

Introduction

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Over the past 20 years, digital technologies have been reshaping human activities: robots are reconfiguring work, personalized learning algorithms are changing education, social media are steering both private and public discourse, targeted advertising is driving consumption, and all in unanticipated and unprecedented ways. This digitization now permeates every fiber of our everyday lives, our relationships, and our self-understanding. As such, it not only reshapes how we communicate, learn, and do business, it also raises fundamental and as yet unanswered questions about what it means to be human in this new, emerging digitized world, particularly as we embed digital surveillance technologies into our bodies, our socio-political relationships, and our lived environments.

Until recently, the debates in the scholarly literature as well as in the more general public sphere about digital technologies have been dominated by the topics of privacy and surveillance, and specific utilizations of AI in industry, sciences, politics, culture, and social life. However, over the last dozen or so years, these debates have been enriched by a growing body of research that goes beyond specific areas or digitizable actions to address the more general, comprehensive questions about what datafication means for our lives and for our ideas of subjectivity and being human.

These debates about what is human obviously began long before the twentieth century. Since philosophy existed, philosophers have been thinking about the nature of human beings, the nature of the demarcation between humans and animals, the determination of (some, “real”) humans based on specific characteristics (that often systematically exclude other humans), and the role of techniques for humans. The question of the human being had its peak in the enlightenment of the eighteenth century when the relevance of self-reference took its place at the centre of the debates: Kant claims in his anthropology: “The fact that the human being can have the ‘I’ in his representations raises him infinitely above all other living beings on earth.” (Kant 2006 [1796], BA 3, 4). It is only in the late modernity of the twentieth and twenty-first century that the question is asked in a categorically new way: because the digitalization of society is so advanced and the tools of artificial

intelligence are so efficient that one actually has to speak of a historical upheaval. The mode in which the questions about human nature are asked, about the finitude of the human being, about its vulnerability, about its ability to speak, and about its self-consciousness, has changed under the massive influence of recent technologies, notably AI. The change is manifest in all areas of life which have been digitized – language, communication in general, friendships and relationships in general, work, democracy. But the upheaval is maybe especially palpable in the economy: with digital or surveillance capitalism the market economy has taken on new forms thanks to categorically new technologies and the concentration of digital companies in the five or six biggest players (see Jasanoff 2016; Zuboff 2019). Since the digitized market has taken over all areas of human life, it has seemingly taken over what it means to be human as well.¹

All these questions, against the background of the transformation of social life, will be addressed in our collection. On the one hand, we seek to explore fundamental issues, such as the extent to which the concept and idea of human beings (has to) change given the new socio-technical reality we are creating. On the other hand, we are also interested in more specific questions such as: What kinds of humans are expected to inhabit these new spaces? Will the machine learning that drives these spaces necessarily make us more predictable? What role, if any, is there for human agency in the emerging digital world?

To begin to address these questions, we gathered a group of leading scholars to reflect on how we – as individuals and as a society – change as digital technologies rewrite the fundamental conditions of our collective life and of our individual experiences of being human. We also asked these scholars to reflect on the kinds of vocabularies or conceptual frameworks that will give us the language we need to grapple with, understand and resist these conditions. We believe that this is an important conversation to initiate because how we as a society answer these questions will be among the defining issues of the coming years and decades.

In order to frame and delimit our conversations, we would first like to clarify how we will and will not engage with certain conceptual and normative approaches. Our goal in this introduction is accordingly to better situate ourselves in the current debates about the technological influence on and interaction with human beings. In the background – and sometimes in the foreground – of our discussions about the digital human are two theoretical trends that have attracted a great deal of attention over the last decades and have led to (at least) two central philosophical debates: posthumanism and transhumanism. We are briefly going to sketch each one in turn.

¹ This complete digitization of everyday life, the engineering of humans and the aim of perfect machine readability of everything we do (Frischmann and Selinger 2018; Selinger and Frischmann 2015; Stivers and DeHart-Davis 2022; see also Chapter 6) can also be read in the tradition of the Weberian theory of modernization as bureaucratization and therefore dehumanization of social relationships and society as a whole (see Slope 2022; on Weber, e.g. Brühlmeier 2024).

1.1 POSTHUMANISM

Posthumanism has two essential characteristics. First, it builds on critical genealogies of the concept of the human being: posthumanism argues that the concept in humanism only referred to the white male human being and as such legitimized exclusion and oppression of non-white people and women. Therefore, many post humanist philosophers and theorists of the humanities in the twentieth and twenty-first century have argued that the very conceptualization of a human being from the start is part of a practice – or at least collusive with practices – which justified the exclusion of women and all non-white people from the privileges of the moral community of human beings.

