HUMAN?

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Human?

An investigation into 'being human' in today's context

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Introduction

There has been always including, excluding, certain, uncertain and ever-changing elements in the outline that defines a "human". As the feminist philosopher, Rosi Braidotti mentions, "Not all of us can say, with any degree of certainty, that we have always been human, or that we are only that. Some of us are not even considered fully human now, let alone at previous moments of Western social, political and scientific history."[1]

The present day's mainstream culture debates about the next human evolution through enhancements, extensions, augmentations, robotics, AI, neuroscience, gene therapy and so on, these technological advancements point towards an inevitable transition to the posthuman which evokes elation but also anxiety.[2] Certainly, the pace of technological advancements is creating an essential difference between the present and earlier stages in human evolution by giving choices to us. These choices are about how we want to change, which elements to embrace and which to reject, and redefine humanity.

Today, I believe that I am not fully human. Also, I am not fully non-human, which is something that has human-like characteristics but not enough to be considered as a human. So, who am I now? Am I oscillating between human and non-human states in a non-binary way? What will be my future as an individual as well as a part of collective similar entities? There are many ethical questions affecting individuals, collective humanity and a shared world which are not having clear answers.

So, I begin my investigation by looking backwards, as descriptions and definitions of 'humans' and the transition of humans in the age of imagination. Next, I examine the accelerated transformation of human which is happening in confusion. Finally, I highlight how the boundary of ethics is blurring and how to draw the clear lines that might help us to see the choices for change and probably make us more than a human.

1   Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013), p.1
2   Jürgen Habermas, quoted in Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013), p.10

Let Me Begin by Asking "What is a human?"

The English adjective human is a Middle English loanword from old French humaine, ultimately from Latin hūmānus, the adjective form of homō "man." The Latin hūmānus, an adjective cognate to "humus" meaning "earth, ground, soil", on a notion of "earthly beings".[3] The word "human" use as a noun with a plural "humans" dates to the 16th century and present spelling became usual in the 18th century; compare with humane. As per Oxford English Dictionary online (2018), the different noun forms "human" or "human being" or "person" or "people" can be interpreted as a man, woman, or child of the species Homo sapiens, distinguished from other animals by superior mental development, power of articulate speech, and upright stance.

The scientific classification of humans has considerably changed over time and its exact makeup is constantly under debate, blurring the lines between the ontological, which is a branch of metaphysics dealing with the nature of being, and epistemological, which is a branch of philosophy concerned with the theory of knowledge of human cognition. A notable date in this genealogy is 1758, the time when the tenth edition of Systema Naturae was published, which is considered as the starting point of modern botanical and zoological taxonomy. In that publication, Carl Linnaeus, a Swedish botanist, physician and zoologist coined the binomial name "Homo sapiens", referring to the only living species of Homo[4]. For the first time in Western history, humans were placed in a system of biological classification like any other animal or plant species.[5]

According to Kenneth Burke's work in "Language as Symbolic Action", man is the symbol-using (symbol-making, symbol-misusing) animal, inventor of the negative (or moralized by the negative), separated from his natural condition by instruments of his own making, goaded by the spirit of hierarchy (or moved by the sense of order), and rotten with perfection".[6] Essentially, Burke's definition maintains that man is distinct from other creatures by the

3   Francesca Ferrando, 'The Body', in Post- and Transhumanism, edited by Robert Ranisch and Stefan Lorenz Sorgner (Frankfurt: Peter Lang, 2014), pp.213-226 (p.214)
4   Homo is the genus that encompasses the extant species Homo sapiens (modern humans), plus several extinct species classified as ancestral to or closely related to modern humans, most notably Homo erectus.
https://en.wikipedia.org/wiki/Homo (accessed 7 April 2018)
5   Francesca Ferrando, 'The Body', in Post- and Transhumanism, edited by Robert Ranisch and Stefan Lorenz Sorgner (Frankfurt: Peter Lang, 2014), pp.213-226 (p 214)
6   Kenneth Burke, Language as Symbolic Action (Berkeley & Los Angeles: University of California Press, 1966) p. 16.

virtue of his use of symbols to communicate, his understanding of negation, his separation from nature by his own techniques, his existence in differing social structures, and his goal to become better than he presently is.[7]

It is no wonder that scientists, philosophers, psychologists, etc., have been puzzling over the most essential definition of human and human uniqueness since the beginning of recorded history. We once thought humans were unique for using language, but this seems less certain each year; we once thought humans were unique for using tools, but this claim also erodes with ongoing animal-behavior research.[8] For example, dolphins employ a universal "sono-pictorial" language of communication. Chimpanzees have culture and use tools. New Caledonian crows not only use tools, but make tools to make tools. Mirror experiments have demonstrated that several animal species clearly have self-awareness. Many animals have vastly better navigation skills than humans, for example, honeybees use the sun, the polarization of the blue sky, and the magnetic field of the planet as markers or guides.

We have been kept asking ourselves about our uniqueness and why we are so compelled to feel unique in the first place. The more we actually look for "solely human" features in other species, the more of these qualities are found and many prominent Biologists argue that we are just part of a continuum of natural qualities, not unique at all. Clearly, there are indications that we have not found the answer to the fundamental question "what is a human?", yet. For now, it appears that every individual interprets "human" in its own way and define "human" to remain unique from others. In the next chapter, I explore the evolution of human and how the goal of "becoming better than the present" is playing a role since the beginning of humanity.

