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Posthuman Humanities[1]

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ABSTRACT This article compares notes on different and new concepts of 'the Human', developed both within disciplinary and interdisciplinary academic scientific research and in broader social practices. The main focus is on the shifting relationship between the 'two cultures' of the humanities and science in the light of contemporary developments, such as the sophisticated forms of interdisciplinary research that have emerged in the fields of biotechnologies, neural sciences, environmental and climate change research and Information and Communication technologies. These rapid changes affect the very definitions of the human and of human evolution. The question is how and to what extent they have an impact on both the practice of the humanities and on their self-representation. Is humanism challenged or strengthened by these developments? To what extent is anthropocentrism called to task by what is becoming known as posthuman theory?

This article attempts to assess the constructions of the human at work in contemporary Humanities scholarship, which I also describe as the posthuman condition. I will start on a critical note by outlining the dislocations of the discursive boundaries and categorical differences within the Humanities, which have been triggered respectively by the explosion of humanism and the implosion of anthropocentrism. I will argue that these epistemological breaks cause an internal fracture within the Humanities that cannot be mended just by good will. I will then go on in a more affirmative note to defend the argument that the Humanities can and will survive their present crises and even prosper, to the extent that they will show the ability and willingness to undergo a major process of transformation in the direction of the posthuman.

I shall devote some time to outlining the posthuman predicament and propose a posthuman affirmative ethics. To be worthy of our times, we need to be pragmatic: we need schemes of thought and figurations that enable us to account in empowering terms for the changes and transformations currently on the way. We already live in permanent states of transition, hybridisation and nomadic mobility, in emancipated, post-feminist, multi-ethnic societies with high degrees of technological mediation which, however, have not ensured justice for all, or resolved enduring patterns of inequality. These are neither simple nor linear events, but rather are multi-layered and internally contradictory social phenomena. They combine elements of ultra-modernity with splinters of neo-archaism: high-tech advances and neo-primitivism, which defy the logic of excluded middle. We therefore need great methodological creativity to cope with these challenges.

Let me explore in order the different steps of this argument.

Posthumanism

The idea of the 'Human' implied in the Humanities - that is to say, the implicit assumptions about what constitutes the basic unit of reference for the knowing subject - has historically been the image of Man as a rational animal endowed with language. This is the humanist core of the

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classical ideal of 'Man', formulated first by Protagoras as 'the measure of all things', later renewed in the Italian Renaissance as a universal model and represented in Leonardo da Vinci's Vitruvian Man. This is an ideal of bodily perfection which doubles up as a set of mental, discursive and spiritual values. That iconic image is the emblem of Humanism as a doctrine that combines the biological, discursive and moral expansion of human capabilities into an idea of teleologically ordained, rational progress. Faith in the unique, self-regulating and intrinsically moral powers of human reason forms an integral part of this high-humanistic creed.

This model sets standards not only for individuals, but also for their cultures. Humanism historically developed into a civilisational model, which shaped a certain idea of Europe as coinciding with the universalising powers of self-reflexive reason. The mutation of the Humanistic ideal into a hegemonic cultural model was canonised by Hegel's philosophy of history. This self-aggrandising vision assumes that Europe is not just a geo-political location, but is instead a universal attribute of the human mind that can lend its quality to any suitable object. This is the view espoused by Edmund Husserl (1970) is his celebrated essay *The Crisis of European Sciences and Transcendental Phenomenology*, which is a passionate defence of the universal powers of reason against the intellectual and moral decline symbolised by the rising threat of European fascism in the 1930s. In Husserl's view, Europe announces itself as the site of origin of critical reason and self-reflexivity, both qualities resting on the Humanistic norm. Equal only to itself, Europe as universal consciousness transcends its specificity, or rather, posits the power of transcendence as its distinctive characteristic and humanistic universalism as its particularity. This makes Eurocentrism into more than just a contingent matter of attitude: it is a structural element of our cultural practice, which is also embedded in both theory and institutional and pedagogical practices. As a civilisational ideal, Humanism fuelled 'the imperial destinies of nineteenth century Germany, France and, supremely, Great Britain' (Davies, 1997, p. 23).

Anti-humanists over the last thirty years questioned both the self-representation and the image of thought implied in the Humanist definition of the Human, especially the ideas of transcendental reason and the notion that the subject coincides with rational consciousness. This flattering self-image of 'Man' is as problematic as it is partial in that it promotes a self-centred attitude.

This paradigmatic self-representation, moreover, is deeply male-centred and Eurocentric. As such it implies the dialectics of self and other, and posits the binary logic of identity and otherness as respectively the motor for and the cultural logic of universal Humanism. Central to this universalistic posture and its dualistic logic is the notion of 'difference' as pejoration. By organising differences on a hierarchical scale of decreasing worth, this humanist subject defined himself as much by what he excluded from as by what he included in his self-representation. Subjectivity is equated with consciousness, universal rationality, and self-regulating ethical behaviour, all of them equating masculinity and European civilisation, whereas Otherness is defined as its negative and specular counterpart: irrationality, immorality, femininity and non-westernness. In so far as difference spells inferiority, it acquires both essentialist and lethal connotations for people who get branded as the 'others'. These are the sexualised, racialised, and naturalised others, who are reduced to the less-than-human status of disposable bodies.

Consequently, we are all humans, but some of us are just more mortal than others. Because their history in Europe and elsewhere has been one of lethal exclusions and fatal disqualifications, these 'others' raise issues of power and exclusion. We need more ethical accountability in dealing with the legacy of Humanism. Tony Davies puts it lucidly: 'All Humanisms, until now, have been imperial. They speak of the human in the accents and the interests of a class, a sex, a race, a genome. Their embrace suffocates those whom it does not ignore. … It is almost impossible to think of a crime that has not been committed in the name of humanity' (Davies, 1997, p. 141).

Over the last thirty years, new critical epistemologies have taken an anti-humanist stance and offered alternative definitions of the 'human'. They mostly evolved in new inter-disciplinary research areas which called themselves 'studies', such as gender, feminism, ethnicity, cultural studies, post-colonial, media and new media and human rights studies (Bart et al, 2003). They critique claims to universalism as being exclusive, androcentric and Euro-centric. They support masculinist, racist or racial supremacist ideologies that turn cultural specificity into a fake universal and normality into a normative injunction. This image of thought perverts the practice of the

Humanities, and in particular theory, into an exercise of hierarchical exclusion and cultural hegemony.

According to James Chandler (2004), this proliferation of counter-discourses creates a condition of 'critical disciplinarity', which is a symptom of the post-humanist predicament. Chandler argues that since Foucault's pertinent diagnosis of the death of 'Man', the traditional organisation of the university in departmental structures has been challenged by the growth of these new discursive areas. This proliferation of discourses is both a threat and an opportunity, in that it requires methodological innovations, such as a critical genealogical approach that bypasses the mere rhetoric of the crisis of Humanism and the Humanities.

