

**Bibliographic Information published by the Deutsche Nationalbibliothek**

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data is available in the internet at <http://dnb.d-nb.de>.

**Library of Congress Cataloging-in-Publication Data**

Post- and transhumanism : an introduction / Robert Ranisch, Stefan Lorenz Sorgner (eds.). -- 1 [edition].

pages cm. -- (Beyond humanism: trans- and posthumanism, ISSN 2191-0391 ; vol. 1 = Jenseits des Humanismus: trans- und posthumanismus, ISSN 2191-0391 ; Bd. 1)

Includes bibliographical references and index.

ISBN 978-3-631-60662-9 (alk. paper)

1. Humanism. 2. Philosophical anthropology. I. Ranisch, Robert, editor.

B821.P585 2014

144--dc23

2014035180

**Cover Photo:**

Antibodies of Surveillance / Pangender Cyborg – Metaformance  
by Jaime del Val - Reverso - in Festival Alterarte Murcia, Spain, 2008;  
Photo: Alterarte.

ISSN 2191-0391

ISBN 978-3-631-60662-9 (Print)

E-ISBN 978-3-653-05076-9 (E-Book)

DOI 10.3726/978-3-653-05076-9

© Peter Lang GmbH  
Internationaler Verlag der Wissenschaften  
Frankfurt am Main 2014

All rights reserved.

Peter Lang Edition is an Imprint of Peter Lang GmbH.

With the exception of: F. Ferrando, "The Body", licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/> or send a letter to Creative Commons, 444 Castro Street, Suite 900, Mountain View, California, 94041, USA.



Peter Lang – Frankfurt am Main · Bern · Bruxelles · New York ·  
Oxford · Warszawa · Wien

All parts of this publication are protected by copyright. Any utilisation outside the strict limits of the copyright law, without the permission of the publisher, is forbidden and liable to prosecution. This applies in particular to reproductions, translations, microfilming, and storage and processing in electronic retrieval systems.

This publication has been peer reviewed.

[www.peterlang.com](http://www.peterlang.com)

## The Body

*Francesca Ferrando*

The 21st century has ushered in a redefinition of the body by cybernetic and biotechnological developments. As we<sup>1</sup> shall see in this article, the concept of “human” has been broadly challenged, while “posthuman” and “transhuman” have become terms of philosophical and scientific enquiry. Physicality no longer represents the primary space for social interaction: the decentralization of the self into virtual bodies and digital identities has turned Baudrillard’s simulacra into ultimate hyper-realities, as the growing issue of internet addiction seems to suggest. Human cloning has approached bioethical disputes and surrogate motherhood is deconstructing natural conception. The semantic demarcation between humans and cyborgs<sup>2</sup> has blurred. On one side, electronic pacemakers, high-tech prostheses, and plastic surgery have become accepted practices of body reconfiguration. On the other, following the route opened by Project Cyborg 2.0,<sup>3</sup> a growing number of people have begun inserting RFIDs under their skin, in a pioneer experimentation towards technological enhancement.<sup>4</sup> Are these scenarios, which characterize some hyper-technological macro and micro societies of planet Earth,<sup>5</sup> inducing a paradigm shift in the ontological and epistemological perception of the human body? If so, will gender, race, age and class among others, represent significant categories of reformulation? More radically, from a futuristic perspective: will posthumans need any embodiment at all? Posthumanism and transhumanism offer different answers to these questions. Before presenting them, I first need to analyze key concepts such as “human”, “body” and “embodied self.” I will delve into each of them independently, in order to trace a rhizomatic map of intellectual exploration and academic rigor.

- 
- 1 The use of “we” is strategically employed not to fall into the illusionary suggestion that this text is somehow non-human centric. According to the feminist policy of “situating”: I was born in a human body, I am writing in a human language, and I am expressing a human body of thoughts to other human readers. Still, humans radically differ from each other on a social, political, and individual level.
  - 2 The term “cyborg” was coined in 1960 by Manfred Clynes and Nathan Kline, and refers to a being constituted by both biological and artificial parts (see Clynes/ Kline 1960).
  - 3 On March 2002 a one hundred electrode array was surgically implanted into the left arm of Professor Kevin Warwick (see Warwick 2004).
  - 4 There is not enough data available yet to determine the long term side effects of such implants on humans.
  - 5 I would rather use this geo-political characterization instead of broadly applied “Western societies”, to indulge into a more precise account of glocalized (the survival of local specificities in a globalized world) policies.