7   https://en.wikipedia.org/wiki/Definition_of_man (accessed 7 April 2018)
8   Brian Christian, 'Mind vs. Machine', *The Atlantic* (March 2011), https://www.theatlantic.com/magazine/archive/2011/03/mind-vs-machine/308386/ (accessed 7 April 2018)

Transitioning in the Age of Imagination

The terms imagination age and "age of imagination" were first introduced in an essay by designer and writer Charlie Magee in 1993. In his essay "The Age of Imagination: Coming Soon to a Civilization Near You", he writes " So, as the tools of the agricultural age control the products of the hunter/gatherer age, and the industrial tools control the products of the agricultural age, and the information tools control the products of the industrial age, what will control the information tools? The human Imagination. The human Spirit. The ineffable Mind."[9] The combination of emerging fields such as AI, nanotech, and biotech has already started creating a world where anything we imagine is possible to achieve, perhaps highlighting imagination as a quality unique to human and its emergence as the most valued skill in the modern human society. Building on from the idea of the age of imagination that we are currently experiencing, the next section illustrates how it took such a long time for the human to reach the current age of evolution.

Genetic measurements indicate that the ape lineage which would lead to Homo sapiens diverged from the lineage that would lead to the bonobo, the closest living relative of modern humans, around 4.6 to 6.2 million years ago.[10] Anatomically modern humans arose in Africa about 200,000 years ago and reached behavioural modernity about 50,000 years ago.[11] Perhaps as early as 1.8 million years ago, but certainly by 500,000 years ago, humans began using fire for heat and cooking. They also developed language in the Paleolithic period and a conceptual repertoire that included systematic burial of the dead and adornment of the living. The early artistic expression can be found in the form of cave paintings and sculptures made from ivory, stone, and bone, showing a spirituality generally interpreted as animism, or even shamanism. During this period, all humans lived as hunter-gatherers and were generally nomadic.[12]

Until about 10,000 years ago, humans lived as hunter-gatherers. They gradually gained domination over much of the natural environment. They

9   Charlie Magee, 'The Age of Imagination: Coming Soon to a Civilization Near You', Second International Symposium: National Security & National Competitiveness: Open Source Solutions Proceedings Vol 1 (1993): 95.
10   Feng-Chi Chen and Wen-Hsiung Li, 'Genomic Divergences between Humans and Other Hominoids and the Effective Population Size of the Common Ancestor of Humans and Chimpanzees', *American Journal of Human Genetics*, 68 (2) (2001): 444.
11   Richard G. Klein, 'Anatomy, Behavior, and Modern Human Origins', *Journal of World Prehistory*, 9 (2) (1995): 167.
12   Adam Hart-Davis, *History: From the Dawn of Civilization to the Present Day* (New York: DK Publishing, 2012), p.17.

generally lived in small nomadic groups known as band societies, often in caves. The advent of agriculture prompted the Neolithic Revolution when access to food surplus led to the formation of permanent human settlements, the domestication of animals and the use of metal tools for the first time in history. Agriculture encouraged trade and cooperation, and led to complex society.[13] The early civilizations of Mesopotamia, Egypt, India, China, Maya, Greece, and Rome were some of the "cradles of civilization" where, according to current archaeological data, civilization is understood to have emerged. Current thinking is that there was no single "cradle", but several civilizations that developed independently, with the Fertile Crescent (Mesopotamia and Ancient Egypt) understood to be the earliest.[14]

The Late Middle Ages and the Early Modern Period saw the rise of revolutionary ideas and technologies. Over the next 500 years, exploration and European colonialism brought great parts of the world under European control, leading to later struggles for independence. The Scientific Revolution, Technological Revolution, and the Industrial Revolution resulted in independent discoveries and with the arrival of Information Age at the end of the 20th century, modern humans live in a world that has become increasingly globalized and interconnected.[15]

The onset of the Information Age is associated with the Digital Revolution, just as the Industrial Revolution marked the onset of the Industrial Age.[16] The rapid evolution of technology in daily life and social organization has led to the fact that the modernization of information and communication processes has become the driving force of social evolution in the Information Age. The hypothesized successor of the Information Age is believed to be Imagination Age.

There is a general observation that every subsequent age of human evolution is getting shorter as well as influential in changing the very basic idea of being a human. In the next chapter, I examine how the accelerated rate of human transformation in the present age of imagination is taking place in confusion where science and conscience are not aligning together.

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13   https://en.wikipedia.org/wiki/Human (accessed 7 April 2018)
14   Charles Keith Maisels, The Near East: Archaeology in the 'Cradle of Civilization' (London: Routledge, 1993), p.77
15   https://en.wikipedia.org/wiki/Human (accessed 7 April 2018)
16   Manuel Castells, The Information Age, Volumes 1–3: Economy, Society and Culture (Oxford: Blackwell Publishing, 1996)

Accelerated Transformation in Confusion

Building on from the idea that science and conscience of the present age are not aligning together, this section illustrates the different concepts and movements surrounding the future human which are leading to an unclear phase of the next human transformation, whether it is a cyborg or a posthuman.