Such critical genealogies continue to be directed against universalist theorists such as Jürgen Habermas and his unambiguous opposition between pro-enlightenment modernity and counter-enlightenment postmodernity. Habermas (1996) clearly criticized the usage of an *exclusionary* concept of human being himself, and his critique of postmodernism goes hand in hand with his staunch defense of the normative content of modernity (see Allen 2017, 177; Habermas 1990; Wellmer 1991). From the post humanist perspective, this is synonymous with the pursuit of the traditional scientific justifications which lie at the heart of their efforts to delegitimize humanism, since all modern attempts to design a world based on these justifications point, or so they argue, toward humanity's deep-seated inhumanity (see Braidotti and Hlavajova 2018; Hayles 2008). One of the important post humanist voices, Rosi Braidotti, concludes that we should not clutch at the concept of human being, which is only an “outdated position” (Braidotti 2019, 3).

There is an obvious conflict between “modernists” like Habermas and some of the post humanists like Braidotti, but of course (as we will also see in this volume) many attempts have been made to find a way forward by holding on to a concept of the human and of accompanying normative convictions (such as human autonomy and human rights) without accepting the exclusionary and oppressive implications of traditional humanist concepts of human nature (see for instance Chapter 5 by Lyon and Chapter 3 by Roessler). Among these, Habermas himself is also critical of the exclusionary and racist consequences of the concept of human beings and argues that a more correctly understood concept is emancipatory for everyone.

The second essential characteristic of post humanist theories is their strong critique of all dichotomies. Posthumanism even aims at the *general* overcoming of common scientific dichotomies and many postmodern theories pin their hopes for this on technology. Therefore, from this perspective, the dichotomy between humans and technology clearly must be overcome to correct the fundamental misconceptualization of this relationship that has troubled philosophy.

This is why Donna Haraway occupies a prominent place in this debate. Haraway (2016) takes the cyborg as a paradigm and aims to achieve not only a postmodernist,

non-naturalist mode but also a socialist–feminist culture rooted in the utopian tradition of imagining a world without gender. It is the dichotomy between human and animal, between animal–human and machine, and between physical and nonphysical which lies at the centre of her critique in her *Cyborg Manifesto*. The cyborg is, according to Haraway, a combination of machine and organism, of technology and human being, and she develops a new ontology based on the hybridization of nature and culture. Her *Manifesto* has been especially influential in feminist debates since she conceptualized the cyborg as a powerful woman. She writes: “By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism – in short, cyborgs. The cyborg is our ontology; it gives us our politics” (Haraway 2016, 44).

Haraway and others place themselves in opposition to philosophical positions like Habermas’, but also taken up by Joseph Weizenbaum. Weizenbaum (1976) is an especially suitable example because he is one of the revolutionary computer technologists of the twentieth century and at the same time wants to hold on to the so-called traditional and modernist human values and concepts like autonomy and human rights. Hayles, for example, writes:

Hence there is an urgency, even panic, in Weizenbaum’s insistence that judgment is a uniquely human function. At stake for him is nothing less than what it means to be human. In the posthuman view, by contrast, conscious agency has never been “in control”. In fact, the very illusion of control bespeaks a fundamental ignorance about the nature of the emergent processes through which consciousness, the organism, and the environment are constituted. Mastery through the exercise of autonomous will is merely the story consciousness tells itself to explain results that actually come about through chaotic dynamics and emergent structures. (Hayles 2020, 288)

This brief look at the post humanist discourse shows various questions that will continue to play a role in the following chapters: the compatibility of human nature and technology; its ideological roots; the finality of human existence; and whether (or how) this existence can be overcome or surmounted. Hayles and Ferrando, to name but two, seem to be keeping some elements of the traditional idea of human nature as they seek to go beyond how Weizenbaum and others conceptualize the human in a liberal humanism. Returning to classical theories of human nature or even insisting on these theories fundamentally because of their normative content (as Habermas and many other defenders of human rights do) remains controversial. The critical attempts, however, do not entail abandoning the idea that there is something worth preserving in human beings’ vulnerable nature.

One position within the post humanist discourse deserves particular attention, namely that of the post-phenomenologists. Why might it be a problem that humans are striving to become more open to being “technologized”? In a first step, following the post-phenomenologists, this concerns the more general question of the relation between human beings and technology. It is helpful to turn to Don Ihde (1990)

because he is one of the most influential contemporary thinkers in post-phenomenological discourses on humans and technology. Ihde connects to phenomenology's fundamental critique (in the tradition of Heidegger and Merleau-Ponty) of the Cartesian and Kantian dichotomies between subject and object and, thus, their epistemological primacy or precedence over what Ihde calls the "praxical orientations for philosophy" (Heidegger 2010; Ihde 1990, 31).² This traditional dichotomy obscures the fact, according to Ihde, that our perceptions and experiences are always already mediated by technology – from Heidegger's hammer to, for instance, the smartphone (see Jasanoff 2016). This mediation co-shapes our concepts as well as our experiences of subjectivity and objectivity. Furthermore, we must assume that we get used to technologies to such a degree that they become unnoticeable and grow to be part of us, and yet mediate our relation to the world. Ihde (1990) coined the image of technologies functioning like spectacles: when we use such technologies, they recede from view. We attend not to the spectacles themselves, but to what we can see *through* them (see Verbeek 2011). Verbeek, one of Don Ihde's students, clarifies this idea and process of shaping and mediating by explaining the way a "personal digital assistant" (e.g. the mobile phone) works:

A PDA helps to shape its user's existence and experience; it shapes specific aspects of its user's subjectivity and the objectivity of that user's world. It is more than a functional instrument and far more than a mere product of "calculative thinking." It mediates the relation between humans and world, and thus co-shapes their experience and existence. (Verbeek 2011, 198–199)

In one sense, this certainly must be right: we shape and form technologies and thereby shape our world, whereas at the same time we are being formed and shaped by these technologies and their "affordances." However, will it still be possible to demarcate, to delimit humans and technologies? This is not completely clear in the post-phenomenological approach, and Ihde (1990), for one, seems to avoid taking a critical look at the way in which technologies determine our lives. Since human beings are always already mired in technologies, a critical perspective that focuses precisely on the influence of technologies on our life and social practices is here seemingly impossible.

1.2 TRANSHUMANISM

Transhumanism, in stark opposition to posthumanism, begins its criticism from the opposite side and seeks its origins in the Enlightenment, and therefore does not expropriate humanism; on the contrary, it can be defined as an "ultra-humanism" (Onishi 2011). In order to greatly enhance human abilities, transhumanism opts for a

² See the debate about the "neutrality" of technology, on the question whether technologies are the *Gestell* (the enframing) or the *Bestand* (the standing reserve) which place us in the world at the same time as in technologies (or the *Technik*) (for instance Borgmann 1984; Ihde 1990; Verbeek 2011; Winner 2020).

radical transformation of the human condition through existing, emerging, and speculative technologies, such as regenerative medicine, radical life extension, mind uploading, and cryonics (see Ferrando 2019). The post-phenomenologists, like Ihde (1990), as we have seen would not want to take part in that, since for them the question is not one of exceeding human abilities, but only of successfully cooperating with technologies. Ihde's perspective acknowledges that in our lived experiences we seem to understand every day anew that we do not have complete control over our bodies and its vulnerabilities – something the transhumanists want to change or, better, to supersede. It is precisely the idea of striving to have complete control over our bodies that inspires the transhumanist fantasy and imagination and feeds transhumanist theories. The overcoming of corporeality and the attempt to turn the body into trans-humans is, for Nick Bostrom, probably the best known and most influential of the transhumanists, the explicit aim. According to him, transcending the human body is a human desire present in all times and all cultures. This desire is now no longer a childish dream but, for the first time in history, has been turned into a proper scientific project. What these transhumanist philosophical approaches share is the idea that we should as far as possible get rid of our “wetware” (see Lovink 1997) and of all malaises connected to it. The body is mostly seen as an obstacle to freedom. Note that, not only but especially in the transhuman variant, these theories are all individualistic: although relationships are possible, they are not necessary for human thriving, and intersubjectivity is not the fundamental and genuine characteristic of a life well lived.

Clearly, transhumanists are not interested in the critique of concepts such as reason or autonomy, a critique which is, as we have seen, the fundamental interest of posthumanism (see again Ferrando 2019; Hayles 2008, 288). Rather, transhumanism is concerned with getting a technological grip on finiteness, on limited cognitive capacities, and on vulnerability, and aiming to technologically eradicate – or at least reduce as far as possible – these human weaknesses. From this perspective, science and technology are extremely helpful because they are the instruments that will enhance and transform human nature.

Unlike posthumanism, then, transhumanism explicitly builds on the concept of the human being, but the human being in its ideal version (see Anthony 2024; Bostrom 2005; also Kurzweil 2006). Julian Huxley, one of the first eponymous transhumanists, strove to use technology to transcend human nature in this way. From the start, though, one of the central themes was that it is not only important and desirable but also possible at some point in the future to overcome illness, aging, and even death.³ Of course, *prima facie* this is not completely implausible:

³ Max More (2013, 13); See Sorgner (2022) on the pluralistic forms of transhumanist theories. Philosophically one of the difficult problems in these debates is how to get from the structural biological or empirical level to the normative one. Why should we treat humans (in a natural sense) in a respectful way, why should we not try to transcend them, and where does the normativity come from? (see Korsgaard 1996; Chapter 4 by Pasquale; Chapter 3 by Roessler).

medicine is nothing other than making people better with the help of the cognitive capacities of humans and, if necessary, technologies. However, how far we should go with the possibilities that technologies make available to us remains a contested question.

