrida and further developed by Bernard Stiegler in particular). It overlooks the consequences of how technology innervates the human world (its *environmentality*, whose precise character was already a matter of dispute between Martin Heidegger and the German Philosophical

1

anthropologists in 1920s and remains so today between thinkers like Peter Sloterdijk and Erich Hörl). It ignores the intertwinement of technology with the very fabric of the nonhuman earthly world in general (as seen in the phenomenon of the anthropocene first designated by Paul Cruzen). This blindness arises from a failure to ask what technology is in itself. In chapter 2 of the present work, I will attempt to shed light on this obscurity not by asking what technology is in the narrow sense (an instrument coupled to human science) but what *technics* is in the most general possible sense, a sense that also includes human (and perhaps other living beings') skills and techniques, singular artworks and industrial production systems, and seemingly immaterial codes and programs. I will show how this general sense of technics has evolved from initially being seen as an instrument of human skill, then being interpreted as autonomous mechanism, before finally being seen as lifelikeness in contemporary bio- and information technologies. The last stage makes apparent what was to some extent already there at the outset: technics has a quasi-autonomous, quasi-living, quasi-intelligent way of being that I designate using the term *bio-technics*, a notion illustrated by contemporary bio- and information technologies but that I will use in a much more general sense. Bio-technics is not a simple projection of human intentions. It has a quasi-life of its own insofar as it has its own nonconscious directedness, which can be called "intentionality" only if the term *intention* is severed from its original meaning such that it can also be attributed to the programs that animate the simplest living entities, such as cells, as well as to technical beings.

Technics was always constructed in order to prolongate human (or other living beings') capacities, and in this respect it has been constructed in the *image* of human beings (and other living beings). Technics also has always had a speculative role, acting as a mirror of their human constructor, hence the fears of human degradation and the dreams of human enhancement that emerge from this technical mirror image. Whatever appears alien (monstrous/marvelous) in a technical context seems to reflect some alienness (monstrosity/marvel) in the human being itself so that the inevitable distortions in the technical image of the human become the origin of distortions in the human. I will present the complexities technics introduces to the study of the human in the first two chapters of this book, giving an introductory overview of the problem field. In chapter 1, I will show how a utilitarian conception of technics projects a utilitarian vision of the human being who restricts itself to being a subject of technics and an object of anthropotechnics. I will also show how the

limits of this perspective become visible in the view of the human as an educable, free, and creative being that prevails in the human sciences. The idea of anthropotechnics presupposes this idea of the plasticity and transformability of the human, which ultimately undermines the very possibility of showing where the image of the human has been destroyed or overcome. There is no pre-given figure of the human because its very nature lies in its capacity to reinvent its figure. Finally, I will point to the discrepancy between technological humanity and the subject of philosophy, a discrepancy that makes the philosophical questions surrounding technics and humanity so difficult. Classical philosophy thinks that insofar as technological humanity is a historical figure of the human, and even one possible figure of the historicity of the human, it is distinct from the subject of philosophy, who is ultimately only the self-consciousness that belongs to the act of pure thinking. But at least since Heidegger contemporary philosophy has emphasized that philosophy always takes place in a given historical situation that it needs to account for, which means that today the subject of philosophy must also account for itself in its technical situation. The subject of philosophy cannot be limited to a pure reason that thinks itself untouched by its technical supports, but on the contrary, it must question technicity as the fundamental relation that ties humans and nature together. The core of the book is an inquiry into this question. In further chapters I show how Martin Heidegger and Philosophical anthropologists such as Helmuth Plessner, Michel Foucault, Jacques Derrida, Bernard Stiegler, and Giorgio Agamben discover and deconstruct the question of technological humanity. These chapters are particularly concerned with indicating how the figure of humanity has tended to fade away as technics became a philosophical question and how the idea of an originary technicity that coincides with life itself gradually emerged in its place. In the end, the bio-technicity that characterizes contemporary technics is also an image of the bio-technicity that turns out to be the condition for any figure of humanity (anti-, trans-, post-, non-in-human humanity). This bio-technicity is ultimately shared by humans, other living beings, and technical beings: bio-technics is how existence is given and gives itself under technological condition.