In a recent statement from Tesla founder Elon Musk, "Humans must become cyborgs if they are to stay relevant in a future dominated by artificial intelligence".[17] While it appears like a strange statement, I find that the transformation of human to cyborg has already started a long time ago. I see it as a Cyborg Syndrome. This syndrome remained unnoticed to the vast majority of human population, but there were a few who envisioned it becoming stronger with time as science fiction started becoming science fact. Modern human use automated tellers or checkouts in banks and supermarkets, fill up fuels at self-service pumps, use search engines like Google all the time without asking how the algorithm works, walk around with artificial hips, hearing aids and pacemakers without thinking of themselves as cyborgs.[18]

The term cyborg (short for cybernetic organism) was first coined by Manfred Clynes and Nathan Kline in 1960. The first syllable of 'cyborg' derives from 'cybernetics' (from the Greek of 'steersman'), which is the study of control systems and comparisons between artificial and biological systems. The second syllable comes from 'organism', which adds emphasis to the significant part that will still be played by the human being who acts as the host to the technology.[19] According to Manfred Clynes and Nathan Kline, a cyborg deliberately incorporates exogenous components extending the self-regulatory control function of the organism in order to adapt it to new environments.[20] In 1965, D. S. Halacy defined "cyborg" as a man who uses machines to increase his power. Cyborg was born when humans began to make tools, no matter how primitive. He addressed a new frontier that was not only space but also the relationship between inner space and out space,

17   https://www.theguardian.com/technology/2017/feb/15/elon-musk-cyborgs-robots-artificial-intelligence-is-he-right (accessed 7 April 2018)
18   Ben Russel, *Robots: The 500-Year Quest to Make Machines Human* (London: Scala Arts & Heritage Publishers, 2017), p.104.
19   Marie O'Mahony, Cyborg: The Man Machine (London: Thames & Hudson Ltd, 2002), p.11.
20   Manfred E. Clynes and Nathan S. Kline, 'Cyborgs and space', *Astronautics*, September (1960): 27.

a bridge between mind and matter.[21] According to Donna Haraway, a cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction.[22] She further calls a cyborg as a kind of disassembled and reassembled, postmodern collective and personal self which is crafted by communications sciences and biotechnologies.[23]

According to Marie O'Mahony, one of the motives for the development of the cyborg is the desire of the human for eternal life, a desire which is linked to the instinct of survival along with a constant cry for more, more of everything – land, possessions, pleasure, stimulation. The quest for eternal life is deeply embedded in the human psyche and influencing the scientific development of the cyborgs. Today, death–denier humans want their corpses immersed in liquid nitrogen in the hope of one day being brought back to life. But in the pursuit of eternal life through the cyborg state, it is far from clear whether the outcome would be a utopia.[24]

At the same time, it appears that there may be an alternative motive, the motive to control the cyborg to produce a desired outcome. Karl Marx's in his theory of alienation describes that within the capitalist mode of production, the human worker loses the ability to determine life and destiny, when deprived of the right to think of themselves as the director of their own actions.[25] Haraway argues that the "New Industrial Revolution" is producing a new worldwide working class, as well as new sexualities and ethnicities. The extreme mobility of capital and the emerging international division of labor are intertwined with the emergence of new collectivities, and the weakening of familiar groupings. These developments are neither gender nor race neutral.[26]

In an essay on "The Cyborg Soldier", Chris Hables Gray notes that millions of US dollars were spent between 1950 and 1975 on the research of drugs

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21   D. S. Halacy, Jr., Cyborg: Evolution of the Superman (New York: Harper & Row, 1965), p.207.
22   Donna Haraway, 'A Cyborg Manifesto', in Simians, Cyborgs and Women: The Reinvention of Nature, edited by Donna Haraway (New York; Routledge, 1991), pp.149–182 (p.149)
23   Donna Haraway, 'A Cyborg Manifesto', in Simians, Cyborgs and Women: The Reinvention of Nature, edited by Donna Haraway (New York; Routledge, 1991), pp.149–182 (p.164)
24   Marie O'Mahony, Cyborg: The Man Machine (London: Thames & Hudson Ltd, 2002), p.16, 18
25   Karl Marx and Friedrich Engels, The Economic and Philosophic Manuscripts of 1844 (New York: Prometheus Books, 1988), p.87.
26   Donna Haraway, 'A Cyborg Manifesto', in Simians, Cyborgs and Women: The Reinvention of Nature, edited by Donna Haraway (New York; Routledge, 1991), pp.149–182 (p.166)

that would lower stress and fear while raising or maintaining performance levels of the American military. A SEAL team member revealed that how these drugs were routinely consumed during his time in the Vietnam war. In his book "No More Heroes: Madness and Psychiatry in War (1988)", Richard Gabriel describes the potential of these drug programmes in not only keeping soldiers from feeling fear but almost anything else as well, making them functional psychopaths.[27] Modern war is a cyborg orgy, coded by C3I, command-control-communication-intelligence.[28]

Haraway argues that we are living through a movement from an organic, industrial society to a polymorphous, information system—from all work to all play, a deadly game. Simultaneously material and ideological, the dichotomies may be expressed in the following chart with some examples of transitions from the comfortable old hierarchical dominations to the scary new networks which she calls as the informatics of domination. The objects on the right-hand side cannot be coded as "natural," a realization that subverts naturalistic coding for the left-hand side as well. We cannot go back ideologically or materially.[29]

Organics of Domination	*Informatics of Domination*
representation	simulation
bourgeois novel, realism	science fiction, postmodernism
organism	biotic component
biology as clinical practice	biology as inscription
small group	subsystem
perfection	optimization
eugenics	population control
organic division of labor	ergonomics, cybernetics of labor
functional specialization	modular construction
reproduction	replication

27   Marie O'Mahony, *Cyborg: The Man Machine* (London: Thames & Hudson Ltd, 2002), p.76.
28   Donna Haraway, 'A Cyborg Manifesto', in Simians, Cyborgs and Women: The Reinvention of Nature, edited by Donna Haraway (New York; Routledge, 1991), pp.149–182 (p.175)
29   Donna Haraway, 'A Cyborg Manifesto', in Simians, Cyborgs and Women: The Reinvention of Nature, edited by Donna Haraway (New York; Routledge, 1991), pp.149–182 (p.161,162,163)

organic sex role specialization	optimal genetic strategies
public/private	cyborg citizenship
nature/culture	fields of difference
cooperation	communications enhancement
sex	genetic engineering
labor	robotics
mind	artificial intelligence

