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Studi

From Internet to Posthuman

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Abstract The social-interactive nature of the human being has produced different political, ethical, and technological structures. The Internet is one of them. A thorough understanding of the World Wide Web's role, potentiality and risks surely requires sound sociological, psychological and cognitive paradigms but it always and above all requires a radical theoretical look at human and posthuman exists and acts on the web and its devices.
KEYWORDS: Mind; Body; Artificial Intelligence; Posthuman; Phenomenology.

Riassunto *Da Internet al Postumano* – La natura sociale e interattiva dell'essere umano ha generato strutture politiche, etiche, tecnologiche assai diverse tra di loro. Internet è una di esse. La comprensione della funzione, delle potenzialità e dei rischi del World Wide Web ha bisogno certamente di paradigmi sociologici, psicologici e cognitivi ma ha bisogno anche e soprattutto di uno sguardo teoretico radicale su quanto di umano e postumano abiti e si muova nella Rete e nei suoi dispositivi.
PAROLE CHIAVE: Sé; Mente; Corpo, Intelligenza artificiale; Postumano; Fenomenologia.

A PHILOSOPHY OF MIND REALLY aware of its object can only be a philosophy of the *bodymind*, of its place in space and moment in time, its incessant movement, perception of colors, sounds, smells, tastes, density. The *bodymind* constitutes the structure from which the cognitive and emotional experience of every human being starts. But the *bodymind* is in constant contact with artifice, machinery, wood, stone, metal, silicon. The human is always a hybrid between an organism and the technological devices that it designs, manufactures, uses. «It is not necessary for us to go to the cinema and see the *Cyborg*. It's enough to go out and look at other humans. It's enough to stand before a glass. The *Cybernetic Organism* is my body, is my mind, it's me».[1] This is the *incipit* of *Cybergsofia*. I cannot but agree with the two key theses of Cristina Meini's essay:

> (1) all the levels of self-information and self-knowledge correspond to informational structures somehow influenced by interactions; and that (2) even some aspects of the inanimate world (e.g., electronic tools) can intervene in the structuring process of the self.[2]

As well as Vygotsky's statement that ser-

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ves as the essay's epigraph and is quoted in the text: «the social dimension of consciousness is primary in time and in fact. The individual dimension of consciousness is derivative and secondary».[3]

In those years, Heidegger also posited the centrality of relationship in producing and making *Dasein*, as *Dasein* and *Welt* don't simply stand side by side but are a dynamic part of the same structure. A subject with no world is a mere abstraction. «Die Welt des Daseins ist *Mitwelt*. Das In-Sein ist *Mitsein* mit Anderen» so that even «das Alleinsein des Daseins ist Mitsein in der Welt. *Fehlen* kann der Andere nur *in* einem und *für* ein Mitsein. Das Alleinsein ist ein defizienter Modus des Mitseins, seine Möglichkeit ist der Beweis für dieses».[4]

If the human is a set of relationships to what is outside, it's also because the human is a relationship to itself. No important function of the human mind – perception, learning, memory, emotions, feelings, attention, reasoning, language – «arise in a *single* center of the brain».[5] The brain-body-mind system makes up a deeply integrated organism, the inner relationships of which are produced by chemical and neurobiological pathways.

The events of the body become the ideas of the mind. Such an integration is made possible by the widest environmental context where the body-mind lives and works, moulding it, and being moulded. Together with the brain and the body, the *environment* is the third necessary element to understand the mental life:

> The images that flow in the mind are reflections of the interaction between the organism and the environment, reflections of how the brain's reaction to the environment affects the body.[6]

One of the key concepts needed to understand the potentialities and the limits of Cristina's GO and of any possible Artificial Intelligence is that all this cannot be only a collection of data or processes. If «a simultaneous transfer of information *and* processes»[7] is really necessary, this is not sufficient at all. It is not because «the human mind is far from being a *tabula rasa* at birth».[8] The biological, innate, material dimension makes immediate perception possible, thus constitutes the real and dynamic life of the human being.

This is «a crucial point, because in envisaging a problem in such a way GO comes close to solving the most serious difficulty in artificial intelligence: the *frame problem*».[9] AI's problem is not only a technological or psychological matter, it is a biological matter too. Indeed, without a *Körper* no consciousness and no *Leib* is possible. No artifact can be conscious without a bodyness produced by the organism but it cannot be reduced to it.