At first glance, the deconstruction of technological humanity and the emergence of a general bio-technics seems to follow from a very particular diagnosis of the contemporary world, from a metaphysics of the present era, as Michel Foucault would put it. We do find ourselves in an unprecedented technological situation, its ground lies in modern thermo-

dynamic and nuclear technologies and its present state lies in information technologies and bio-technologies. It is necessary to ask in all manners how this technological situation has affected human existence and human self-understanding. To ask what contemporary technologies make of the human being is not just to echo yet again the age-old lament of departing generations who are puzzled by the latest inventions nor the jubilation of new generations spurred on by new hopes, for there is something specific to contemporary technologies that puts the human being at stake in a new way. What is novel in contemporary technologies is their reflexive character: they are directed back onto the human beings who have built them, instead of primarily cultivating, modifying, and exploiting external nature, as earlier technologies did. The most characteristic contemporary technologies are bio- and information technologies, where the *bio* is also the human body and the *info* is also human thought. Progress in these domains seems to have an unprecedented impact on the human being's own mind and body. This is not to say that older technologies did not affect the human being. All technologies mark their users. For example, medicine and the printing press have long contributed to the development of the human mind and body. But while older technologies have generally been seen as enhancing or contaminating the human situation, there is today a widespread foreboding that contemporary technologies aim to change what the human being itself means, such that with the progress of technology, the human species feels that it runs the risk of divinizing or defiguring itself.

Are those forebodings justified? What do they really mean? These questions are much more complicated than they appear at first sight, for not only does the nature of contemporary technologies change extremely rapidly, thus obscuring the meaning technologies may have, but also and in particular the nature of the "human being" that they are suspected of transforming is itself obscure. Moreover, the question of the human being is reflected back into the philosophy that seeks not only to inquire into the anthropos but also to investigate human existence as the site of the subject of philosophy itself.

Before going any further, I need to digress for a moment to remark on my linguistic choices, and these can actually be read as another metaphor for the contemporary difficulty of knowing what is happening to the human being. The reader may have noticed that I have taken the liberty of referring to the human being with the pronoun *it* and with its derivatives (e.g., *itself*). I have accustomed myself to this use of *it* and I

have also extended it to all instances where one would normally expect to find a third-person singular pronoun, with the exception of references to specific persons whose gender has hitherto been designated unambiguously (Plato is *he*). This choice, as well as this digression justifying it, are of course due to the crisis surrounding the third-person singular pronoun that has gripped the English language for decades now and that is by no means unrelated to social and to anthropo- and bio-technical progress. I explain my choice in a footnote,[1] and I simply hope that the reader will be comfortable with this choice, which is not meant to convey any value judgments but rather to avoid common pitfalls surrounding gender and grammar. I suggest that you read this book as a test of what happens if *he/she/they* singular is replaced by *it*. After reading these pages you will know whether the experiment is successful.

Now, the primary aim of this book is not to make a cultural diagnosis or to critique the contemporary world that is shaped by the aforementioned technological and even linguistic factors. I am neither a technician capable of evaluating concrete technologies nor an anthropological, social, or political scientist trained in the evaluation of their psychological, sociological, or political consequences. Instead, this book focuses on the philosophical concepts of technics and humanity; it attempts to trace the unraveling of an idea of "technological humanity" in contemporary philosophy and the emergence of a bio-technical conception of existence beneath it.