Anti-humanism emerged as the rallying cry of this generation of radical thinkers who later were to became world-famous as the 'post-structuralist generation'. They stepped out of the dialectical oppositional thinking and developed a third way to deal with changing understandings of human subjectivity. By the time Michel Foucault published his ground-breaking critique of Humanism in *The Order of Things* (1970), the question of what, if anything, was the idea of 'the human' was circulating in the radical discourses of the time and had been at the centre of many agendas of different political groups for over a decade. The 'death of Man', announced by Foucault (1970), formalises an epistemological and moral crisis that goes beyond binary oppositions and cuts across the different poles of the political spectrum. What is targeted is the implicit Humanism of Marxism - more specifically, the humanistic arrogance of continuing to place Man at the centre of world history. Even Marxism, under the cover of a master theory of historical materialism, continued to define the subject of European thought as unitary and hegemonic and to assign him (the gender is no coincidence) a royal place as the motor of human history. Anti-Humanism consists in de-linking the human agent from this universalistic posture, calling him to task, so to speak, on the concrete actions he is enacting. Different and sharper power relations emerge, once this formerly dominant subject is freed from his delusions of grandeur and is no longer allegedly in charge of historical progress.

The radical thinkers of the post-1968 generation rejected Humanism both in its classical and its socialist version. The Vitruvian ideal of Man as the standard of both perfection and perfectibility was literally pulled down from his pedestal and deconstructed. It turned out that this Man, far from being the canon of perfect proportions, spelling out a universalistic ideal that by now had reached the status of a natural law, was in fact a historical construct and as such contingent as to values and locations. Individualism is not an intrinsic part of 'human nature', as liberal thinkers are prone to believe, but rather is a historically and culturally specific discursive formation - one which, moreover, is becoming increasingly problematic. The deconstructive brand of social constructivism introduced by post-structuralist thinkers like Jacques Derrida (2001) also contributed to a radical revision of the Humanist tenets. An entire philosophical generation called for insubordination from received Humanist ideas of 'human nature'.

Feminists like Luce Irigaray (1985a,b) pointed out that the allegedly abstract ideal of Man as a symbol of classical Humanity is very much a male of the species: it is a he. Moreover, he is white, European, handsome and able-bodied; of his sexuality nothing much can be guessed, though plenty of speculation surrounds that of its painter, Leonardo da Vinci. What this ideal model may have in common with the statistical average of most members of the species and the civilisation he is supposed to represent is a very good question indeed. Feminist critiques of patriarchal posturing through abstract masculinity (Hartsock, 1987) and triumphant whiteness (hooks, 1981; Ware, 1992) argued that this Humanist universalism is objectionable not only on epistemological grounds, but also on those of ethics and politics.

Anti-colonial thinkers adopted a similar critical stance by questioning the primacy of whiteness in the Vitruvian ideal as the aesthetic canon of beauty. Re-grounding such lofty claims onto the history of colonialism, anti-racist and post-colonial thinkers explicitly questioned the relevance of the Humanistic ideal, in view of the obvious contradictions imposed by its Eurocentric assumptions, but at the same time they did not entirely cast it aside. They held the Europeans accountable for the uses and abuses of this ideal by looking at colonial history and the violent domination of other cultures, but still upheld its basic premises. Frantz Fanon, for instance, wanted to rescue Humanism from its European perpetuators arguing that we have betrayed and misused the humanist ideal. As Sartre put it in his preface to Fanon's *Wretched of the Earth* (1963, p. 7), 'the yellow and black voices still spoke of our Humanism, but only to reproach us with our

inhumanity'. Postcolonial thought asserts that if Humanism has a future al all, it has to come from outside the western world and bypass the limitations of Eurocentrism. By extension, the claim to universality by scientific rationality is challenged on both epistemological and political grounds (Spivak, 1999; Said, 2004), all knowledge claims being expressions of western culture and of its drive to mastery.

French post-structuralist philosophers pursued the same postcolonial aim through different routes and means.[2] They argued that in the aftermath of colonialism, Auschwitz, Hiroshima and the Gulag – to mention but a few of the horror of modern history – we Europeans need to develop a critique of Europe's delusion of grandeur in positing ourselves as the moral guardian of the world and as the motor of human evolution.

Anti-humanist criticism has foregrounded two issues as potentially fatal flaws at the core of the Humanities: their structural anthropomorphism, and their perennial methodological nationalism (Beck, 2007). The former translates into sustained hostility towards, or genuine incompatibility with, the culture, practice and institutional existence of science and technology. They challenge the Humanities' ability to cope with two of the distinctive features of our times: the scientific rise of 'Life' sciences and technologically mediated communication and knowledge transfer and the global spread of cultural diversity, not only between different geo-political areas but also within each one of them.

This criticism is very salient and relevant, especially in view of the political context. The European Union at present is dominated by a right-wing agenda of neoliberal economics on the one hand and xenophobic, populist social and cultural agendas on the other. As a result, the University as an institution, and the Humanities especially, are under attack. They are accused of being unproductive, narcissistic and old-fashioned in their approach and also of being out of touch with contemporary science and technology culture. The Humanities are therefore experiencing at first hand the crisis of 'Man' that has been theorised by the very radical philosophies such as post-structuralism and by feminist and postcolonial interdisciplinary 'studies', which were often marginalised in the university institutional settings. The Humanities are often forced into a defensive position.

The issue of methodological nationalism is especially crucial in that it is in-built into the European Humanities' self-representation. Edward Said reminded us that Humanism must shed its smug Euro-centrism and become an adventure in difference and alternative cultural traditions. This shift of perspectives requires a prior consciousness-raising on the part of Humanities scholars: 'Humanists must recognise with some alarm that the politics of identity and the nationalistically grounded system of education remain at the core of what most of us actually do, despite changed boundaries and objects of research' (Said, 2004, p. 55). The changing institutional structure of the contemporary university both rests upon the decline of the nation state as the horizon for research and also has the potential to contribute to a post-national perspective.

Posthumanist Alternatives

The posthumanist position I want to defend builds on the anti-humanist legacy, more specifically on the epistemological and political foundations of the post-structuralist generation, and moves further. The alternative views about the human and the new formations of subjectivity that have emerged from the radical epistemologies of Continental philosophy in the last thirty years do not merely oppose Humanism but create other visions of the self. Sexualised, racialised and naturalised differences, far from being the categorical boundary-keepers of the subject of Humanism, have evolved into fully-fledged alternative models of the human subject. The extent to which they bring about the displacement of the received ideas about the human is of course a matter of debate, which requires critical debate.

The current of thought that has gone further in unfolding the productive potential of the posthuman predicament can be genealogically traced back to the post-structuralists, the anti-universalism of feminism and the anti-colonial phenomenology of Frantz Fanon (1967) and of his teacher Aimé Césaire (1955). What they have in common is a sustained commitment to work out the implications of posthumanism for renewing our shared understandings of the human subject and of humanity as a whole.