The control strategies during the transition will be formulated in terms of rates, costs of constraints, degrees of freedom. For example, control strategies applied to women's capacities to give birth to new human beings will be developed in the languages of population control and maximization of goal achievement for individual decision makers. Human beings, like any other component or subsystem, must be localized in a system architecture whose basic modes of operation are probabilistic, statistical. The dichotomies between mind and body, animal and human, organism and machine, public and private, nature and culture, men and women, primitive and civilized are all in question ideologically.[30]

In her TED talks, Amber Case highlights the issue of being a cyborg. As she says we are cyborgs every time we look at a computer screen or use one of our cell phone devices. In the beginning, for thousands and thousands of years, everything has been a physical modification of self. It has helped us to extend our physical selves, go faster, hit things harder, and there has been a limit on that. But now what we're looking at is not an extension of the physical self, but an extension of the mental self, and because of that, we're able to travel faster, communicate differently. The other thing that happens is that we are all carrying around little Mary Poppins technology. We can put anything we want into it, and it doesn't get heavier, and then we can take anything out. What does the inside of your computer actually look like? Well, if you print it out, it looks like a thousand pounds of material that you're carrying around all the time. If you actually lose that information, it means that you suddenly

30   Donna Haraway, 'A Cyborg Manifesto', in Simians, Cyborgs and Women: The Reinvention of Nature, edited by Donna Haraway (New York; Routledge, 1991), pp.149–182 (P.163)

have this loss in your mind, that you suddenly feel like something's missing, except you aren't able to see it, so it feels like a very strange emotion.

The other thing that happens is that you have a second self. Whether you like it or not, you're starting to show up online, and people are interacting with your second self when you're not there. So you have to be careful about leaving your front lawn open, which is basically your Facebook wall, so that people don't write on it in the middle of the night because it's very much the equivalent. Suddenly we have to start to maintain our second self. You have to present yourself in digital life in a similar way that you would in your analog life. So, in the same way that you wake up, take a shower and get dressed, you have to learn to do that for your digital self. The problem is that a lot of people now, especially adolescents, have to go through two adolescents. They have to go through their primary one, that's already awkward, and then they go through their second self's adolescence, and that's even more awkward because there's an actual history of what they've gone through online. Anybody coming in new to technology is an adolescent online right now, and so it's very awkward, and it's very difficult for them to do those things.[31]

Another line of thought on the future of human comes from the idea of posthuman. As per Oxford English Dictionary online (2018), Posthuman or post-human is a concept originating in the fields of science fiction, futurology, contemporary art, and philosophy that literally means a person or entity that exists in a state beyond being human.

According to philosopher Francesca Ferrando, "posthuman" has become a key term to cope with an urgency for the integral redefinition of the notion of the human, following the onto-epistemological as well as scientific and bio-technological developments of the twentieth and twenty-first centuries. However, the philosophical landscape, which has since developed, includes several movements and schools of thought such as posthumanism, transhumanism, antihumanism, AI Takeover, Voluntary Human Extinction, new materialisms, metahumanities and so on. Such a generic and all-inclusive use of the term "posthuman" has created methodological and theoretical confusion between experts and non-experts alike. There are different

31   https://www.ted.com/talks/amber_case_we_are_all_cyborgs_now (accessed 7 April 2018)

reasons for such confusion. The most confused areas of signification are the ones shared by posthumanism and transhumanism having special meaning of posthuman in each tradition.[32]

Posthumanism and Transhumanism movements started more specifically in the late Eighties and early Nineties of the twentieth century.[33] Both share a common perception of the human as a non-fixed and mutable condition, but they generally do not share the same roots and perspectives. To add further confusion, the concept of posthumanism itself is interpreted in a specific transhumanist way within the transhumanist debate as for some transhumanists, human beings may eventually transform themselves so radically as to become posthuman, a condition expected to follow the current transhuman era. Such a take on the posthuman should not be confused with the post-anthropocentric and post-dualistic approach of (philosophical, cultural, and critical) posthumanism.[34]

In simple terms, posthumanism comes out of postmodernism, whereas transhumanism seeks its origin in science and technology, especially early ideas about human evolution and recognizes the Enlightenment as one of its sources, and thus it doesn't expropriate rational humanism.[35] Posthumanism while being critical rejects the idea that humans are unique creatures (human exceptionalism) and have a right to control the natural world (human instrumentalism). On the other side, Transhumanism retains humanism's focus on the homo sapien as the center of the world but also considers technology to be an integral aid to human progression. In popular culture, Transhumanism is also more ingrained than posthumanism, especially in science fiction and is referred to by Pramod Nayar as "the pop posthumanism of cinema and pop culture."[36] The next section further explores the differences between the posthumanism philosophical and transhumanism point of view about posthuman.

32   Francesca Ferrando, 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms', Existenz 8 (2) (2013):26.
33   Julian Huxley, New Bottles for New Wine: Essays (London: Chatto & Windus, 1957), p.13-17; Ihab Habib Hassan, 'Prometheus as Performer: Toward a Posthumanist Culture?', The Georgia Review 31/4 (Winter 1977):830-850; Ihab Habib Hassan, The Postmodern Turn: Essays in Postmodern Theory and Culture (Columbus, OH: Ohio State University Press, 1987)
34   Francesca Ferrando, 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms', Existenz 8 (2) (2013):27
35   Francesca Ferrando, 'The Body', in Post- and Transhumanism, edited by Robert Ranisch and Stefan Lorenz Sorgner (Frankfurt: Peter Lang, 2014), pp.213-226 (p.221)
36   Pramod K Nayar, Posthumanism (Cambridge: Polity, 2014), p.6.