I will start this philosophical investigation by discussing in this introduction the contemporary intellectual currents of transhumanism and posthumanism that focus on the idea of technological humanity.[2] They keep open the question of whether intense technological transformations can ultimately extend to fundamental anthropological transformations and furthermore of whether technological changes can become so significant that they actually put an end to humanity and change it into something else, into a condition sometimes described as "transhuman" or "posthuman." I outline these positions because they provide the most striking illustration of different possible perspectives on the idea of technological humanity today. However, like most "isms," these intellectual currents express general world views rather than precise philosophical positions. This book does *not* aim at a continuation of post- or transhumanist projects but instead at uncovering a field of philosophical problems underlying and conditioning such projects, albeit often unthought by them and really much older and more general than these discussions. The philosophical core of this book lies in this general question: *How does technics configure human existence?*

We shall see that this question belongs on a very different level to post- and transhumanist reflections, but the radicality of the latter makes manifest the necessity of the former.

Transhumanism and posthumanism are not fixed notions but historically variable positions. They share a positive attitude toward technology, which is why they are sometimes taken to be synonymous. Stefan Lorenz Sorgner even suggests that trans- and posthumanisms could be united into a "metahumanism."[3] Some commentators claim that both trans- and posthumanism are continuations of postmodernist and poststructuralist ideas.[4] Yet when we look more closely, these two currents turn out to be contrary to each other in many ways. Although the transhumanist Nick Bostrom has identified himself with posthumanism,[5] transhumanism generally tends to use the tools of analytical philosophy and is opposed to poststructuralism,[6] while many versions of posthumanism see poststructuralism and postmodernism as their forebears. These posthumanists often refer to Michel Foucault, Jean-François Lyotard, Gilles Deleuze, Jacques Derrida, Jean-Luc Nancy, and Bernard Stiegler. The approaches of these thinkers provide useful conceptual tools insofar as they all think that technics is a distinctive feature of humanity ("*propre de l'homme*"). But they also emphasize that this very technicity undermines the possibility of any proper characteristics ("*propre*") as well as of the very notion of humanity ("*l'homme, l'humain, l'humanité*"). They think technicity as an originary mode of existence but do not proclaim a new humanism, transhumanism, or posthumanism.[7] However, the terms *poststructuralism* and *postmodernism* are so vague that the thesis of a rapprochement between posthumanism and poststructuralism holds of some authors, for example Rosi Braidotti and Stefan Herbrechter, but not of others, as Cary Wolfe and Frédéric Neyrat have shown.[8] Once we admit the impossibility staking out definitive positions, we can give a schematic characterization of transhumanism and posthumanism.

Transhumanism is an intellectual position that advocates the radical transformation of the human being's biological, mental, and social conditions by means of technology. The first article of the World Transhumanist Association's *Transhumanist Declaration* states, "Humanity stands to be profoundly affected by science and technology in the future. We envision the possibility of broadening human potential by overcoming ageing, cognitive shortcomings, involuntary suffering, and our confinement to planet Earth." An earlier version of the *Transhumanist Declaration* declared: "We support the development of access to new technologies that enable everyone

to enjoy better minds, better bodies and better lives. In other words, we want people to be better than well."[9] The transhuman philosopher Max More specifies that these "radical alterations in the nature and possibilities of our lives [result] from various sciences and technologies such as neuroscience and neuropharmacology, life extension, nanotechnology, artificial ultraintelligence, and space habitation."[10]

Transhumanists perceive such transformations as human *enhancement*, desirable as such, even if it results in a form of life that is no longer human. Robert Ranisch and Stefan Lorenz Sorgner explain that "the result of such a technologically induced version of evolution is referred to as posthuman. However, there is no commonly shared conception of what posthumans are, and visions range from the posthuman as a new biological species, a cybernetic organism, or even a digital disembodied entity. The link between the human and the posthuman is the transhuman, an abbreviation for a transitional human, to which transhumanism owes its name."[11]