As Damasio showed, in order that rationality can work concretely every day, it likely needs the substratum of biological impulses, interior *feelings*, body *emotions* expressing such feelings outside. This is the other reason why Artificial Intelligence hasn't yet managed to reach the goal of making machines think, since such machines should have a body, feel life, experience a sort of emotion: «I do not wish to diminish in any way the value of the interesting artificial creatures being created in the laboratories of Gerald Edelman or Rodney Brooks. In different ways, these engineered creatures deepen our understanding of certain brain processes and may become useful complements of our own brain equipment. I simply want to note that these animated creatures are not living in the sense we are and are not likely to feel in the way we do».[10] It is necessary to «be an agentive body who stands in relationship – or seeks to stay in relationship – with other agents».[11] Only the body offers up the «warmth and intimacy»,[12] necessary to mental life.

Related to GO, Cristina «takes the upper-level decisions»[13] because she not only makes a decision but she is also conscious of acting. Such consciousness is given by the *movements of the body in spacetime*. Thus the problem lies at a deep level which cannot be solved by simply contrasting behaviorist and

cognitive perspectives like the difference between Simulative Artificial Intelligence and the Extended Mind Model, or endorsing more the results than how these results are reached.

Related to these traces of behaviorism, I think it's especially important *how* we define this difference. The fact that «if one subscribes to the *Extended Mind Model*, GO is the better example of extended mind» and that it is not «absurd to suppose that Cristina (perhaps not now but in the future) takes GO's decisions to be to a certain extent *her own* decisions»[14] can and must have a more radical bedrock which I summarize using the concept of hybridization, «meant both as the organic evolution of machines and, above all, as the amplification of human intelligence by integration with machines, particularly with computers, through a direct contact between electric brain waves and software».[15] The private self is an ecological and interpersonal self just because it is an extended self, whose extension also consists in a constant exchange with other human beings, other animals, and artificial items without which humanity is simply unexplainable.

Hybridization shows itself in the forms of a cyber-anthropology that aims to make biocomputers, machines able to reach the critical threshold from which consciousness occurs. However it's a project mainly grounded on the illusion that by increasing processing power, speed, parallel calculation and memory capacity it is possible to overcome the limits of computationalism and – improving a system's chaotic flexibility – also provide machines with a kind of free-will. But this merely computational and quantitative road is a dead end.

The alternative is to graft some elements, inside *our bodies* and within the genetic code, in order to enhance perception, memory, answers congruent with the frame, within the context where life occurs. Research on the interface between the nervous system and servomechanisms for muscles supply new and promising results on how to transform brain impulses into electronic ones. Indeed, the human mind is formed by its relation to outside technological processes, and this process has occurred since the origin of the species. According to Andy Clark's effective definition, we are *Natural-Born Cyborgs*.

The fact that since its origin the human has been «a bond between body and technique, between organic and inorganic»[16] is so evident led Clark/Catena to state that «since the beginning man has been post-human».[17] For the Greeks, for Plato too, the human is *zoon* just like any other living thing. So, even at an epistemological level it is necessary that what is ontologically unitary com-bines: the human body-mind along with any other element of matter, of nature, of the world.

Really, nothing would have been possible for our species without the ability to produce artifacts and tools, nothing would have been possible without *the machine*. Manmade devices are far more than a tool aimed at a goal. Devices transform every datum into a process guided by intentions. The artificial nature of our species makes every instrumental or anthropocentric concept of technique incomplete and insufficient, as we depend on machines as much as machines depend on us.

Such a relationship and interdependence is a part and an emergence of *Homo sapiens*'s radical finitude. A fruitful finitude as not only today, and not only since the Industrial Revolution nor since the Neolithic Revolution but since forever humanity has been a device hybridized with its own instruments. The powerful scene in *2001: a Space Odyssey* where the bone taken by the monkey becomes a spaceship surfing spaces is an effectual (and really beautiful) explanation of what *hybridization* means.