Posthumanism Philosophical Posthuman

Although the roots of posthumanism can be already traced in the first wave of postmodernism, the posthuman turn was fully enacted by feminist theorists in the Nineties, within the field of literary criticism – what will later be defined as critical posthumanism. Simultaneously, cultural studies also embraced it, producing a specific take which has been referred to as cultural posthumanism.[37] By the end of the 1990s, both critical and cultural posthumanism developed into a more philosophically focused inquiry and now referred to as philosophical posthumanism.

According to Rosi Braidotti in Posthuman Critical Theory, the philosophical 'posthuman turn' is triggered by the convergence of anti-humanism on the one hand and anti-anthropocentrism on the other, which may overlap, but refer to different genealogies and traditions. Anti-humanism focuses on the critique of the humanist ideal of 'Man' as the universal representative of the human, while anti-anthropocentrism criticizes species hierarchy and advances ecological justice.[38] She further adds that the 'human' is not a neutral term but rather a hierarchical one that indexes access to privileges and entitlements, linked to both the humanist tradition and anthropocentric ' exceptionalism. The real methodological difficulty in releasing our bond to Anthropos and developing critical post-anthropocentric forms of thought, however, is affective. Disloyalty to our species is no easy matter because different ecologies of belonging are at stake in the movement towards a critical posthuman position. Some of us feel quite attached to the 'human', that creature familiar from time immemorial who, as a species, a planetary presence, and a stratified cultural formation, spells out very specific modes of belonging.[39]

The Posthumanism posthuman is roughly synonymous with the Donna Haraway's cyborg which in many ways appears as the "beta" version of the critical posthuman.[40] Although her cyborg theory is considered as one of

37   Francesca Ferrando, 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms', Existenz 8 (2) (2013):29

38   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.13–14)

39   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.15)

40   https://en.wikipedia.org/wiki/Posthuman (Accessed 7 April 2018)

the milestones in the development of feminist posthuman theory,[41] she has distanced herself from posthumanistic discourse due to other theorists' use of the term to promote utopian views of technological innovation to extend the human biological capacity. She has outspokenly rejected the term posthumanism, though acknowledges a philosophical alignment with it and opts instead for the term of companion species, referring to nonhuman entities with which humans coexist.[42]

Following Haraway's cyborg theory, Katherine Hayles, whose work grounds much of the critical posthuman discourse, asserts that liberal humanism – which separates the mind from the body and thus portrays the body as a "shell" or vehicle for the mind – becomes increasingly complicated in the late 20th and 21st centuries because information technology puts the human body in question. Hayles maintains that we must be conscious of information technology advancements while understanding information as "disembodied," that is, something which cannot fundamentally replace the human body but can only be incorporated into it and human life practices.[43] She describes four characteristic posthumans.[44]

1. Information patterns are more important or essential to the nature of being than any "material instantiation, so that embodiment in a biological substrate is seen as an accident of history rather than an inevitability of life".

2. Consciousness is an epiphenomenon. There is no immaterial soul.

3. The body is simply a prosthesis, albeit the first one we learn to use and manipulate. Consequently, replacing or enhancing human function with other prostheses is only a natural extension of our fundamental relationship with our begotten bodies.

4. The posthuman views the human being as capable of being "seamlessly articulated with intelligent machines. In the posthuman, there are no

41   Ferrando, Francesca, 'Posthumanism', Kilden Journal of Gender Research (2) (2014): 168–172.
42   Nicholas Gane and Donna Haraway, 'When We Have Never Been Human, What Is to Be Done?: Interview with Donna Haraway', Theory, Culture & Society 23 (7-8) (2006): 135-158.
43   N. Katherine Hayles, How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics (Chicago & London: University of Chicago Press), p.214.
44   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517–2520 (p.2518)

essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot technology, and human goals".

As posthumanism attracts more attention and becomes mainstream, new challenges arise such as thinkers looking to embrace the "exotic" difference, such as the robot, the alien, and so on without having to deal with the differences embedded within the human realm, thus avoiding the studies developed from the human "margins," such as feminism or critical race studies. Francesca Ferrando points out that posthumanism does not stand on a hierarchical system: there are no higher and lower degrees of alterity when formulating a posthuman standpoint, so that the non-human differences are as compelling as the human ones.[45]

Transhumanism Posthuman

The biologist Julian Huxley is generally regarded as the founder of transhumanism, after using the term for the title of an influential 1957 article. He describes transhumanism as

"Up till now human life has generally been, as Hobbes described it, 'nasty, brutish and short'; the great majority of human beings (if they have not already died young) have been afflicted with misery... we can justifiably hold the belief that these lands of possibility exist, and that the present limitations and miserable frustrations of our existence could be in large measure surmounted... The human species can, if it wishes, transcend itself—not just sporadically, an individual here in one way, an individual there in another way, but in its entirety, as humanity."[46]

However, as a names movement transhumanism started in the 1980s with the writings of a futurist known as FM-2030, with the term transhuman being a shorthand for a transitional human.[47] Within the first years of the 1990s, a whole series of groups emerged embracing transhumanist ideology,