## The Body

“Body” is an English term used to define a broad human notion which describes, amongst other meanings: “the physical structure and material substance of an animal or plant, living or dead”, “a person”, “a collective group.” Still, when we think of bodies, the human body is the first signified to come to mind, exposing the human-centric dialectics of the term. Do animals,<sup>6</sup> plants and machines have bodies as humans do? “Body” is a human concept created in a human language. While its connotations may vary depending on context and association (i.e. the animal body, the plant body, the mechanic body, that is, the automata), the denotation of the body *is* the human body. And still, such a denotation manifests itself as an assemblage of different connotations. Phenomenologically, the human body appears multiple and situated. Its symbolic meaning and social reception might shift depending on its gender, race, age, ethnicity, physical – plus intellectual – capabilities; and on cultural, historical and economic contexts. The body itself is constantly reshaping and defining its boundaries – think of the pregnant body, the menstruating body, the aging body, the sick body. Signifier for an extensive range of signifieds (including apparent dichotomies such as dead/alive, person/group; and relevant differences such as human/animal/plant), the body reveals its inner dynamics as well as its absolute centrality to the construction of taxonomical accounts; its ontological configuration can hardly be separated from detecting its epistemes<sup>7</sup> and epistemological outfits.

## How We Became Humans

The word “human” derives from Latin “*humanus*”, an adjective cognate to “*humus*” meaning “earth<sup>8</sup>, ground, soil”, on notion of “earthly beings” whose symbolic realm would mark the border with the one of the celestial gods. The Earth is the third planet in order from the Sun. Evidence suggests that life on this globe has existed for about 3.5 billion years. There is no scientific consensus on how it originated, but all known life forms share fundamental molecular mechanisms, supporting the hypothesis of the last universal ancestor (LUA), a primor-

<sup>6</sup> For a philosophical account on the animal as a homogeneous set deprived of the *logos* – from Aristotle to Heidegger, from Descartes to Kant – see, for instance, Derrida (2008).

<sup>7</sup> I am referring to the use of the term, as elaborated by Michel Foucault in *The Order of Things*: “the epistemological field, the episteme in which knowledge [...] manifests a history which is not that of its growing perfection, but rather that of its conditions of possibility” (1970 [1966], xxii).

<sup>8</sup> Not to be confused with “Terra”, the Latin translation for Earth – which, at the time, was not yet conceived as a planet.

dial single cell organism from which all life forms would descend<sup>9</sup>. In the evolutionary history of life, which focuses on the evolution of living and fossil organisms, the term “human” refers to the *Homo* genus, and includes not only modern humans (*Homo sapiens*), but other species closely related and now extinct. From a posthumanist perspective, it is important to observe that the earliest evidence of stone tool usage precedes the paleontological advent of *Homo*: technology is not something separated from the human, but can be seen as a mode of biological revealing.<sup>10</sup>

Still, the scientific classification of humans has considerably changed over time and its exact makeup is constantly under debate, blurring the lines between the ontological, epistemological and methodological dimensions of human cognition. A notable date in this genealogy is 1758,<sup>11</sup> when Carl Linnaeus coined the binomial name “*Homo sapiens*” (Latin for “knowing man”), referring to the only living species in the *Homo* genus. Paralleling, Linnaeus also coined the term “*Mammalia*”, addressing the group of animals named after their mammary glands. For the first time in Western history, humans were placed in a system of biological classification like any other animal or plant species. Yet, this terminology – which is still in use today – clearly reflects sexist biases. As Londa Schiebinger has pointed out:

[...] the mammae are ‘functional’ in only half of this group of animals (the females) and, among those, for a relatively short period of time (during lactation) or not at all. As we shall see, Linnaeus could indeed have chosen a more gender-neutral term, such as *Aurecaviga* (the hollow-eared ones) or *Pilosa* (the hairy ones)” (Schiebinger 2000, 11-12).

While the term “mammal”, which is related to female biology and stresses human specificities,<sup>12</sup> is used to place the human species into the larger natural system; the term *Homo sapiens* emphasizes the human cognitive functions within a

<sup>9</sup> Note that the hypothesis of LUA can also be based upon non-unitarian origins (see Woese 1998).

<sup>10</sup> While technology is still often addressed as an external source which might guarantee humanity a place in post-biological futures, the non-separateness between the human and the techno realm shall be investigated not only as an anthropological (see Gehlen 1980 [1957]) and paleontological issue (see Leroi-Gourhan 1943; 1993 [1964]), but also as an ontological one (see Heidegger 1977 [1954]; Stiegler 1998).