Maybe we could say that, if we were as human as we can be in our *best* moments, there would be no reason for the transhumanist to transcend us. This question of *how we could best be human* seems to be essential because, in all criticisms of transforming human nature (in posthumanism as well as in transhumanism), we have to be conscious of a rather fundamental question: what's so good about being human that we want to hold on to it?

1.3 OVERVIEW OF THE CHAPTERS

This question is also what the following chapters have in common. In various contributions, human intersubjectivity is of decisive concern (see for instance Chapter 8, by Steeves), an aspect of the human being that is, as we have already seen, perceptibly absent from the postmodernist as well as the transhumanist theories. Others examine the messy social practices in which people are always already anchored and which, for traditional theories of human nature, constitute a substantial and fundamental aspect of being human (see for instance Chapter 4, by Pasquale) or demonstrate that these practices do not seem to be a relevant element in the pursuit of the perfect transhuman being (see Chapter 2, by Murakami Wood). All the following contributions assume that it is possible to hold on to the concept of the human being and still conceptualize the changes – possibly also conceptual changes – that accompany the digitization of our societies. Accordingly, our collection aims at presenting new conceptual frameworks and vocabularies to help us understand and challenge emerging paradigms of what should be human and humanly possible for the digitized person, and to elucidate the economic, political, or social conditions that are necessary for a good digital life. The collection, as we understand it, is accordingly a further step toward thinking about and discussing the grounds for the possible and ongoing transformations of being human.

Part I begins by examining the types of people and social spaces anticipated by the technology companies building the platforms that undergird the digital world and offers conceptual means to evaluate the ways that this technical vision supports and at the same time constrains human striving for autonomy and meaningful relationships.

David Murakami Wood (Chapter 2) starts the section off by analyzing smart city marketing materials to create a detailed description of the kind of human who is expected to reside in these cities. He offers a fascinating portrait of the “platform human,” a being whose entrepreneurial and libertarian needs are seamlessly enabled by technology built into the lived environment in ways that

resonate strongly with the transhumanist imaginary. In sharp contrast, Beate Roessler's contribution (Chapter 3) explores the centrality that self-consciousness, vulnerability, and finiteness play in being human, and uses Ian McEwan's novel, *Machines Like Me* to explore the unprogrammability that defines humanness. Frank Pasquale (Chapter 4) also draws from the world of literature and film to explore the role of emotions in being human and the ways that affective computing both seeks to duplicate and constrain caring as a fundamental human quality. In the final chapter in this section (Chapter 5), David Lyon reflects on the COVID epidemic to think about the instrumentalizing role of surveillance capitalism in digital society. He offers Eric Stoddart's notion of the "common gaze" as a counterpoint to begin to articulate what it might mean to flourish in the digital world.

Part II examines central aspects of living within these digitized platforms, specifically those concerned with how the demands of machine readability and algorithmic prediction shape the possibilities of human existence.

Margot Hanely, Solon Barocas, and Helen Nissenbaum (Chapter 6) argue that we have moved beyond being legible to systems of assessment to being remade as machine readable humans who are more vulnerable to systems of control. They review and discuss a variety of apps to explore when this machine readability may or may not be ethical. In Chapter 7, Chloé S. Georas does a deep dive into carebots to unpack how care technologies rewrite the material and discursive underpinnings of caring as a central part of humanness. Valerie Steeves (Chapter 8) provides an empirical snapshot of the networked "community" and draws on understandings of intersubjective communication developed by G. H. Mead to better understand emerging notions of self and other in order to reclaim normative space for any sense of agency. Azadeh Akbari (Chapter 9) focuses on digital embodiment and the experiences of the most marginal as they move through borders, using poetry to help relieve "the linguistic distress for finding the right words to describe embodied feelings" in digitalized geographies.

Part III focuses attention on new approaches to technology policy that can better grapple with the human issues raised by digitization. In Chapter 10, Daniel Susser provides a thoughtful examination of what we mean by (digital) exploitation and suggests that regulation should constrain platform activities that instrumentalize people or treat them unfairly. Jason Millar and Elizabeth Gray (Chapter 11) detail emerging uses of mobility tracking and draw an analogy to net neutrality to think through potential regulatory approaches. Finally, in Chapter 12, Julie E. Cohen adapts the doughnut model of sustainable economic development to suggest ways for policymakers to identify regulatory policies that can better serve the humans who live in digital spaces.

We hope to have put together a volume with interestingly different perspectives and stimulating new insights which can open up new ways for us to think about what it means to be human in the digital world.

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