Although the "posthuman" may refer to the product of such technological enhancement, the term also has another use, which allows Cary Wolfe to claim that it is the opposite of transhumanism.[12] Posthumanism denotes a break with the traditional humanism perceived as an ideological construct that paternalistically imposes Western "phallo-logo-centrism" on the entire world (and indeed, the transhumanist conception of "better minds, better bodies and better lives" reproduces the most classical Western ideas of human excellence). Many feminist, postcolonial, and ecologist authors call themselves posthumanists in order to demarcate themselves from and oppose humanism in this sense (and its ideals of mind, body, and life). This is why the term has also been used to characterize authors such as Donna Haraway who see the other of "man" in the feminist figure of a technologically mediated cyborg, authors such as Cary Wolfe who associate posthumanism with ecology rather than with technology, or authors such as Jane Bennett who are interested in the materiality of human and nonhuman life.[13] To sum up a complex situation in a slogan, we can say transhumanism is situated in Silicon Valley and posthumanism is in departments of art and literature, or we can think of transhumanism as a liberal-capitalist view of human becoming and posthumanism as a leftist one.

The origin of the term transhumanism is generally located in Julian Huxley and Pierre Teilhard de Chardin's writings.[14] Today's transhumanists are engineers, scientists, futurist artists, and utilitarian philosophers. Their

ideas are defended by the World Transhumanist Association (WTA), which was founded by the philosophers Nick Bostrom and David Pearce in 1998, whose declarations can be found on the Humanity+ website. Transhumanists think that biomedical technologies should be used nontherapeutically, for example to enhance human health and longevity, emotional and cognitive capacities, physical traits, and behavior. Some transhumanists dream of mind uploading and expect the advent of Singularity, or the becoming self-conscious of the infosphere.[15]

The term *posthumanism* also has several origins. Its first occurrence has been traced back to the Macy conferences on cybernetics (1946–1953), but it was first used in the contemporary sense by the postmodern philosopher Ihab Hassan in *Prometheus as Performer* (1977).[16] Hassan thought that the change of the human form has now become so radical that "humanism may be coming to an end, as humanism transforms itself into something that we must helplessly call posthumanism." While this idea seems similar to the visions of the transhumanists, Hassan has a different reference point, namely the idea of the "end of man" formulated by Michel Foucault in 1966.[17] Foucault does not mean that the biological species *Homo sapiens* would change in any way but rather that the idea of humanity is a historical construct that is gradually becoming obsolete. Foucault's idea of the end of man is not the end of the human animal but of a particular self-image we have of ourselves. The authors who first studied technological posthumanity, especially Donna Haraway and N. Katherine Hayles, agree with Foucault rather than with those transhumanists who take the notion of the transformation of the human species literally.

What is the role of technics in the self-constitution of the human being according to these intellectual currents? The transhumanist position is quite clear. In most cases, transhumanist authors see technics as a means for human self-enhancement and enhancement as desirable as such. For instance, Max More affirms that "transhumanists regard human nature not as an end in itself . . . we can learn to reshape our nature in ways we deem desirable and valuable . . . we can become posthuman. . . . Transhumanists refer to 'technology' as the primary means of affecting changes to human condition."[18] The aim of technics is thus the production of the human being by itself. In familiar Aristotelean terms, in transhumanism, the human being sets the final cause (itself) as well as the formal cause (also itself) and it is the agent of this production and the matter formed. Technics is the instrument of this production, which is valuable if it effectively realizes human intentions but is not problematized in itself.

Correlatively, the critical discussions of transhumanism tend above all else to evaluate its aims. For example, commentators and science fiction authors have shown why the *final causes* of transhumanist production, such as immortality, absence of pain, and an ultrarapid and tireless brain could even be undesirable. When we look more closely at the transhumanist ideal of "better minds and better bodies," we realize that instead of challenging traditional enlightenment humanism, transhumanism actually adopts and reinforces its most productivist and dryly intellectualist elements.[19] Together with the enlightenment ideal, it thus tends to reproduce the flip side of this humanism: a harsh productivism and a hostility to incarnated existence. We can further question whether it is really so obvious that the human being is the agent of transhumanist self-production. For who is that agent? An individual could choose to improve itself in a certain way, but in so doing it could only choose among the technical *dispositifs* that are already available in society, which the latter it cannot choose. And finally, we can wonder whether human beings can ever be seen as simply the material ("*hyle*") for transhumanist production. Harnessing the body and the mind for preset aims might well destroy or detrimentally impact important aspects of their own development.