The work of postcolonial and race theorists displays a situated cosmopolitan posthumanism that is supported as much by the European tradition as by non-western sources of moral and intellectual inspiration. The examples are manifold and deserve more in-depth analysis than I can grant them here; for now, let me pick out the main gist of it.[3]

Edward Said (1978) was among the first to alert critical theorists in the West to the need to develop a reasoned scholarly account of Enlightenment-based secular Humanism, which would take into account the colonial experience, its violent abuses and structural injustice, as well as postcolonial existence. Postcolonial theory developed this insight into the notion that ideals of reason, secular tolerance, equality under the Law and democratic rule need not be, and indeed historically have not been, mutually exclusive in terms of European practices of violent domination, exclusion and systematic and instrumental use of terror. Acknowledging that reason and barbarism are not self-contradictory, nor are Enlightenment and horror, need not result in either cultural relativism or moral nihilism, but rather in a radical critique of the notion of Humanism and its link with both democratic criticism and secularism. Edward Said defends the idea that

> [i]t is possible to be critical of Humanism in the name of Humanism and that, schooled in its abuses by the experience of Eurocentrism and empire, one could fashion a different kind of Humanism that was cosmopolitan and text-and-language bound in ways that absorbed the great lessons of the past ... and still remain attuned to the emergent voices and currents of the present, many of them exilic, extraterritorial and unhoused. (2004, p. 11)

Fighting for such subaltern secular spaces is a priority for a posthumanist quest for what is known in some quarters as a 'global ethic for global politics and economic' (Kung, 1998).

This brings us back to the issue of Eurocentrism in terms of 'methodological nationalism' (Beck, 2007) and its long-standing bond to Humanism. Contemporary European subjects of knowledge must meet the ethical obligation to be accountable for their past history and the long shadow it casts on their present-day politics.[4] The new mission that Europe has to embrace entails the criticism of narrow-minded self-interests, intolerance, and xenophobic rejection of otherness. Symbolic of the closure of the European mind is the fate of migrants, refugees and asylum-seekers, who bear the brunt of racism in contemporary Europe.

A new agenda needs to be set, which is no longer that of European or Eurocentric universal, rational subjectivity, but rather a radical transformation of it, in a break from Europe's imperial, fascistic and undemocratic tendencies. As I stated earlier on in this essay, since the second half of the twentieth century, the crisis of philosophical Humanism – also known as the death of 'Man' – both reflected and amplified larger concerns about the decline of the geo-political status of Europe as an imperial world power. Theory and world-historical phenomena work in tandem when it comes to the question of European Humanism. Because of this resonance between the two dimensions, critical theory has a unique contribution to make to the contemporary Humanities.

Post-anthropocentrism

Many of the assumptions and premises of the post-anthropocentric universe are somewhat counter-intuitive, although the term has acquired widespread currency nowadays. In mainstream public debates, for instance, the post-anthropocentric line is usually coated in anxiety about the excesses of technological intervention and the threat of climate change, or in elation about the potential for human enhancement. In academic culture, on the other hand, the critique of anthropocentrism has even more shattering implications than the transformative agenda of posthumanism. The post-anthropocentric turn, linked to the compounded impacts of globalisation and technology-driven forms of mediation, strikes the human at his/her heart and shifts the parameters that used to define *anthropos*.

The issue of the posthuman in relation to post-anthropocentrism is therefore of an altogether different order than in posthumanism. For one thing, whereas the latter mobilised primarily the disciplinary fields of philosophy, history, cultural studies and the classical Humanities in general, the issue of post-anthropocentrism enlists also science and technology studies, new media and digital culture, environmentalism and earth sciences, biogenetics, neuroscience and robotics, evolutionary theory, critical legal theory, primatology, animal rights and science fiction. This high

degree of trans-disciplinarity alone adds an extra layer of complexity to the issue. The key question for me is: what understandings of contemporary subjectivity and subject formation are enabled by a post-anthropocentric approach? What comes after the anthropocentric subject?

The Opportunistic Post-anthropocentrism of Biogenetic Capitalism

I start from the assumption that advanced capitalism is a spinning machine that actively produces differences for the sake of commodification. It is a multiplier of deterritorialised differences, which are packaged and marketed under the labels of 'new, dynamic and negotiable identities' and an endless choice of consumers' goods. This logic triggers a proliferation and a vampiric consumption of quantitative options. Many of them have to do with cultural 'others', from fusion cooking to 'world music'. Jackie Stacey, in her analysis of the new organic food industry (Franklin et al, 2000), argues that we literally eat the global economy. Paul Gilroy (2000) and Celia Lury (1998) remind us that we also wear it, listen to it and watch it on our many screens, on a daily basis.

The most salient trait of the contemporary global economy is therefore its techno-scientific structure. It is built on the convergence between different and previously differentiated branches of technology, notably the four horsemen of the posthuman apocalypse: nanotechnology, biotechnology; information technology and cognitive science. The biogenetic structure of contemporary capitalism is especially important and central to the discussion of the posthuman. This aspect involves the human genome project, stem cell research and biotechnological intervention upon animals, seeds, cells and plants. In substance, advanced capitalism both invests in and profits from the scientific and economic control and commodification of all that lives. This context produces a paradoxical and rather opportunistic form of post-anthropocentrism on the part of market forces which happily trade on Life itself.

The commodification of Life by biogenetic advanced capitalism, however, is a complex affair. The great scientific advances of molecular biology have taught us that matter is self-organised (autopoietic), whereas monistic philosophy adds that it is also structurally relational and hence connected to a variety of environments. These insights combine in defining intelligent vitality or self-organising capacity as a force that is not confined within feedback loops internal to the individual human self, but is present in all living matter. Why is matter so intelligent, though? Because it is driven by informational codes, which both deploy their own bars of information and interact in multiple ways with the social, psychic and ecological environments (Guattari, 2000). What happens to subjectivity in this complex field of forces and data flows?

My argument is that it becomes an expanded relational self, engendered by the cumulative effect of all these factors (Braidotti, 1991, 2011a). The relational capacity of the posthuman subject is not confined within our species, but includes all non-anthropomorphic elements. Living matter – including the flesh – is intelligent and self-organising, but it is so precisely because it is not disconnected from the rest of organic life. Capitalism knows this very well too, this is why 'Life-farming' is one of its favourite activities.

Post-anthropocentrism is marked by the emergence of 'the politics of life itself' (Rose, 2007). 'Life', far from being codified as the exclusive property or the unalienable right of one species, the human, over all others or being sacralised as a pre-established given, is posited as process, interactive and open-ended. This vitalist approach to living matter displaces the boundary between the portion of life – both organic and discursive – that has traditionally been reserved for *anthropos* - that is to say, *bios* - and the wider scope of animal and non-human life, also known as *zoe*. *Zoe* as the dynamic, self-organising structure of life itself (Braidotti, 2006, 2011b) stands for generative vitality. It is the transversal force that cuts across and reconnects previously segregated species, categories and domains.

The perversity of advanced capitalism and its undeniable success consists in reattaching the potential for self-organising vitality back to an overinflated notion of possessive individualism (MacPherson, 1962), tied to the profit principle. The opportunistic political economy of biogenetic capitalism turns Life/*zoe* – that is to say, human and non-human intelligent matter – into a commodity for trade and profit.

What the neoliberal market forces are after and what they financially invest in is the informational power of living matter itself. The capitalisation of living matter produces a new

political economy, which Melinda Cooper (2008) calls 'Life as surplus'. It introduces discursive and material political techniques of population control of a very different order from the administration of demographics, which preoccupied Foucault's work on bio-political governmentality. The warnings are now global. Today, we are undertaking 'risk analyses' not only of entire social and national systems, but also of whole sections of the population in the world risk society (Beck, 1999). Data banks of biogenetic, neural and mediatic information about individuals are the true capital today, as the success of Facebook demonstrates at a more banal level.