<sup>11</sup> 1758 is the date of the tenth edition of *Systema Naturae* (first edition: 1735), which is considered the starting point of modern botanical and zoological taxonomy.

<sup>12</sup> Human children have the longest infancy in the animal kingdom.

male frame,<sup>13</sup> and is applied to mark the distinction between humans and other primates, revealing the inner sexism and speciesism of both notions.

### Which Humans are Human?

Historically, the recognition of the human status has been regularly switched on and off. In the American system of slavery, for instance, captives were considered property to the extent that, in some cases, owners had legal rights to kill them.<sup>14</sup> In Nazi Germany (1933-1945), this pattern reached a dramatic apex. The Nazis, as stated by Kete:

“[...] abolished the line separating human and animal and articulated a new hierarchy based on race, which placed certain species – races – of animals above ‘races’ of humans – eagles and wolves and pigs in the new human hierarchy were placed above Poles and rats and Jews” (Kete 2002, 20).

The dissolution of the animal/human divide was sealed in blood. The Nazis exterminated approximately six million<sup>15</sup> European Jews and millions of others, including: Germans with mental and physical disabilities, homosexuals, Roma (“Gypsies”), Poles, Jehovah’s Witnesses, and Soviet prisoners of war. European witch trials in the Early Modern period, which ended in an estimation of sixty thousand<sup>16</sup> executions (a large majority of women), proved another discontinuity within the human frame: not only the lives of those humans considered inferior could be taken, but also the ones of those who were assumed to be supernatural shall be sacrificed, in order to keep the human realm safe. The witch-hunt proved superstition as one of the hidden forces behind law making apparatuses, next to biological determinism, scientific racism and ethnocentrism. Rosi Braidotti points out the superstitious roots of teratology. She redefines the figure of the monster as “a process without a stable object” (Braidotti 1996, 150), historically attributed to different embodiments and to different causes, such as women’s power to create – and consequently deform – life. Freak shows were expected to shock the viewers by exhibiting uncanny bodies pertaining to the

13 In Latin “homo” means “man” as “person” or “human”, whereas “vir” indicates “man” as opposed to woman or child. Still, it is grammatically expressed strictly in the masculine form, exposing the sexist outline of the Latin language itself.

14 In 1740 South Carolina passed the *Negro Act*, which made it legal for slave owners to kill rebellious slaves.

15 Although it is impossible to determine the exact number of Jewish victims, six million is the round figure accepted by most authorities.

16 This estimate is problematic. Since the murders were not systematically recorded and many of the archives which existed have been lost, the number of deaths could be much higher. Consequently, historians have not settled on a figure.

liminal zone of the human; in Braidotti’s words: “we all have bodies, but not all bodies are equal: some matter more than others; some are, quite frankly, disposable” (Braidotti 1996, 136). Geo-historically situated, the human body stands as a symbolic text of cognitive and social processes. The establishment of a discourse of perversion (see Foucault 1998 [1976]) and the consequent practices of normalization of the perverse, such as the Nazi genocide, the witch-hunt and the disciplining of the maternal body instrumental to scientific teratology, are embedded to its genealogy, in a recurring paradigm of human abjection.<sup>17</sup>

While the monster and the supernatural stand as social and mythical archetypes delimiting the domain of the comprehensible body, it can be argued that human identity *tout court* has formed, historically and theoretically, through the construction of the “Other”: animals, automata, children, women, people of color or other than white,<sup>18</sup> queers<sup>19</sup> etc. marking the shifting borders of what would become “the human” through a process of performative rejections. Race being one of the canons, Yancy states:

“The Black body has been historically marked, disciplined, and scripted and materially, psychologically, and morally invested in to ensure both white supremacy and the illusory construction of the white subject as a self-contained substance whose existence does not depend upon the construction of the Black qua inferior” (Yancy 2008, 1).<sup>20</sup>

If the black body has symbolically and physically represented the working shadow necessary to validate white existence, in this configuration of the human, women have represented the body as the locus of original sin; in the cartesian split, an ontology of metaphysical irrelevance. As Price and Shildrick maintain:

“At the risk of misleading simplification, it can be argued that the denial of corporeality and the corresponding elevation of mind or spirit marks a transhistorical desire to access the pure Intelligible as the highest form of being” (Price/ Shildrick 1999, 2).