Such questions and misgivings mainly arise in bioethical approaches to transhumanism. A very different, and in my opinion more fundamental, question emerges when we interrogate technics itself instead of just focusing on how humans use it. When technics is understood simply as means, it suffices to evaluate the ends human beings make it serve. But this perspective remains blind to the effects of technics, which cannot be simply reduced to human intentions (pollution) and it does not heed how technics formats human intentions (the creation of new needs). Martin Heidegger famously calls the fundamental structure of the modern technical world the *Ge-stell*: it disposes of the human being and of nature before it comes to be at the human being's disposal.[20] Michel Foucault's term *dispositif* reinterprets *Ge-stell* with regard to social techniques in particular. Both show how the general structure of the contemporary world is a technical framework that predetermines what we can be and do and what we deem desirable. If technics is such a general framework, its effects can never be delimited as the effects of simple means: the very existence of means is already a consequence of the framework that conditions and surpasses their use. The posthumanists who distinguish themselves from transhumanists by developing Foucault's (and Derrida's) idea of "the end of man" accordingly see technics as a dispositif of a finite

historical situation that conditions the human (and nonhuman) beings who live in it. But at the same time, technics is also something that the human (and nonhuman) beings can invent and use in different technics of self and of the world. Technics is really the endless mediation between existents and their situations.

One could perhaps say that most versions of posthumanism are existential and political interpretations of this situation. Who are we if we are inextricably bound to technics, if we are formatted and formatting beings? What do we make of ourselves? For instance, Haraway's "cyborg" is a possible name for the existential situation of a being that through endless technical mediations is profounded intertwined with nonhuman life. In a parallel fashion, Hayles locates posthumanity in the situation where human beings have given over one part of their thinking to technical systems and then identified themselves with the resulting hybrids. Does such posthumanity amount to an overcoming of humanity? It at least heeds the extension of humanity into domains ignored by classical humanism. But then again, what does "humanity" mean? In *A Thousand Plateaus*, Deleuze and Guattari note: "Why are there so many becomings of man, but no becoming-man? First because man is major-itarian par excellence, whereas becomings are minoritarian; all becoming is a becoming-minoritarian."[21] This is why there is no becoming-man but only becoming-woman, becoming-child, and becoming-animal. If humanism just means becoming-man in the majoritarian sense, then these posthumanist intertwinements of human with nonhuman technicity represent the overcoming of humanity. But if the idea of the human being can accommodate its minoritarian becomings as well, then the hybrids of human/woman/man and machine reconfigure "humanity" instead of abandoning it.

Trans- and posthumanism fundamentally ask whether and how technological progress changes humanity into something that comes after "humanity." The motivation of this book is different and (it seems to me) more fundamental because it aims to show that before evaluating such a change we should first decide what we mean by "humanity" and "technics." The figure of humanity can be changed only if it is a *figure* in the first place, but if it is, as I believe, a plastic capacity for transformation, its only possibility of being fundamentally changed would be the cessation of this capacity and its fixation into an unchanging figure. On the other hand, if technics is only the instrument of predetermined change, it does not really induce change but only realizes preprogrammed possibilities and thereby reproduces the extant figure of the human. But if it is the very

situation in which change takes place—the bios used by technics and the new form of life created by technics—then it is difficult to know when it is the effect and when it is the agent of a change whose origin lies in the situation itself.

Instead of defining the notions of humanity and technics, I am interested in their relation, in the *originary technicity* whose effects are both humanity and technics and which calls for a constant adjustment of these terms. In Agamben's terms, this relation happens as the reciprocal *use* of humans and technics; in deconstructive terms, this *use* becomes thinkable as the reciprocal *mimetic* relation between life and technics; and in Heideggerian terms this reflects the *in* of the existential situation of being-in-the-technical-world. What this means should become clear in the following chapters.