Patricia Clough pursues a similar line in her analysis of the 'affective turn' (2008). Because advanced capitalism reduces bodies to their informational substrate in terms of energy resources, it levels out other categorical differences, so that 'equivalencies might be found to value one form of life against another, one vital capacity against another' (Clough, 2008, p. 17). What constitutes capital value in our social system is the accumulation of information itself, its immanent vital qualities and self-organising capacity. Clough provides an impressive list of the concrete techniques employed by 'cognitive capitalism' (Moulier-Boutang, 2012) to test and monitor the capacities of affective or 'bio-mediated' bodies: DNA testing, brain fingerprinting, neural imaging, body heat detection and iris or hand recognition. All these are also immediately operationalised as surveillance techniques both in civil society and in the war against terror.

The point being that the opportunistic political economy of biogenetic capitalism induces, if not the actual erasure, at least the blurring of the distinction between the human and other species, when it comes to profiting from them. Seeds, plants, animals and bacteria fit into this logic of insatiable consumption alongside various specimens of humanity.

This results in a reactive or negative re-composition of Humanity. The global economy is post-anthropocentric in that it ultimately unifies all species under the imperative of the market and its excesses threaten the sustainability of our planet as a whole. A negative sort of cosmopolitan interconnection is therefore established through a panhuman bond of vulnerability. The size of recent scholarship on the environmental crisis and the climate change alone testifies to this state of emergency and to the emergence of the earth as a political agent. Post-anthropocentrism is especially thriving in popular culture and has been criticised (Smelik & Lykke, 2008) as a negative tendency to represent the transformations of the relations between humans and technological *apparatus* or machines in the mode of neo-gothic horror.

The literature and cinema of extinction of our and other species, including disaster movies, is a successful genre of its own, enjoying broad popular appeal. I have labelled this narrow and negative social imaginary as techno-teratological (Braidotti, 2002) - that is to say, as the object of cultural admiration and aberration. This dystopian reflection of the biogenetic structure of contemporary capitalism is crucial to explain the popularity of this genre.

The social theory literature on shared anxiety about the future both of our species and of our humanist legacy is also rich and varied. Important liberal thinkers like Habermas (2003) and influential ones like Fukuyama (2002) are very alert on this issue, as are social critics like Sloterdijk (2009) and Borradori (2003). In different ways, they express deep concern for the status of the human and seem particularly struck by moral and cognitive panic at the prospect of the posthuman turn, blaming our advanced technologies for it. I share their concern, but as a posthumanist with distinct anti-humanist feelings, I am less prone to panic at the prospect of a displacement of the centrality of the human and can also see the advantages of such an evolution.

Once these post-anthropocentric practices blur the qualitative lines of demarcation not only among categories (male/female; black/white; human/animal; dead/alive; centre/margin, etc.), but also within each one of them, the human becomes subsumed into global networks of control and commodification which have taken 'Life' as the main target. The generic figure of the human is consequently in trouble. Donna Haraway puts it as follows:

> our authenticity is warranted by a database for the human genome. The molecular database is held in an informational database as legally branded intellectual property in a national laboratory with the mandate to make the text publicly available for the progress of science and the advancement of industry. This is Man the taxonomic type become Man the brand. (Haraway, 1997, p. 74)

We know by now that the standard which was posited in the universal mode of 'Man' has been widely criticised (Lloyd, 1984) precisely because of its partiality. Universal 'Man', in fact, is

implicitly assumed to be masculine, white, urbanised, speaking a standard language, heterosexually inscribed in a reproductive unit and a full citizen of a recognised polity (Irigaray, 1985b; Deleuze & Guattari, 1987). As if this line of criticism were not enough, this 'Man' is also called to task and brought back to its species specificity as *anthropos* (Rabinow, 2003; Esposito, 2008) - that is to say, as the representative of a hierarchical, hegemonic and generally violent species whose centrality is now challenged by a combination of scientific advances and global economic concerns. Massumi refers to this phenomenon as 'Ex-Man': 'a genetic matrix embedded in the materiality of the human' (1998, p. 60), and as such, undergoing significant mutations: 'species integrity is lost in a bio-chemical mode expressing the mutability of human matter' (1998, p. 60).

These analyses indicate in my view that the political economy of biogenetic capitalism is post-anthropocentric in its very structures, but not necessarily or automatically post-humanistic. It also tends to be deeply inhuman(e).

The posthuman dimension of post-anthropocentrism can consequently be seen as a deconstructive move. What it deconstructs is species supremacy, but it also inflicts a blow to any lingering notion of human nature, *anthropos* and *bios*, as categorically distinct from the life of animals and non-humans, or *zoe*. What comes to the fore instead is a nature-culture continuum in the very embodied structure of the extended self, as I argued earlier. This shift can be seen as a sort of 'anthropological exodus' from the dominant configurations of the human as the king of creation (Hardt & Negri, 2000, p. 215) – a colossal hybridisation of the species.

Methodological Implications

Once the centrality of *anthropos* is challenged, a number of boundaries between 'Man' and his others go tumbling down, in a cascade effect that opens up unexpected perspectives. Thus, if the crisis of Humanism inaugurates the posthuman by empowering the sexualised and racialised human 'others' to emancipate themselves from the dialectics of master-slave relations, the crisis of *anthropos* relinquishes the demonic forces of the naturalised others. Animals, insects, plants and the environment - in fact, the planet and the cosmos as a whole - are called into play. This places a different burden of responsibility on our species, which is the primary cause for the mess. The fact that our geological era is known as the 'anthropocene' [5] stresses both the technologically mediated power acquired by *anthropos* and its potentially lethal consequences for everyone else.

Furthermore, the transposition of naturalised others poses a number of conceptual and methodological complications linked to the critique of anthropocentrism. This is due to the pragmatic fact that, as embodied and embedded entities, we are all part of nature, even though academic philosophy continues to claim transcendental grounds for human consciousness. How to reconcile this materialist awareness with the task of critical thought? This requires a mutation of our shared understanding of what it means to think at all, let alone think critically.

Dipesh Chakrabarty (2009) addresses some of these concerns by investigating the consequences of the climate-change debate for the practice of history. He argues that the scholarship on climate change causes both spatial and temporal difficulties. It brings about a change of scale in our thinking, which now needs to encompass a planetary or geo-centred dimension, acknowledging that humans are larger than a biological entity and now wield a geological force. It also shifts the temporal parameters away from the expectation of continuity which sustains the discipline of history, to contemplate the idea of extinction - that is to say, a future without 'us'. Furthermore, these shifts in the basic parameters also affect the content of historical research, by 'destroying the artificial but time honoured distinction between natural and human histories' (Chakrabarty, 2009, p. 206). Although Chakrabarty does not take the post-anthropocentric path, he comes to the same conclusion as I do: the issue of geo-centred perspectives and the change of location of humans from mere biological to geological agents calls for recompositions of both subjectivity and community.