45   Francesca Ferrando, 'Posthumanism, Transhumanism, Antihumanism, Metahumanism, and New Materialisms', Existenz 8 (2) (2013):30
46   Julian Huxley, New Bottles for New Wine: Essays (London: Chatto & Windus, 1957), p.13-17
47   https://nickbostrom.com/views/transhumanist.pdf (accessed 7 April 2018)

including the Extropians, the Transtopians, and the Singularitarians, the latter group anticipating and working to bring about the technological "Singularity" predicted by Vernor Vinge. Writing in 1993, Vinge predicted that the exponential increase in scientific and technical knowledge, coupled with feedback loops from artificial intelligence systems, would soon lead to a massive destabilization and transformation of all social structures, technical devices, and human beings, who would be transformed into superior beings. While the Singularity is the most extreme of the transhumanist visions, the idea that humankind should engineer the next phase of its own evolution, and that human beings should be augmented and altered, even to the point of losing their humanity.[48]

Transhumanists view human nature as a work-in-progress, a half-baked beginning which can be remolded in a desirable way. As the current humanity need not be the endpoint of evolution, transhumanists hope that humans shall eventually become posthumans having vastly greater capacities than present ones.[49] In order to greatly enhance human abilities, transhumanism opts for a radical transformation of the human condition by existing, emerging and speculative technologies such as regenerative medicines, radical life extension, mind uploading and cryonics. It suggests that diversity and multiplicity will replace the notion of existing within a single system, such as the biological body.[50] As Bostrom says "To transhumanists, the journey of unlimited human growth and expansion, of exploration of the transhuman and eventually the posthuman realm, appears infinitely more attractive than remaining at home forever in our biologically defined cottage."[51]

There are clear pieces of evidence that point towards different visions about the future of the human. The differences between philosophical posthuman and transhumanist posthuman approach highlight the existing confusion. In the next chapter, I take a deeper dive into posthumanism and transhumanism and how the boundary of ethics is getting blurred with these approaches.

48   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517-2520 (p.2518)
49   https://nickbostrom.com/ethics/transhumanist.pdf (accessed 7 April 2018)
50   Francesca Ferrando, 'The Body', in Post- and Transhumanism, edited by Robert Ranisch and Stefan Lorenz Sorgner (Frankfurt: Peter Lang, 2014), pp.213-226 (p.221)
51   https://nickbostrom.com/ethics/transhumanist.pdf (accessed 7 April 2018)

Blurring Boundary of Ethics

Posthumanism and Transhumanism talk about the ethics in many ways, however, the boundary of ethics remains blur and vulnerable over one's own judgement about future seleves as an individual and as a part of the entire human community. While both Posthumanism and Transhumanism find some common grounds such as augmentation or enhancements, inequality, and discrimination as a matter of ethical debate, posthumanism tends to convey serious concerns about political agenda and contemporary global economy as well.

Inequality and Discrimination

One of the first significant ethical issues relating to posthumanism and transhumanism is the question of enhancement or augmentation: should human beings augment or enhance themselves and future generations? This is not a simple question to answer, though humans have made a practice of augmenting and enhancing themselves throughout recorded history. This is the nature and explicit goal of all tool use and education so far.[52]

For example, consider correction of vision. The use of glasses or contact lenses to correct vision is an example of a commonly employed augmentation. Yet this intervention is only correcting a deficiency, returning the individuals function to species-normal levels. It is thus a healing intervention more than an enhancement. What becomes problematic for some is when the augmentation or enhancement in question potentially exceeds the function that could be achieved by the finest specimens of homo sapiens trained in the most rigorous fashion. People accept the use of some enhancing technologies, such as telescopy or microscopy, which may be used for a time, and for a specific purpose, but cannot become a permanent fixture of the human being. They remain tools, rather than becoming attributes.[53]

Another example, consider "designer babies". The ability to select one's children's genes and create "designer babies" will, it is claimed, corrupt

52   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517–2520 (p.2518)
53   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517–2520 (p.2518)

parents, who will come to view their children as mere products.[54] We will then begin to evaluate our offspring according to standards of quality control, and this will undermine the ethical ideal of unconditional acceptance of children, no matter what their abilities and traits.[55]

In today's context, children from wealthy homes enjoy many environmental privileges, including access to better schools and social networks. Arguably, this constitutes an inequity against children from poor homes. We can imagine scenarios where these inequities grow much larger thanks to genetic interventions that only the rich can afford, adding to the environmental advantages already benefiting privileged children. Pushing such a trend to its extreme, one can even speculate about the members of the privileged stratum of society eventually enhancing themselves and their offspring to a point where the human species, for many practical purposes, splits into two or more species that have little in common except a shared evolutionary history.[56] The mobility between the enhanced and the unenhanced species might be reduced practically to zero as a kid born to poor parents, lacking genetic enhancements, would have no chance whatsoever of successfully competing against the super-kids of the rich.[57] Both the enhanced and the unenhanced, as each community may feel threatened by the other.[58]

According to Freeman Dyson, a British physicist and educator, "the artificial improvement of human beings will come, one way or another, whether we like it or not, as soon as the progress of biological understanding makes it possible. When people are offered technical means to improve themselves and their children, no matter what they conceive improvement to mean, the offer will be accepted. The technology of improvement may be hindered or delayed by regulation, but it cannot be permanently suppressed. It will be seen by millions of citizens as liberation from past constraints and injustices. Their freedom to choose cannot be permanently denied"[59]

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54   Leon Kass, quoted in Julian Savulescu, Ruud ter Meulen, and Guy Kahane, *Enhancing Human Capacities* (Oxford: Blackwell Publishing, 2011), p.81.
55   https://nickbostrom.com/ethics/transhumanist.pdf (accessed 7 April 2018)
56   https://nickbostrom.com/ethics/transhumanist.pdf (accessed 7 April 2018)
57   https://nickbostrom.com/ethics/transhumanist.pdf (accessed 7 April 2018)
58   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517-2520 (p.2518)
59   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517-2520 (p.2519)