In Western traditions, but not only, the symbolic body of this dualism was female and had two simplified variables of representation: the primordial body (the mother), and the sexual body (the prostitute). On the other side, the body as the norm in biological and medical sciences has been unequivocally male: “Woman, considered a monstrous error of nature, was studied for her deviation

17 And still: the abject is neither subject nor object, but precedes the symbolic order (see Kristeva 1982).

18 For an extensive reflection on the “racial Other”, see Goldberg (1993).

19 For a critical reading of the human rooted in queer theory, see Butler (2004, 2), where she states: “If I am a certain gender, will I still be regarded as part of the ‘human’?”

20 Thanks to Prof. Jean-Marie, for bringing this text to my attention.

from (the) male norm" (Schiebinger 1999, 27), in a schizophrenic attempt to pose a symbolic body with a sex but without organs, and a clinical body with organs but without sex – neutral, that is, white<sup>21</sup> and male.

### Embodied Selves

Humans are embodied, and so is human thought, human language and human phenomenological reception. The 1970s marked a blast of critical approaches to "the neutral subject". In the historical and philosophical frame of postmodernism, feminist, black, gay and lesbian, postcolonial theorists, together with differently abled activists and other outsiders, pointed out the partiality of the construction of the discourse.<sup>22</sup> Irigaray has brilliantly used the image of the "Speculum" (see Irigaray 1985) to refer to the symbolic Woman of this structural account as the dark continent, the irrational, the unknowable. The Seventies also marked the official birth of animal rights, for which animals should be viewed as non-human persons and members of the moral community. In this context, the term "speciesism" was popularized (see Singer 1975) to name the practice of privileging humans over other animals. Ecofeminism marked a new wave of environmentalism based on parallels between the oppression and subordination of women and nature in Western cultural traditions (see Merchant 1980), while accounts of different societies based on matriarchy and worshipping the Goddess began to nourish archeological research as, for instance, in the work of Marija Gimbutas (1974). In 1970 Shulamith Firestone published *The Dialectic of Sex*, which offered a philosophical twist to technophobic feminist perspectives: technology could actually open new exciting possibilities by "freeing women from the tyranny of reproduction" (Firestone 1970, 221). Firestone's theoretical approach marked the birth of technofeminism. But could women rely on technology and science? The Nineties saw the rise of Feminist Epistemology. Scientists such as Sandra Harding, Evelyn Fox Keller, and theorists such as Patricia Hill Collins and Helen Longino, argued that objectivity is situated and embodied. In Haraway's words: "Feminist objectivity means quite simple *situated knowledges*" (Haraway 1996, 253). Traditionally, scientific observations have been elaborated from a specific standpoint, which has been: white, Western, economically privileged, heterosexual and male. Technology and science

21 For an account on the role played by race in the production of medical knowledge, see Harding (1993), among others.

22 I am referring not only to the Foucaultian use of the term as a way of constituting knowledge, social practices and power relations (see Foucault 1998 [1976]), but also to the phallogocentric *logos* (see Irigaray 1985 [1974]), and the symbolic order (see Kristeva 1984).

are not free from sexist, racist and Eurocentric biases; their social construction is embedded in their methods and practice.<sup>23</sup>

### Posthuman Bodies

Humans are embodied. What about posthumans?

"Here, at the inaugural moment of the computer age, the erasure of embodiment is performed so that 'intelligence' becomes a property of the formal manipulation of symbols rather than enaction in the human lifeworld" (Hayles 1999, XI).

Following Katherine Hayles' criticism of the erasure of embodiment by the computer age, will the posthuman body still be shaped in terms of gender, race, age, class, (dis)ability and sexuality among others? Namely, will posthumans need to take into account the histories and herstories which have determined the historical configuration of the human body? Posthumanism itself was actually generated from the radical deconstruction of the "Human", which began as a political project in the Seventies and turned into an epistemological one in the Nineties. Posthumanism came along within and after postmodernism. Although the term is already present in *Prometheus as Performer: Toward a Posthumanist Culture?* (see Hassan 1977), posthumanism grew out of literary theory in the 90s, and made its way into philosophy by the end of the 20th century, enacting a thorough critique of humanism and anthropocentrism (Braidotti 2013). And still, posthumanism refers not only to an academic critical position, but also to a perception of the human which is transhistorical.