The geo-centred turn has also other serious political implications. The first concerns the limitations of classical Humanism in the Enlightenment model. Relying on postcolonial theory, Chakrabarty points out that the 'philosophers of freedom were mainly, and understandably, concerned with how humans would escape the injustice, oppression, inequality or even uniformity foisted on them by other humans or human-made systems' (2009, p. 208). Their anthropocentrism,

coupled with a culture-specific notion of Humanism, limits their relevance today. The climate-change issue and the spectre of human extinction also affect 'the analytic strategies that postcolonial and postimperial historians have deployed in the last two decades in response to the postwar scenario of decolonization and globalization' (Chakrabarty, 2009, p. 198). I would add that the social constructivist approach of Marxist, feminist and postcolonial analyses does not completely equip them to deal with the change of spatial and temporal scale engendered by the post-anthropocentric or geo-centred shift. This insight is the core of the radical post-anthropocentric position I want to defend, which I see as a way of updating critical theory for the third millennium.

Many scholars are coming to the same conclusion, through different routes. For instance, post-anthropocentric neo-humanist traditions of socialist or standpoint feminist theories (Harding, 1986) and of postcolonial theory (Shiva, 1997) have approached the issues of environmentalism in a post-anthropocentric, or at least non-androcentric, or non-male-dominated, manner. This critique of anthropocentrism is expressed in the name of ecological awareness, with strong emphasis on the experience of social minorities like women, and of non-western peoples. The recognition of multicultural perspectives and the critique of imperialism and ethnocentrism add a crucial aspect to the discussion on the becoming-earth.

The Humanities

What is the place of the Humanities as a scientific enterprise in this globalised network culture (Terranova, 2004) that no longer upholds the unity of space and time as its governing principle? In the era of citizens' science [6] and citizens' journalism, what can be the role of academic research institutions? The displacement of anthropocentrism and the scrambling of species hierarchy leaves the Human up for grabs, so to speak.

The question of the future of the Humanities, the issue of their renewal and the recurrent threat of death of the disciplines, is aggravated by one central factor: the new 'human-non-human linkages, among them complex interfaces involving machinic assemblages of biological "wetware" and non-biological "hardware"' (Bono et al, 2008, p. 3). The dualistic distinction of nature-culture has collapsed and is replaced by complex systems of data feedback, interaction and communication transfer. This places the issue of the relationship between the two cultures at the centre of the agenda again. The profoundly anthropocentric core of the Humanities is displaced by this complex configuration of knowledge dominated by science studies and technological information. Far from being a terminal crisis, however, this challenge opens up new global, eco-sophical dimensions.

Against the prophets of doom, I want to argue that technologically mediated post-anthropocentrism can enlist the resources of biogenetic codes, as well as telecommunication, new media and information technologies, to the task of renewing the Humanities. Posthuman subjectivity reshapes the identity of humanistic practices, by stressing heteronomy and multi-faceted relationality, instead of autonomy and self-referential disciplinary purity.

Today, environmental, evolutionary, cognitive, biogenetic and digital trans-disciplinary discursive fronts are emerging around the edges of the classical Humanities and across the disciplines. They rest on post-anthropocentric premises and technologically mediated emphasis on Life as a *zoe*-centred system of species egalitarianism (Braidotti, 2006), which are very promising for new research in the field. Probably the most significant example of the excellent health enjoyed by the post-anthropocentric Humanities is the recent explosion of scholarship in the fields of 'animal studies' and 'eco-criticism'. Both areas are so rich and fast-growing that it is impossible to even attempt to summarise them.[7] Where do these developments leave the scholarship in the Humanities? Or rather: what's the human got to do with this shifting horizon? And what are the implications for the future of the Humanities today?

The vitality is high, as shown by the proliferation of new discursive fields: after the end of the Cold War, we get the emergence of centres for conflict studies and peace research; humanitarian management; human rights-oriented medicine; trauma and reconciliation studies; death studies - and the list is still growing. These are institutional structures that combine pastoral care with a therapeutic function to deal with the inhumane and painful aspects of historical horrors. They

perpetuate and update the transformative impact of the Humanities in an inhumane context, but they do so by exploding the boundaries of classical Humanities disciplines.

Therefore, instead of turning backwards to a nostalgic vision of the Humanities as the repository and the executors of universal transcendental reason and inherent moral goodness, such as Martha Nussbaum proposes, I suggest that we move forward into multiple posthuman futures. We need an active effort to reinvent the academic field of the Humanities in a new global context and to develop an ethical framework worthy of our posthuman times. Affirmation, not nostalgia, is the road to pursue: not the idealisation of philosophical meta-discourse, but the more pragmatic task of self-transformation through humble experimentation. Let me expand on this project in the next section.

Institutional Patterns of Dissonance

The crises of self-definition and public perception of the Humanities have been building up, since the end of the 1970s, into an institutional debate framed by explicit political factors. A recent American study assesses the situation lucidly:

> In addition to the decline of federal funding, a shrinking job market, and the new pressures of globalization, the most significant internal challenges confronting the Humanities have emerged from the hegemony of techno science, the impact of the 'new media' revolution, the rise of expert cultures on the one hand and, on the other, the unprecedented democratic proliferation of new interdisciplinary fields, such as gender, ethnic, disability, and African-American studies, as well as studies of non-European cultures, all of which put the traditional canon and the 'common' mission of the Humanities into question. (Bono et al, 2008, p. 2)

The institutional crisis therefore grew beyond issues of self-representation, to question the dominant paradigm of what constitutes scientific knowledge for the contemporary humanists.

During the conflict-ridden 1990s, 'science wars' – also known as 'theory' or 'culture' wars – broke out on the American campus (Searle, 1995). The core of the dispute was precisely the question of differences of paradigm between the Humanities and the natural sciences. French Continental philosophy and especially post-structuralism were targeted for particular hostility, under the general charge of 'political correctness' (Bérubé & Nelson, 1995). Militant anti-poststructuralist scientists, like Socal and Bricmont (1998), accused the Humanities of scientific inadequacy and downright ignorance, with disastrous effects for the morale of the field. They have encouraged the by-now-familiar reaction of dismissal of the Humanities through the intellectually lazy charge of moral and cognitive relativism. This was definitely the lowest point in the contemporary relationship between the two cultures.

And yet, against these vulgar simplifications, I maintain that it is important to acknowledge the productive contribution that post-structuralism and other critical theories have made to a renewal of the field of the Humanities. Foucault argued back in the 1970s that the Humanities as we have come to know them are structured by an implicit set of humanistic assumptions about 'Man' which are historically framed and contextually defined, in spite of their universalistic pretensions. As an 'empirical-transcendental doublet', Man is framed by the structures of Life, Labour and Language, as constant work-in-progress. This is no manifesto for relativism, but rather, as Rabinow (2003, p. 114) puts it, a call for 'a renewed problematization of *anthropos*'.