The human cannot stand on one leg only – biology –, but also needs the other one – technique – which is itself also a part of nature. *Interconnected Networks,* Google, the GO Cristina symbiotically lives with, are certainly powerful and refined devices but they are the most advanced emergences of instruments – stone, papyrus, paper – that

made the endless exchange among minds, building sociality and culture possible across the millennia. The Web, data, texts, images, web bits running through telematic supports is one of the ways in which the human species works and communicates. Its potentialities are huge, but they are still instrumental skills. It's also for this reason that the enthusiasm and fears about such instruments are both unjustified. More probably, «new information technologies instead of creating different artificial intelligences, are computerizing human beings' intelligence».[18]

You see how complex the relationship between mind, body and AI is. The need for a path leading machines from logics to existence, from algorithms to corporeity has become clearer and clearer. It is this path which makes man-machine hybridization more credible than the autonomous evolution of computers: «We shall not see biochemistry replaced by electronics; we shall see a merger that incorporates them both».[19] So Katherine Hayles is right: «We have always been posthuman».[20]

Most of what we call Information Technology, Artificial Intelligence, Computer Science is based on the transformation of objects with materiality into immaterial structures, in the transfer from the world of atoms to the world of bits, from carbon to number code, just to *digital*. Computational ontology is a disincarnate ontology, it is a virtual transformation of the human body itself into data and information flow. Functionalist hypotheses on mind are perfectly consistent with such a virtual and abstract conception of body and also in contradiction with it. As Hayles states: «Just because information has lost its body does not mean that humans and the world have lost theirs»,[21] so refusing those points of view which transform the human into an unworldly hologram, and imagine – as does Moravec – *uploading* the mind into different support systems that differ from protoplasmic corporeity.

Really, thinking and being are inseparable from *Leib*, from whole corporeity living in time. As many neurologists are verifying, it's the whole body that thinks and not only a part of it, brain or Central Nervous System as may be the case. As thinking is mostly memory, it's the whole body which keeps track of events that have happened, felt feelings, lived experiences. The human is a bodily dimension making up itself, which is not the simple organism made of tissues, liquids, bones but is an *enculturated body*:

> In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals.[22]

The complicated and changing symphony that is the incarnated body in space, time, and meanings, is the structure/function where every change can graft, if the *post* still must be beyond the *human*. So even for passions and for Cristina's connections these words are appropriate:

> If my nightmare is a culture inhabited by posthumans who regard their bodies as fashion accessories rather than the ground of being, my dream is a version of the posthuman that embraces the possibilities of information technologies without being seduced by fantasies of unlimited power and disembodied immortality, that recognizes and celebrates finitude as a condition of human being, and that understands human life is embedded in a material world of great complexity, one on which we depend for our continued survival.[23]

Hybridized corporeity is the human way to be in the world; mind is also the material it is made of and meets. It's the whole of qualitative perceptions – colours, forms tastes, smells, sounds – in a given context. Perception is inseparable from the body's movement in space, which moment by moment takes on sensible forms in an ever-different

and yet constant horizon. We perceive only fragments of items in space and time around the isotropic body. Mind is the process of unifying these fragments to produce a world full of meanings. Dichotomy between externalism and internalism is the result of the early mistake of separating thoughts from matter, perceptions from objects, the mental state from the world. The body is not only an object of experience since it is also the beginning of experience. Cartesian dualism between 'mind' and 'body' must be replaced with a complementary distinction between the body as an experienced thing and the body as an agent of experience.

Corporeity allows everyone to feel what happens to him as his own experience. Here is the root of Self and consciousness, in *Meinheit* (Husserl). Really, the only reason why «brain states or functional states assume the relevant importance they do is through their putative correlation with mental states identified on other, experiential grounds».[24] The ability to combine quantitative data with lived experience is the real reason why phenomenology has come back to mental studies and progressively confronts and interacts with the cognitive brain sciences.

Let me conclude by saying something about William James's statement – recalled by Cristina Meini – according to which the worst torture would be absolute solitude, to be ignored by everyone: «No more fiendish punishment could be devised, were such a thing physically possible, than that one should be turned loose in society and remain absolutely unnoticed by all the members thereof».[25]

One of the most radical philosophical novels in Italian literature is based exactly on the *positivity* of such a condition. The protagonist of *Dissipatio H.G.* is effectively the last man left on the planet after a moment, at 2 am sharp on any night, when humanity suddenly dissolved. *Dissipatio Humani Generis* is Giamblico's formula (or it is said to be) to show the human's disappearing, his vanishing. Surprised, incredulous, dismayed, euphoric, resigned, hilarious, relieved, the chosen or the excluded one – it depends on the point of view – reconstructs the events that led him to the Event, included his desire/intention to kill himself just at the same hour when the unthinkable happened.