The hybrid has been part of human symbolic and cultural heritage since the beginning of recorded civilization: from the lion-headed figurine of the Hohlenstein Stadel<sup>24</sup> to the Egyptian sphinx; from Ganesha – the hindu deity with the elephant head – to the biblical devil embodied as a snake in the garden of Eden. The chimera, the masculine minotaur and the feminine harpy are just a few characters of the very fecund Greek mythological parade. Alternative embodiments are contemplated in psychological, spiritual and religious domains. Islam has a foundation in dream initiation: the Isra and Mi'raj – the Night Journey during which Mohammed ascends to heaven and speaks to God – has been described as both a physical and spiritual journey. Altered states of consciousness, trance rituals and psychoactive substances form part of shamanic practices in different traditions, and are aimed to achieve spiritual elaborations of the self

23 On the sociology of scientific knowledge, see Latour (1979; 1987).

24 Determined to be about 32.000 years old, this is the oldest known zoomorphic sculpture in the world.

through a mediated perception of the physical body. The Jungian collective unconscious and the paranormal activity can be viewed as other terms of speculative embodiments. What about virtual bodies as contemporary interpretations of the other selves? Following McLuhan's definition of the media as "extensions of man", (see McLuhan 1964) online identities have been regarded as extensions of the self, and as "the second self" (see Turkle 1984). In cybernetics, an avatar indicates one (of many) graphic representation of a user, while its etymology suggests a transcendental nexus: in Sanskrit "avatar" refers to the appearance or manifestation of a deity from heaven to earth, and it is widely translated into English as "incarnation". Extending its enquiry over the boundaries of the scientific domain, and so opening to different types of knowledge and understanding, posthumanism offers a theoretical invitation to think inclusively, in a genealogical relocation of humanity within multiversality ("post-humanism" as a criticism of humanism, anthropocentrism and universe-centrism), and alterity within the self ("posthuman-ism" as a recognition of those aspects which are constitutively human, and still, beyond human comprehension). In this double sense, "posthuman" is becoming a key concept for the past,<sup>25</sup> not only for the present and the future.

Posthumanism radically opens to alterity and extensions of diversity, and thus reflects on alternative human embodiments. More extensively: will *Homo sapiens* evolve into a number of subspecies, as Warwick (1997) predicts? This question leads to conjectures. In the near future some people might migrate to planets other than Earth; due to adaptation, generation after generation their DNA may mutate. Other humans might radically merge with technology and machines, with their descendants evolving specific traits and, ultimately, turning into what has been called "*Homo cyberneticus*." Due to its postmodern roots, posthumanist accounts adopt a strong critical approach, trying to keep *historia magistra vitae* in mind and to dislocate human-centric perspectives. Obviously, since posthumanism is thought by humans, that may prove a hard task. Still, this strong criticism of humanism is crucial for posthumanist reflections, as much as this decentralization does not end in a new structure which simply reverses the traditional one. More than one century ago, Dubois was wondering about race:

"What shall be its functions in the future? Manifestly, some of the great races of today – particularly the Negro race – have not yet given to civilization the full spiritual message which they are capable of giving" (Dubois 1897, 11).

Emphasizing a comprehensive genealogy of humanity, which strives to dethrone previous monopolies of social identities historically based on hierarchical tax-

<sup>25</sup> Some authors, for instance, have started to produce posthumanist readings of Plato, Dante, Shakespeare (see Joy/ Dionne [eds.] 2010).

onomies of bodies, posthumanism seems congenial to the social and spiritual realization envisioned by Dubois. We still have to take into account all of human perspectives, in order to praise diversification and not sadomasochistic new accounts of the conflicted, but still egocentric, symbolic white man.<sup>26</sup>

### Transhuman Bodies

Just like posthumanism, transhumanism<sup>27</sup> arose as a movement in the late 80s / early 90s, orientating its interests around similar topics. But the two movements do not share the same roots nor perspectives (see Ferrando 2013). While posthumanism comes out of postmodernism, transhumanism seeks its origins in science and technology, especially early ideas about human evolution. It recognizes the Enlightenment as one of its sources, and thus it does not expropriate rational humanism. The concept of posthuman itself is interpreted in a specific transhumanist way. In order to greatly enhance human abilities, transhumanism opts for a radical transformation of the human condition by existing, emerging and speculative technologies (as in the case of regenerative medicine, radical life extension, mind uploading<sup>28</sup> and cryonics); it suggests that diversity and multiplicity will replace the notion of existing within a single system, such as a biological body.<sup>29</sup> For transhumanists, human beings may eventually transform themselves so radically as to become "posthuman." According to Kurzweil:

"We will continue to have human bodies, but they will become morphable projections of our intelligence. [...] Ultimately software-based humans will be vastly extended beyond the severe limitations of humans as we know them today" (Kurzweil 2005, 324-325).

In his democratic transhumanism, Hughes calls for an equal access to these technological enhancements, which could otherwise be limited to certain socio-

<sup>26</sup> This generic definition mainly refers to the symbolic subject of Western official discourses, assuming that not every embodied white man in history has shared such schemata.