The changing conditions of our historicity are responsible for the decline of humanist 'Man'. To blame post-structuralism for breaking the bad news is to mistake the messenger for the message. In Foucault's (1970) ironical terms, this 'death' is not a form of extinction, but rather a historically specific mode of endurance on the part of 'ex-Man', after the anthropological exodus I discussed above. With her customary insight and wit, Gayatri Spivak (1987) denounced this 'death' as the weakened but nonetheless hegemonic modus vivendi of Eurocentric 'ex-Man'. The fact that critical theory has been coming to terms with endless deaths since then, ranging from the death of Man, the universal and the nation state, to the end of history and of ideology and the disappearance of the printed book, bears testimony to the sagacity of Spivak's remark.

To return to the main point of my current argument, I fully endorse the call for an epistemological turn in the Humanities, so as to enable them to clarify their own knowledge production processes and consequently becoming better equipped to help clarify those of others.

There are, however, some serious obstacles to this worthy project. The first is the lack of a tradition of epistemological self-reflexivity in the field. Linked to this is the deplorable persistence of an introverted culture of disciplinary insularity, unthinking Eurocentrism and anthropocentrism. Few of these institutional habits of the Humanities are really conducive to epistemological self-scrutiny. The field furthermore tends to be unable to resist the fatal attraction of the gravitational pull back to Humanism. Only a serious mutation can therefore help the Humanities to grow out of some of their entrenched bad habits. This requires a number of new perspectives, but over and above these formal criteria, I think the Humanities need to find the inspirational courage to move beyond an exclusive concern for the human, be it humanistic or anthropocentric Man, and to embrace more planetary intellectual challenges.

The Humanities in the Twenty-first Century

We have at our disposal a variety of robust and constructive institutional alternatives to the rather unresolved and often conflict-ridden relationship between the Humanities and the sciences in the third millennium.

One useful strategy aims at identifying points of compatibility between the two cultures and points out the role played by cultural representation, images and literary devices – all of them drawn from the 'subtle' (a term that I find vastly preferable to the derogatory 'soft') sciences – in the making of publicly acclaimed science. For instance, Gillian Beer's study of evolutionary narratives was positively path-breaking in this respect (1983), and it was brilliantly pursued by studies of literary Darwinism (Carroll, 2004). Working within scientific culture, Evelyn Fox Keller (1995, 2002) is a pioneer of a different kind, producing a series of key texts to illustrate the complementary nature of humanistic knowledge and empirical science. The study of Barbara's McClintock's life and work (Fox Keller, 1983) is especially relevant in that it demonstrates the contiguity between cultural insights, spiritual resources and experimental science.

Another angle of approach to the question of the two cultures today focuses on the function of visualisation in science. Steven Jay Gould and Rosamond Purcell (2000) pioneered the dialogue between art and science by a sophisticated interplay of images and scientific information. This tradition was brought to new heights by the collaborative interdisciplinary work on picturing science and the arts by Carrie Jones and Peter Galison (1998). The field is large and well endowed with talents that range from the political analysis of the scientific gaze (Fox Keller, 1985; Jordanova, 1989; Braidotti, 1994) to the cultural history of photography and new media (Lury, 1998; Zylinska, 2009). Cross-over studies of the visual arts in relation to the physical and biological sciences are also crucial, as Barbara Stafford has brilliantly demonstrated (1999, 2007).

Anthropology has played an inspirational role in the study of science, starting from agenda-setting pioneers like Marilyn Strathern (1992), to Paul Rabinow's Foucauldian take on the 'Life' sciences (2003) and Rayna Rapp's combination of political and epistemic elements in the analysis of biotechnologies (2000). Henrietta Moore's analyses of subject formations span across the decades of post-structuralism to provide the most consistent insights about the entanglements of bodies, psychic landscapes, cultures and technologies (1994, 2007, 2011).

Feminist epistemology and social studies of sciences posit feminist theory as the missing link between science studies and epistemological political subjectivity, with intellectual pioneers like Donna Haraway (1990), Sandra Harding (1991, 1993), Isabelle Stengers (1987, 2000), Lisa Cartwright (2001), Bryld and Lykke (1999) and Annemarie Mol (2002). The social studies of science also proved very innovative, as evidenced by the work of Fraser et al (2006), Maureen McNeil's shrewd political analyses of technology (2007) and Sarah Franklin's path-breaking work on Dolly the sheep (2007). Cultural studies of science have also been crucial, as in Jackie Stacey's brilliant analyses of the social and therapeutic cultures of cancer (1997) and the cinematic life of genetics (2010).

The field of media studies has produced an astonishing amount of high-quality research on science and technology, as testified by the work of Jonathan Crary (2001) and the Zone Books series, which brought French theory and philosophy of science to large American audiences. Jose van Dijck' s analyses of digital culture are path-breaking (2007); Smelik and Lykke (2008) opened up

the field to a variety of original interventions on the inter-disciplinary structures of contemporary science and its embedded cultural and social aspects.

We are confronted therefore by a sort of embarrassment of riches in new discourses about the current relationship between the Sciences and the Humanities, and I regret that I cannot pursue a more detailed analysis of the fields I have outlined. For the moment, apart from praising the range and quality of these new areas of scholarship, I want to draw several conclusions – the first being that such a wealth of innovative interdisciplinary scholarship in and across the Humanities is an expression of the vitality of this field, not of its crisis. Second, much of this new research is conducted in those experimental inter-disciplinary areas of 'studies' that I have highlighted as a major source of inspiration. Third, they are epistemologically grounded and consequently they enable the contemporary Humanities to clarify their own methods and mechanisms of knowledge production. However, the very interdisciplinary nature of these new research areas does not facilitate the task of providing a new synthesis of the field. This wealth of approaches therefore re-opens the old question of the generic identity of the Humanities as a discipline.

Commenting on this lack of unity in the discursive practice of the Humanities, Rabinow concludes (2003, p. 4), 'No consensus has ever been reached about principles, methods and modes of problem specification, or ... principles of verification, or about forms of narration in the human sciences.'

It is important to stress, however, that this dis-unity points to over-abundance, not lack. As a result, '*anthropos* is that being who suffers from too many *logoi*' (Rabinow, 2003, p. 6). This is especially true in the context of contemporary scientific and technological advances, which have contributed to even more heterogeneous discourses. Their heterogeneity is such that they are incapable of providing an over-arching theory of technological self-representation. They consequently push even further the disaggregation of the discursive unity of *anthropos*, which has proved very creative in adapting to this scientific exuberance.

Lorraine Daston (2004) acknowledges the range and quality of these resources and disciplinary precedents. She also emphasises the importance of culture and interpretation to the making of science. Daston shows that hermeneutical frameworks are not only embedded in all sorts of disciplines close to the Humanities – notably the social sciences, law and the Life sciences - they also play a key role in society at large and are present in all decisions-making processes. Daston therefore encourages humanists to make a bigger effort to explain to the outside world how we know what we know. Arguing that the scholarship on epistemology and philosophy of science is slanted in favour of the natural sciences, she calls for an epistemology of knowledge practices by humanists. This will result in explaining what counts as a scientific 'discovery' or just a 'finding' for the Humanities, with attention to process and praxis, as opposed to an exclusive focus on the objects of knowledge.