While some transhumanists are quite clear that they do not wish to force their desires for enhancement onto others,[60] as a group, or even as individual scholars, they have not satisfactorily resolved how tolerance will be maintained both within and outside their communities of choice. In fact, some transhumanists already display belligerent attitudes against skeptics and dissenters (Dvorsky; Smith; Shropshire).[61] This fact itself acknowledges one of the fundamental flaws of transhumanist, or any other, utopian thinking: the failure to understand the darkness, the fears, and the unpredictability of each human heart. The lesson of the twentieth century, such as the experience with eugenics, fascism, and communism, should have been to beware the power of utopian dreams to enslave, destroy, and demean, rather than provide the promised justice, freedom, and human flourishing.[62] Even though Bostrom mentions the value of meaningful human relationships and eco-diversity, how these can resist the widening social inequalities remains unclear.[63]

Rosi Braidotti aptly mentions, "I do not think we are justified in taking the posthuman as an intrinsically liberatory or progressive category, nor can we embrace the equation between the ' posthuman' and post-power/gender/race/class positions, without taking into account enduring power differentials."[64] While it is doubtful that consensus could ever be reached on enhancement or augmentation, humankind must engage prospectively in a full and open dialogue concerning the coming technologies and their implications.[65] In his democratic transhumanism, Hughes calls for an equal access to technological advancements, which could otherwise be limited to certain socio-political classes and related to economic power, consequently encoding racial and sexual politics.[66]

60   https://nickbostrom.com/views/transhumanist.pdf (accessed 7 April 2018)
61   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517-2520 (p.2519)
62   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517-2520 (p.2519)
63   https://nickbostrom.com/ethics/transhumanist.pdf (accessed 7 April 2018)
64   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debabish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.17)
65   C. Christopher Hook, 'Transhumanism and Posthumanism', in Encyclopedia of Bioethics 3rd ed., Stephen Garrard Post (New York : Macmillan Reference USA, 2004), pp. 2517-2520 (p.2520)
66   James Hughes, Citizen Cyborg: Why Democratic Societies Must Respond To The Redesigned Human Of The Future (Cambridge, MA: Westview Press), p.206

Political Agenda

The term ' posthuman' covers at present a vast array of diverse positions and different institutional processes, which often defend diametrically opposed political agendas. To give just one example of the diversity of positions, consider the creation of two major research institutes: on the one hand, the Oxford transhumanists gathered around the 'Future of Humanity Institute', and on the other, the Cambridge Centre for the Study of Existential Risk. The Oxford Institute for the Future of Humanity rejects the term 'posthuman' as a logical impossibility for our species, considering the insufficient level of computational power we dispose of at present.[67] [68]

The Cambridge Centre for the Study of Existential Risk takes the lead in assessing the significant risks involved in too hasty an endorsement of human– technology interfaces. They also defend a more grounded perspective that locates technology in the real world and evaluates its long-term social and environmental impact in a balanced manner. These two complementary projects set the tone for the debate in relation to the posthuman turn. They combine radical expectations of transhumanist enhancement, with a firm reiteration of enlightenment-based values such as rationality and liberal individualism. Apparently nonplussed by the internal contradiction of combining radical change with the perpetuation of tradition, they reject the critical edge of posthuman theory, appease venture capitalist interventions in fundamental research and strike a politically conservative note.[69]

67   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.15)
68   Nick Bostrom, 'Are you living in a computer simulation?', Philosophical Quarterly, Vol. 53, No. 211 (2003): 243–255. According to Nick Bostrom, the founding director of Future of Humanity Institute at Oxford, a technologically mature "posthuman" civilization would have enormous computing power. Based on this empirical fact, the simulation argument shows that at least one of the following propositions is true:
1. The fraction of human- level civilizations that reach a posthuman stage is very close to zero. If it is true, then we will almost certainly go extinct before reaching posthumanity.
2. The fraction of posthuman civilizations that are interested in running ancestor; simulations is very close to zero. If it is true, then there must be a strong convergence among the courses of advanced civilizations so that virtually none contains any relatively wealthy individuals who desire to run ancestor;simulations and are free to do so.
3. The fraction of all people with our kind of experiences that are living in a simulation is very close to one. If it is true, then we almost certainly live in a simulation.
Bostrom adds that in the dark forest of our current ignorance, it seems sensible to apportion one's credence roughly evenly between 1, 2, and 3.
69   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.17)

Contemporary Global Economy

The global economy engenders global nature as well as global culture[70] and is a spinning machine that actively produces differences and multiplies quantitative differences for the sake of commodification and consumption. Global consumption knows no borders and a highly controlled flow of consumer goods, information bytes, data, and capital constitutes the core of the hypermobility of this economic system.[71] The global economy tends to be deeply inhuman(e), displaying structural injustices including increasing poverty and indebtedness.[72] Today's global economy has a techno-scientific structure, built on the convergence between previously differentiated branches of technology, notably nanotechnology, biotechnology, information technology and cognitive science. They involve research and intervention upon animals, seeds, cells, and plants, as well as humans. What constitutes capital value today is the informational power of living matter itself, transposed into data banks of bio-genetic, neural and mediatic information about species, populations, and individuals, as the success of Facebook demonstrates at a more banal level.[73] It is thus very important to remain more experimental and take the challenges of human enhancement seriously while remaining suspicious of the profit motive of the current market economy, driven by 'cognitive capitalism'. According to Yann Moulier Boutang "cognitive capitalism is a paradigm, or a coherent research program, that poses an alternative to post-Fordism." It no longer takes Fordism as the norm, and it certainly does not get bogged down in theories of eternal capital. Its attention is on "new vectors of the production of wealth". [74]

When I consider the factors of augmentation or enhancements, inequality, discrimination, political agenda and contemporary global economy, the boundary of ethics definitely appear as blur and therefore, it becomes

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70 Franklin et al. (2000), quoted in Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.20)
71 Rosi Braidotti (2002, 2006), quoted in Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.20)
72 Deleuze and Guattari(1977) and Lazzarato(2012), quoted in Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.20)
73 Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.19-21)
74 Yann Moulier-Boutang, Cognitive Capitalism (Cambridge: Polity, 2002), p.140.

important to draw a clear line that can give a pointer to move forward when ethics is in question. In the next chapter, I discuss how to draw that clear line.