<sup>27</sup> The term was coined in 1957 by biologist Julian Huxley.

<sup>28</sup> Also defined as "whole brain emulation", mind uploading describes the hypothetical process of transferring or copying a conscious mind from a brain to a non-biological substrate, with the onto-epistemological risks of dualism and mechanism that such a view entails.

<sup>29</sup> It is interesting to notice that transhumanists value the human body and advocate self-responsibility in maintaining health and well-being, in order to live longer and keep the biological body alive until other options might become available – I thank Dr. Natasha Vita-More for her input and clarification on this point.

political classes and related to economic power, consequently encoding racial and sexual politics (see Hughes 2004).

Max More defines morphological freedom as “the ability to alter bodily form at will through technologies such as surgery, genetic engineering, nanotechnology, uploading” (More 1993). Natasha Vita-More has been working on the design of a posthuman body for more than ten years. Her project is one of a visionary mind:

“Affected by this state of progress, human nature is at a crossroads. [...] We are questioning our human biology and challenging what it means to be biological” (Vita-More 2004).

Still, the table that represents some of the differences between the human body and the 21st century Primo Prototype is only part of the story. Primo Prototype figures as “ageless”, with “replaceable genes” and “upgrades.” The human body, instead, is defined by “limited lifespan”, “legacy genes”, and by the fact that it “wears out”, among other terms. Gender is marked as “restricted” (compared with Primo Posthuman’s “changeability”). Race is not mentioned. Age must be overcome. But this human body does not seem to be situated, nor to belong to a genealogy. Most transhumanist accounts on the body lack in philosophical deconstructionism as a theoretical practice. Talking of human embodiment as an outfit which can be conveniently reshaped reveals a reductionist approach, based on the Cartesian body/mind dualism. My question to this seemingly “neutral” body being redesigned is: how are the histories and herstories of the historical human body going to affect our posthuman future? The body, as a biological and figurative locus of socio-political interactions, is hardly neutral; reaffirming its discontinuities, emphasizing differences rather than erasing them when delivering phenomenological accounts of embodied humans, will set a more strategic *terminus a quo* to envision forthcoming posthumanities.

### Conclusions

Presenting the ontology of the human body as a performative and pluralistic process interdependent with its taxonomies and epistemologies, provides a theoretical ground and analytical tool to speculate on posthuman bodies. Yet, such a framework might not offer a full spectrum approach to depicting future embodiments. On one side, the concept of “body” is human and, inevitably, human-centric. On the other, “human” is a shifting etiquette which has been historically sustained through generative reformulations of the symbolic “Other”; it has been consequently ascribed within the frame of: speciesism, racism, sexism, heterosexism, ethnocentrism, classism, ageism, elitism and ableism, among other

-isms. Furthermore, it might be unnecessary to think in terms of “post” when referring to the future of humanity, if concepts such as “technology” and “tools” are symbiotic to the biological manifestation of the human itself, blurring the traditional divide nature/culture. Still, the term “posthuman” reveals a hidden value in social comprehension of narrative representations of knowledge. Not only does it imply a historical perspective on the human, but also, due to its newness to the common vocabulary, intrigues people to rethink on the meanings of the human. A historical and biological site of intersectional differences, the human body appears multiple. Humans are situated: born from a specific female body, in a certain era and geo-political arena; an individual out of one of many species inhabiting the earth. Humankind is no longer at the center of the universe, not only because posthumanism has decentralized the human, but also because the universe itself might have no center. On one side, we might be living in a multiverse;<sup>30</sup> on the other, our own organism shall be conceived as an assemblage of organs and different forms of life.<sup>31</sup> And still, everything is connected. Biodiversity is a measure for the health of ecosystems: “health” etymologically derives from proto-Germanic “hælp”, which means “whole.”

Contemporary scientific and bio-technological discourses are carving the future into a broader spectrum of alternative human embodiments, proposing a scientific revisit of mythological chimeras, in a generic and all-inclusive posthuman horizon. But the same Western traditions which are now debating post-embodiments, have culturally and politically theorized the human body in terms of exclusion. How much emphasis do we need to give to the past in order to reflect on the present and on the forthcoming time? The best way to predict the futures is to think about them. Envisaging posthuman bodies is a philosophical and a political task, involving human agency. Histories and herstories of the human body are herstories and histories of the cyborg. Not only contemporary posthumanist and transhumanist thinkers shall freely refer to them, but future generations of humans, post-humans and intelligent machines will have to process them, in order to access a deeper understanding of themselves.<sup>32</sup> Denying feminism, race studies, postcolonialism and all accounts made by subjects who have been historically located outside of hegemonic discourses, will offer a very

<sup>30</sup> For a scientific revisit and a theoretical reflection on the multiverse, see, for instance, Randall (2005). For a historical account on the notion of the multiverse, from quantum physics to cosmology, see Greene (2011).