Although this is very important and necessary, the very nature of data collection in the Humanities clashes with the methods of the natural or 'Life' sciences in that it is based on lived experience and tends towards complexity, not quantification. In a European context, moreover, other factors need to be factored in - for instance, the multi-lingual structure of research and thinking in the Humanities. This means that research practice differs considerably in terms of geographical but also temporal locations across Europe and beyond. Is it then fair to ask this rich and internally differentiated field to conform to a different research paradigm?

While the calls for the Humanities to develop some 'bio-literacy' and cyber-nautical skills gather force, the resistance remains great both in the Humanities and in the larger scientific community. The missing links of this dialogue are manifold and they collide over the very definition of the posthuman. If we 'postanthropocentric posthumanists' (not hyphenated and non-unitary subjects) are to strike a note of resonance in both scientific communities, we need to insist on a culture of mutual respect. Cultural and social studies of science need to address their resistance to theories of the subject, while philosophies of the subject, on the other hand, would be advised to confront their mistrust and mis-cognition of bio-sciences. Posthuman times call for posthuman Humanities studies.

Posthuman thinkers embrace creatively the challenge of our historicity without giving in to cognitive panic. The argument is straightforward: if the proper study of mankind used to be Man and the proper study of humanity was the human, it seems to follow that the proper study of the posthuman condition is the posthuman itself. This new knowing subject is a complex assemblage

of human and non-human, planetary and cosmic, given and manufactured, which requires major readjustments in our ways of thinking. This is not as abstract as it may sound at first. Let me give you some concrete examples.

The first is the fast-growing field of environmental Humanities, inspired by the awareness that human activity has a geological influence. Also known as sustainable Humanities (Braidotti, 2006) and as 'anthropocene Humanities' [8], this interdisciplinary field of study introduces major methodological as well as theoretical innovations. For one thing, it spells the end of the idea of a de-naturalised social order disconnected from its environmental and organic foundations and calls for more complex schemes of understanding the multi-layered form of inter-dependence we all live in. Second, it stresses the specific contribution of the Humanities to the public debate on climate change, through the analysis of the social and cultural factors that underscore the public representation of these issues. Both the scale and the consequences of climate change are so momentous as to defy representation. Humanities, and more specifically cultural research, are best suited to fill in this deficit of the social imaginary and help us think the unthinkable.

The impact of the environmental Humanities is even further reaching. In his analysis of the implications of climate change research for the discipline of history, Dipesh Chakrabarty (2009) argues for a more conceptual shift towards 'Deep History'. This is an interdisciplinary combination of geological and socio-economic history, which focuses both on the planetary or earth factors and on the cultural changes that have jointly created humanity over hundreds of thousands of years. It combines theories of historical subjectivity with 'species thinking'. This is, in my eyes, a post-anthropocentric configuration of knowledge, which grants the earth the same role and agency as the human subjects that inhabit it.

The scale of these mental shifts is such as to almost defy representation, as I suggested above. Chakrabarty suggests further critical reflection on 'the difference between the present historiography of globalisation and the historiography demanded by anthropogenic theories of climate change' (2009, p. 216). This forces us to bring together categories of thought which were till now kept apart not only by disciplinary boundaries – between the earth sciences and literature and history, for instance – but also by the anthropocentric bias that has sustained the Humanities. Far from being a crisis, this new development has enormous inspirational force for the field. It also calls into question some of the current ideas about the negative formation of a new sense of 'the human' as bound together by shared vulnerability in relation to the possibility of extinction. Chakrabarty's insights about a critical climate change-driven Deep History also challenge some of the given assumptions about postcolonial critiques of the western universal. Quite a programme.

Another illuminating example of the advantages of a posthuman scientific position is the 'One Health Movement', which defines its mission in terms of public health as follows:

> Recognizing that human health (including mental health via the human-animal bond phenomenon), animal health, and ecosystem health are inextricably linked, One Health seeks to promote, improve, and defend the health and well-being of all species by enhancing cooperation and collaboration between physicians, veterinarians, other scientific health and environmental professionals and by promoting strengths in leadership and management to achieve these goals.[9]

The movement is inspired by Rudolf Virchow (1821-1902), who coined the term 'zoonosis', arguing that there should be no dividing lines between animal and human medicine. This position has been gathering momentum in the last fifteen years. The One Health initiative is a rather daring interdisciplinary alliance that unites physicians, osteopaths, veterinarians, dentists, nurses and other scientific health and environmentally related disciplines, on the basis of a simple hypothesis, which is the isomorphism of structures between humans and animals in immunology, bacteriology and vaccine developments. This means that humans are both exposed and vulnerable to new diseases, like bird flu and other epidemics, which they share with animal species.

Obviously a response to the new pandemics that have emerged in the global era, like bovine spongiform encephalopathy (BSE), better known as 'mad cow disease', the One Health Initiative stresses the variety of shared diseases that tie humans and animals. For instance, animals suffer from many of the same chronic diseases, such as heart disease, cancer, diabetes, asthma and arthritis, as humans. It follows, therefore, that we should develop comparative medicine as the study of disease processes across species and that therefore we should also connect doctors and

veterinarians in their daily practices, both therapeutic and research based. Environmentally embedded, the One Health Movement pursues both ecological and social sustainability and has large social repercussions.

The common concerns about public health among humans and animals have become intensified as a result of urbanisation, globalisation, climate change, wars and terrorism and microbial and chemical pollution of land and water sources, which have created new threats to the health of both animals and humans.[10] Medical doctors and veterinarians need to join forces with environmental health scientists and practitioners to deal with disease outbreaks, prevent chronic disease caused by chemical exposure, and create healthier living environments. One Health is the perfect post-anthropocentric concept that brings together human health-care practitioners, veterinarians and public health professionals for the sake of environmental social and individual sustainability.

Another significant example is the fast-growing field of the Digital Humanities, pioneered by Katherine Hayles, which deals with a rich agenda of thematic and methodological issues. One of them is the continuing relevance of the science of texts and the role of the press – from Gutenberg to 3D printing – in shaping human knowledge. Just as the Humanities led these discussions in the sixteenth century, when the printing press was introduced in the western world, so are they at the forefront of contemporary frontiers of thought. And they are not alone.

This is a new and innovative agenda, which builds on but is not confined to either humanism or anthropocentrism – a genuinely new programme for the Humanities in the twentieth century.

The 'Proper' Subject of the Humanities is not 'Man'

I have argued that posthuman theory rests on a process ontology that challenges the traditional equation of subjectivity with rational consciousness, resisting the reduction of both to objectivity and linearity.[11] A collectively distributed consciousness emerges from this, a transversal form of non-synthetic understanding of the relational bond that connects us. This places the relation and the notion of complexity at the centre of both the ethics and the epistemic structures and strategies of the posthuman subject (Braidotti, 2006).

This view has important implications for the production of scientific knowledge. The dominant vision of the scientific enterprise is based on the institutional implementation of a number of laws that discipline the practice of scientific research and police the thematic and methodological borders of what counts as respectable, acceptable and fundable science. In so doing, the laws of scientific practice regulate what a mind is allowed to do, and thus they control the structures of our thinking. Posthuman thought proposes an alternative vision of the thinking subject, his or her evolution on the planetary stage and the actual structure of thinking.