This man had craved solitude and silence many times but now unreserved Solitude, absolute Silence where the human is parenthetical are offered to him. A metaphysical and concrete *epoché* shows the power of objects and nature. It's clear that the humans' and ages rush to dissolution is already in their own birth, in generating things which feel alive. «An imperious and unaware need» is already working to «unparticipation in the outside world, callousness, indifference» which makes us «dead in front of what doesn't touch us or doesn't interest us».[26]

Yet, the protagonist's satisfaction, his lonely euphoria, bumps into a well founded suspicion, that seems to agree with James, Heidegger, Meini: it is the euphoria of death, everything in the world is going on and it's only him that is dissolving. Morselli seems to suggest with the whole density of paradox that thinking belongs to everyone's body-mind but that with no relationship to otherness – whether the otherness of Cristina's father or her GO – thinking would be pure power, far away from the act, it would be «a mechanism which is innate but needs the intervention of other agents to be triggered and maintained in good functioning».[27] In any case

> the system (GO + Cristina) could implement at best an extended self, not an autonomous agent. On the one hand, GO does not have the top level capacity for autonomous decision to trigger a search process; on the other hand, once having processed the input string, it somehow substitutes itself for the user and goes independently onwards. It does not perform the higher level work; but its contribution to the task is not negligible at all.[28]

Such a statement seems undoubtedly reasonable and is one I can share.

Notes

[1] A.G. BIUSO, *Cyborgsofia. Introduzione alla filosofia del computer*, Il pozzo di Giacobbe, Trapani 2004, p. 14.
[2] C. MEINI, *From Cradle to Internet. The Social Nature of Personal Identity*, in: «Rivista Internazionale di Filosofia e Psicologia», vol. VI, n. 2, 2015, pp. 282-296, here p. 284.
[3] *Ibidem*.
[4] M. HEIDEGGER, *Sein und Zeit*, Max Niemeyer Verlag, Tübingen 1963, § 26, p. 118 and 120.
[5] A. DAMASIO, *Looking for Spinoza. Joy, Sorrow, and the Feeling Brain*, Harcourt, San Diego 2003, p. 299.
[6] *Ivi*, p. 206.
[7] C. MEINI, *From Cradle to Internet*, cit., p. 289.
[8] *Ivi*, p. 284.
[9] *Ivi*, p. 293.
[10] A. DAMASIO, *Looking for Spinoza*, cit., pp. 128-129.
[11] C. MEINI, *From Cradle to Internet*, cit., p. 283.
[12] *Ivi*, p. 297.
[13] *Ivi*, p. 293.
[14] *Ivi*, p. 291.
[15] A.G. BIUSO, *La mente temporale. Corpo Mondo Artificio*, Carocci, Roma 2009, p. 131.
[16] M.T. CATENA, *Come costruirsi un cuore. Sul sentire (post)umano*, in: M.T. CATENA (a cura di), *Artefatti. Dal postumano all'umanologia*, Mimesis, Milano 2012, pp. 19-54, here p. 52.
[17] N. RUSSO, *L'uomo postumo e la sua ideologia*, in: M.T. CATENA (a cura di), *Artefatti. Dal postumano all'umanologia*, pp.147-190, here p. 162.
[18] M. IORIO GIANNOLI, *Materializzazioni dell'anima. Dai modelli dell'intelligenza all'intelletto sociale,* Manifestolibri, Roma 2003, p. 204.
[19] G.B. DYSON, *Darwin Among the Machines. The Evolution Of Global Intelligence*, Reading, Addison-Wesley Pub, 1997, p. 202.
[20] K. HAYLES, *How We became Posthuman. Virtual Bodies in Cybernetics, Literature, and Informatics*, The University of Chicago Press, Chicago & London 1999, p. 291.
[21] *Ivi*, p. 244.
[22] *Ivi*, p. 3.
[23] *Ivi*, p. 5.
[24] S. GALLAGHER, D. ZAHAVI, *The Phenomenological Mind* (2008), Routledge, London 2012, II ed., p. 18.
[25] C. MEINI, *From Cradle to Internet*, cit., p. 287.
[26] G. MORSELLI, *Dissipatio H.G.*, Adelphi, Milano 2012, p. 95 and 74.
[27] C. MEINI, *From Cradle to Internet*, cit., p. 285.
[28] *Ivi*, p. 294.