<sup>31</sup> Humans have ten times more bacteria than human cells; still, we don’t think of “them” as “us” (Keller 2009).

<sup>32</sup> In his classic study *Mind Children*, Moravec (1988, 1) stated on AI: “it will be in our artificial offspring’s power, and to their benefit, to remember almost everything about us, even, perhaps, the detailed workings of individual human minds”.

limited notion of the human, and will stand as one more repetitive ego trip of the omniscient neutral subject, lacking on providing an accurate representation of humanity as an evolving life form rich in diversity.<sup>33</sup> My future is posthuman, but my posthumanism is rooted in a comprehensive critical account of what it means to be human.

### Acknowledgements

I am grateful to Prof. Achille Varzi, Dr. Natasha Vita-More, Prof. Vivaldi Jean-Marie and Prof. Luisa Passerini for their precious comments on this article; to Prof. Patrick Millard, Ellen Delahunt Roby and Thomas Roby for their helpful proof-reading; to Prof. Francesca Brezzi, Dr. Stefan Lorenz Sorgner and Luca Toledo for their constant support.

### Bibliography

- Braidotti, R. (1996): Signs of Wonder and Traces of Doubt: On Teratology and Embodied Differences. In: Lykke N./ Braidotti R. (eds.): Between Monsters, Goddesses and Cyborgs: Feminist Confrontations with Science, Medicine and Cyberspace. London: Zed Books, 135-152.
- Braidotti, R. (2013): The Posthuman. Cambridge: Polity Press.
- Butler, J. (2004): Undoing Gender. New York: Routledge.
- Clynes M.E./ Kline N.S. (1960): Cyborgs and Space. In: *Astronautics* 14(9), 26-7, 74-6.
- Derrida, J. (2008): The Animal That Therefore I Am. New York: Fordham University Press.
- Du Bois, W.E.B. (1897): The Conservation of Races (The American Negro Academy Occasional Papers, No.2). Washington D.C.: The Academy.
- Ferrando, F. (2013): Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms: Differences and Relations. In: *Existenz* 8(2), 26-32.
- Firestone, S. (1970): The Dialectic of Sex: The Case for Feminist Revolution. New York: Quill William Morrow.
- Foucault, M. (1970 [1966]): The Order of Things: An Archaeology of the Human Sciences. New York: Random House.
- Foucault, M. (1998 [1976]): The History of Sexuality (Vol. 1: The Will to Knowledge). London: Penguin.
- Gehlen, A. (1980 [1957]): Man in the Age of Technology (European Perspectives). New York: Columbia University Press.
- Gimbutas, M. (1974): The Gods and Goddesses of Old Europe: 7000 to 3500 BC Myths, Legends and Cult Images. Berkeley et al: University of California Press.
- Goldberg, D.T. (1993): Racist Culture: Philosophy and the Politics of Meaning. Cambridge(MA): Blackwell Publishers.
- Gould, S. J. (1996): Full House: The Spread of Excellence from Darwin to Plato. New York: Three Rivers Press.
- Green, B. (2011): The Hidden Reality: Parallel Universes and the Deep Laws of the Cosmos. New York: Random House.
- Haraway, D. (1996): Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. In: Keller, E.F./ Longino, H.E. (eds.): Feminism and Science. New York: Oxford University Press, 249-263.
- Harding, S. (1993): The "Racial" Economy of Science: Toward a Democratic Future. Bloomington et al: Indiana University Press.
- Hassan, I. (1977): Prometheus as Performer: Toward a Posthumanist Culture? In: *The Georgia Review* 31(4), 830-850.
- Hayles, N.K. (1999): How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics. Chicago et al: The University of Chicago Press.
- Heidegger, M. (1977 [1954]): The Question Concerning Technology and Other Essays. New York: Harper Torchbooks.
- Hughes, J. (2004): Citizen Cyborg: Why Democratic Societies Must Respond to the Redesignated Human of the Future. Cambridge(MA): Westview Press.
- Huxley, J. (1957): Transhumanism. In: Huxley, J.: New Bottles for New Wine. London: Chatto & Windus, 13-17.
- Irigaray, L. (1985 [1974]): Speculum of the Other Woman. New York: Cornell University Press.
- Joy, E.A./ Dionne, C. (eds.) (2010): When Did We Become Post/human? In: Postmedieval: A Journal of Medieval Cultural Studies 1(1-2).
- Keller, E.F. (2009): Society and Health (Presentation at The Darwin 2009 Festival, Cambridge University). <http://www.coursehero.org/lecture/evelyn-fox-keller-society-and-health-tue-7-july> (accessed August 3, 2013).
- Kete, K. (2002): Animals and Ideology: The Politics of Animal Protection in Europe. In: Rothfels, N. (ed.): Representing Animals. Bloomington et al: Indiana University Press, 19-34.
- Kurzweil, R. (2005): The Singularity is Near: When Humans Transcend Biology. New York: Viking.
- Kristeva, J. (1982): Powers of Horror: An Essay on Abjection New York: Columbia University Press.
- Kristeva, J. (1984): Revolution in Poetic Language. New York: Columbia University Press.
- Latour, B./ Woolgar, S. (1986 [1979]): Laboratory Life: The Social Construction of Scientific Facts. Princeton: Princeton University Press.
- Latour, B. (1987): Science In Action: How to Follow Scientists and Engineers Through Society. Cambridge(MA): Harvard University Press.
- Leroi-Gourhan, A. (1943): *L'Homme et la Matière*. Paris: Albin Michel.
- Leroi-Gourhan, A. (1993 [1964]): Gesture and Speech. Cambridge(MA) et al.: MIT Press.
- Linnaeus, C. (1758): *Systema Naturae per Regna Tria Naturae: Secundum Classes, Ordines, Genera, Species, cum Characteribus, Differentiis, Synonymis, Locis – Editio Decima, Reformata*. Holmiae: Laurentius Salvius.