In chapters 1 and 2 of this book I will present the notions of humanity and technics. In chapters 3, 4, and 5 I will show how the complex question of technological humanity has gradually been deconstructed, first in German philosophy from the 1920s (Martin Heidegger and the Philosophical anthropologists Max Scheler, Helmuth Plessner, and Arnold Gehlen), then in French "poststructuralist" philosophy that began in the 1960s (Michel Foucault and Jacques Derrida), and finally in continental philosophy of the 2000s (Bernard Stiegler and Giorgio Agamben). This is, admittedly, a selective history and many other important authors could also be included. However, it seems to me that these authors present a sufficient variety of perspectives on the question of the human/subject. Through reading these authors, I will show how an idea of bio-technics gradually emerged in the place of technological humanity. I do not take the terms *technological humanity* and *bio-technics* from the authors treated in this study, but my discussion of them takes place in the context of an investigation of a field of problems that these authors had in part discovered but did not treat in detail because they had other objectives in view.

In the chapter 3 I will show how technics (instead of reason) appeared as a determining feature of human existence for the first time in Heidegger's existential analytic and in the simultaneous development of so-called Philosophical anthropology by Scheler, Plessner, and Gehlen. By paying attention to the technological imprint on the human existence, these authors thought of the core of human existence in terms of a negativity. Negativity and nothingness were not only a fundamental metaphysical force but also a sign of the hollowing out of traditional humanism that called for different ways of thinking of the human, such as in terms of life

or *Dasein*. Sometimes this negativity was seen as reflecting the nihilism of the modern age, for example in Heidegger's texts on the technological era, and sometimes as acting as the source of a creative liberty that enabled the creation of a technological world, for instance in the works of Philosophical anthropologists. In all these cases, technics was much more than an instrument: it was the form of a world in which humanism has lost its substance.

In chapter 4, I will show how so-called poststructuralist thinking developed an *antihumanism*, which thought of the human being not as the origin but as a simple effect of prevailing systems of significations. Foucault shows how the human effect is produced by different social power technologies to which technologies of the self can respond. Derrida studies signification itself as a technics and not as the expression of a logos or of a meaning intention. He also studies the consequences of the parallel between technics and life, both of which are thought of in terms of codes and programs, and thus preparing the possibility of thinking of "bio-technical existence." However, Derrida himself does not affirm such a theory. He instead develops a kind of a phenomenological ontology of spectrality and of the *khora* that frames the tele-technological existence that comes forth today as a fundamental condition of human existence.

In chapter 5, I will show how, instead of asking what anti/humanism consists of, thinkers as different as Bernard Stiegler and Giorgio Agamben focus on the markedly ethical and political investigations of the conditions of resistance to *inhumanity*. Interpreting human existence in terms of concrete technics, these thinkers draw attention to the way in which technics belongs to communities and attaches individuals to collectives. This is why technics is not only shared by but also accompanied by the possibility of alienation. In the concluding chapter, I make a brief inquiry into the possibilities of resisting such alienation through a free use of technics that allows ways out of its toxicity.

I also draw together the idea of bio-technical existence implicit in the readings presented in this book. Examining humanity in the mirror of technics thus shows how technological humanity is really a deconstructed humanity: a life. Examining the effects of technics on existence attracts attention, not to consciousness that defines classical humanity but to non-conscious aspects of existence that coincide with life. At the same time we see that this "life" is by no means a natural given. It is thoroughly marked by technics and actually *is* the technical agentivity of a skilled body, of a mechanically supplemented mind, of calculus that supports thinking.

Existence is technicity—not a product that a technical program could predetermine but a life that forever escapes technical formatting. Life and technics do not coincide into one general thing; *bios* and *techne* remain separated by the very hyphen that connects them. One cannot display the reason of the other. They mime one another, invent one another, use one another, and together display the fundamental structure of our world.