Deleuze and Guattari's (1994) idea that the task of thinking is to create new concepts is a great source of inspiration for the Humanities, also because it rests on the parallelism between philosophy, science and the arts. This is not to be mistaken for a flattening out of the differences between these intellectual pursuits, but rather is a way of stressing the unity of purpose among the three branches of knowledge. Deleuze and Guattari take care to stress the differences between the distinctive styles of intelligence that philosophy, science and the arts respectively embody. They also argue that they remain indexed on a common plane of intensive self-transforming life energy. This continuum sustains the ontology of becoming that is the conceptual motor of posthuman nomadic thought. In so far as science has to come to terms with the real physical processes of an actualised and defined world, it is less open to the processes of becoming or differentiation that characterise Deleuze's monistic ontology. Philosophy is at an advantage, being a subtler tool for the probing intellect, one that is more attuned to the virtual plane of immanence, to the generative force of a generative universe, or 'chaosmosis', which is nonhuman and in constant flux. Thinking is the conceptual counterpart of the ability to enter modes of relation, to affect and be affected, sustaining qualitative shifts and creative tensions accordingly, which is also the prerogative of art. Critical theory therefore has a major role to play.

The monistic ontology that sustains this vision of life as vitalist, self-organising matter also allows the critical thinker to re-unite the different branches of philosophy, the sciences and the arts in a new alliance. I see this as a dynamic contemporary formula to redefine the relationship

between the two cultures of the 'subtle' (Humanities) and 'hard' (Natural) sciences. They are different lines of approaching the vital matter that constitutes the core of both subjectivity and its planetary and cosmic relations.

As a consequence, one can venture the preliminary conclusion that the main implication of posthuman critical theory for the practice of science is that the scientific Laws need to be retuned according to a view of the subject of knowledge as a complex singularity, an affective assemblage, and a relational vitalist entity.

It follows from all this that the Humanities in the posthuman era of anthropocene should not stick to the Human – let alone 'Man' - as its proper object of study. On the contrary, the field would benefit by being free from the empire of humanist Man, so as to be able to access in a postanthropocentric manner issues of external and even planetary importance, such as scientific and technological advances, ecological and social sustainability and the multiple challenges of globalisation. Such a change of focus requires assistance from other social and scientific actors as well.

The question is whether the Humanities are allowed to set their own agenda in relation to contemporary science and technology, or whether they are confined to places they did not choose to be in the first place. There is in fact a distinct tendency - for instance, in the public debates about climate change, or biotechnologies - to assign to the institutionally underfunded field of the Humanities all subjects related to the human component of these complex debates. This tendency has made the institutional fortunes of ethics, which is expected to issue new meta-discourses and normative injunctions suited to the dilemmas of our age - and often claims for itself the prerogative of doing so. This meta-discursive claim, however, is unsubstantiated. It moreover perpetuates the institutionalised habit of thought - reactive and sedentary – of assigning philosophy to the role of a master theory. The image of the philosopher as the legislator of knowledge and the judge of truth – a model rooted in the Kantian school - is the exact opposite of what posthuman critical theory is arguing for: post-identitarian, non-unitary and transversal subjectivity based on relations with human and non-human others.

Another discursive field that gets regularly evoked as the single responsibility of the Humanities is the controversial issue of the 'social and cultural aspects' of complex issues such as climate change or the impact of biotechnologies. In other words, the Humanities are actively confined to the anthropocentric corner, while being simultaneously blamed for this limitation - which is the perfect illustration of the paradox noted by Whimster (2006, p. 174): 'a science of the human would seem either to have the capacity to be inhuman or, alternatively, to be humanistic but hardly scientific'. Damned if you do, damned if you don't.

My point is that the Humanities need to embrace the multiple opportunities offered by the posthuman condition. The Humanities can set their own objects of enquiry, free from the traditional or institutional assignment to the human and its humanistic derivatives. We know by now that the field is richly endowed with an archive of multiple possibilities which equip it with the methodological and theoretical resources to set up original and necessary debates with the sciences and technologies and to meet other grand challenges of today. The question is what the Humanities can become, in the posthuman era and after the decline of the primacy of 'Man' and of *anthropos*.

In other words, I think the Humanities can and will survive and prosper to the extent that they will show the ability and willingness to undergo a major process of transformation in the direction of the posthuman. To be worthy of our times, we need to be pragmatic: we need schemes of thought and figurations that enable us to account in empowering terms for the changes and transformations currently on the way. We already live in permanent states of transition, hybridisation and nomadic mobility, in emancipated (post-feminist), multi-ethnic societies with high degrees of technological intervention. These are neither simple nor linear events, but rather are multi-layered and internally contradictory phenomena. They combine elements of ultra-modernity with splinters of neo-archaism: high-tech advances and neo-primitivism, which defy the logic of the excluded middle.

We do need to embrace non-profit as a key value in contemporary knowledge production, but this gratuitousness is linked to the construction of social horizons of hope and therefore it is a vote of confidence in the sheer sustainability of the future (Braidotti, 2006). The future is nothing more and nothing less than inter-generational solidarity, responsibility for posterity, but it is also

our shared dream, or a consensual hallucination.[12] Collini puts it beautifully (2012, p. 199): 'we are merely custodians for the present generation of a complex intellectual inheritance which we did not create, and which is not ours to destroy'.

Notes

[1] This text contains extracts from my book *The Posthuman* (Braidotti, 2013).

[2] This line is pursued in philosophy by Deleuze's rejection of the transcendental vision of the subject (1994); Irigaray's de-centring of phallologocentrism (1985a,b); Foucault's critique of Humanism (1977); and Derrida's deconstruction of Eurocentrism (1992).

[3] Significant examples include Avtar Brah's diasporic ethics (1996) that echoes Vandana Shiva's anti-global neo-Humanism (1997). African Humanism or Ubuntu is receiving more attention, from Patricia Hill Collins (1991) to Drucilla Cornell (2002). In a more nomadic vein, Edouard Glissant's politics of relations (1997) inscribed multi-lingual hybridity at the heart of the contemporary posthuman condition. Homi Bhabha's 'subaltern secularism' (1994) builds on the huge legacy of Edward Said.

[4] As Morin (1987), Passerini (1998), Balibar (2004) and Bauman (2004) have also argued.

[5] The term was coined by Nobel Prize-winning chemist Paul Crutzen in 2002 and has become widely accepted.

[6] http://www.citizensciencealliance.org/

[7] A companion to animal studies has just been published (Gross & Vallely, 2012), whereas a complete eco-criticism reader has been available for a while (Glotfelty & Fromm, 1996). The *Journal of Ecocriticism* is quite established, while a recent issue of the prestigious *PMLA* papers (2012) was dedicated to the question of the animal. For the younger generation of scholars (Rossini & Tyler, 2009), the animal is the posthuman question par excellence.

[8] I am indebted to Debjani Ganguly and Poul Holm for this felicitous formulation.

[9] http://www.onehealthinitiative.com/mission.php, with thanks to my colleague Anton Pijpers.

[10] Source: Wikipedia: One Health Initiative, consulted on 26 April 2012.

[11] For an excellent critical account of the notion of objectivity, see Daston & Galison, 2007.

[12] This is William Gibson's (1984) definition of cyberspace.

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