<sup>33</sup> According to Gould, evolution is not driven towards complexity, but towards diversification (Gould 1996).

- McLuhan, M. (1964): *Understanding Media: The Extensions of Man*. Cambridge(MA) et al.: The MIT Press.
- Merchant, C. (1980): *The Death of Nature: Women, Ecology, and the Scientific Revolution*. New York: HarperCollins.
- Moravec, H. (1988): *Mind Children: The Future of Robot and Human Intelligence*. Cambridge(MA): Harvard University Press.
- More, M. (1993): Technological Self-Transformation: Expanding Personal Extropy. In: *Extropy #10*, 4(2).
- Price, J./ Shildrick, M. (eds.) (1999): *Feminist Theory and the Body: A Reader*. New York: Routledge.
- Randall, L. (2005): *Warped Passages: Unraveling the Mysteries of the Universe's Hidden Dimensions*. New York: HarperCollins.
- Schiebinger, L. (1999): Theories of Gender and Race. In: Price, J./ Shildrick, M. (eds.): *Feminist Theory and the Body: A Reader*. New York: Routledge, 21-31.
- Schiebinger, L. (2000): Taxonomy for Human Beings. In: Kirkup, G. et al. (eds.): *The Gendered Cyborg: A Reader*. New York: Routledge, 11-37.
- Singer, P. (1975): *Animal Liberation: A New Ethics for Our Treatment of Animals*. New York: New York Review.
- Stiegler, B. (1998): *Technics and Time, 1: The Fault of Epimetheus*. Stanford: Stanford University Press.
- Turkle, S. (1984): *The Second Self: Computers and the Human Spirit*. New York: Simon & Schuster.
- Vita-More, N. (2004): The New Genre: Platform Diverse Body / Substrate Autonomous Persons – (e.g. Primo Posthuman) (Presentation at Ciber@RT Conference, Bilbao). <http://www.natasha.cc/paper.htm> (accessed August 3, 2013).
- Warwick, K. (1997): *The March of the Machines: The Breakthrough in Artificial Intelligence*. London: Century.
- Warwick, K. (2004): *I, Cyborg*. Urbana(IL) et al.: University of Illinois Press.
- Woese, C. (1998): The Universal Ancestor. In: *Proceedings of the National Academy of Science of the United States of America* 95(12), 6854-6859.
- Yancy, G. (2008): *Black Bodies, White Gazes: The Continuing Significance of Race*. Lanham et al: Rowman & Littlefield Publishers.



This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License. You must attribute this work to the Original Author as part of the Present Collection, in the manner specified by the Editor in the Colophon of this Publication. To view a copy of this License, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/> or send a letter to Creative Commons, 444 Castro Street, Suite 900, Mountain View, California, 94041, USA.