Drawing Clear Lines

Posthuman ethics should express a grounded form of accountability, based on a sense of collectivity and relationality, which results in a renewed claim to the community and belonging by singular subjects. Genevieve Lloyd refers to these locally situated micro-universalist claims as 'a collaborative morality'.[75] What matters is to negotiate collectively about what exactly we are in the process of becoming, and how much transformation, pain, disidentification, enhancement, etc., our embodied and embrained selves can take. The posthuman is just the question, the answer is what 'we' are capable of becoming.[76]

Rosi Braidotti emphasises that at this particular point in our collective history, ' we' simply do not know what our enfleshed selves, minds and bodies as one can actually do. We need to find out by embracing an ethics of experiment with intensities, which has to start with the careful composition of a plane of immanence that will ground and operationalize the missing people, or the transversal subjects that 'we' are.[77] She argues in favour of a nature–culture continuum which stresses embodied and embrained immanence and includes negotiations and interactions with bio-genetics and neurosciences, but also environmental sciences, gender, ethnicity and disability studies. This shift also brings to an end of the categorical distinction between on the one hand human life—Anthropos— and on the other, bios, as strictly policed prerogatives categorically distinct from the life of animals and nonhumans.[78] She argues against the reduction of the human to a repository of cerebral capacities compatible with global computational networks, but for a nomadic vision of the subject as embedded and embodied, relational and affective.[79]

The posthuman does not mean to be indifferent to the humans, or to be dehumanized. On the contrary, it rather implies a new way of combining ethical values with the well-being of an enlarged sense of community,

75   Lloyd (1996), quoted in Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.26)
76   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.29)
77   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.25)
78   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.19)
79   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13–32 (p.27–28)

which includes one' s territorial or environmental inter-connections.[80] Becoming posthuman consequently is a process of redefining one's sense of attachment and connection to a shared world, a territorial space: urban, social, psychic, ecological, planetary as it may be. It expresses multiple ecologies of belonging, while it enacts the transformation of one' s sensorial and perceptual coordinates, in order to acknowledge the collective nature and outward-bound direction of what we still call 'the self'.[81]

The ethical ideal is to actualize the cognitive, affective and sensorial means to cultivate higher degrees of empowerment and affirmation of one' s interconnections to others in their multiplicity. The selection of the affective forces that propel the process of becoming posthuman is regulated by an ethics of joy and affirmation that functions through the transformation of negative into positive passions.[82]

Building on from the idea of drawing a clear line, we can have choices for changing ourselves. The essential difference between the present and earlier stages in human evolution is that we can choose how we want to change, which elements to embrace and which to reject. These choices will be based on ethical questions affecting both individual and collective humanity.

80   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.26-27)
81   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.25-26)
82   Rosi Braidotti, 'Posthuman Critical Theory', in Critical Posthumanism and Planetary Futures, edited by Debashish Banerji and Makarand R. Paranjape (New Delhi: Springer India, 2016), pp.13-32 (p.26)

More Than a Human

Perhaps, one of the choices is to find an approach that can make us more than a human, understand ourselves and how we fit in the universe before we reach the point of no return in our next human evolution.

What it means to be a human, is acknowledging that each of us is a member of a nested animal species that is capable of transforming itself and also harboring arrogance. While more than a human is about humility and having a humble relation to the things around us. Similar to "human", the root of "humility" is in humus and it points towards "ground" and being grounded. It is about giving utmost importance to every living and nonliving connected entities. When we focus exclusively upon ourselves with human-centric mindset and create the human-centric things around us, then we no longer have the trait to exemplify our humility. Humility recognizes both our own faults and encourages us to accept others. Mahatma Gandhi once said, "I claim to be a simple individual liable to err like any other fellow mortal. I own, however, that I have humility enough to confess my errors and to retrace my steps."

Havel writes that only a dreamer can believe that the solution lies in curtailing the progress of civilization in some way or another. The main task in the coming era is something else: a radical renewal of our sense of responsibility. Our conscience must catch up to our reason, otherwise, we are lost. It is my profound belief that there is only one way to achieve this: we must divest ourselves of our egotistical anthropocentrism, our habit of seeing ourselves as masters of the universe who can do whatever occurs to us. We must discover a new respect for what transcends us: for the universe, for the earth, for nature, for life, and for reality. Our respect for other people, for other nations and for other cultures, can only grow from a humble respect for the cosmic order and from an awareness that we are a part of it, that we share in it and that nothing of what we do is lost, but rather becomes part of the eternal memory of being, where it is judged.[83]

There can be no humanity without humility and more than a human is nothing but a humble animal, *homini humilis animalis*. I conclude with a quote from Rabindranath Tagore, "We come nearest to the great when we are great in humility."

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83   Václav Havel, *The Art of the Impossible: Politics as Morality in Practice* (New York: Knopf, 1997), 95

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