Posthuman Glossary

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BLOOMSBURY

POSTHUMAN GLOSSARY

Edited by Rosi Braidotti and Maria Hlavajova

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Series Preface

Theory is back.

Critical theorists of the universal, organic or situated kind used to be defined by their ethical-political commitment to account for power relations at work in the real world, as well as in scientific practice. But their prestige waned throughout the 1990s. The 'theory wars' in the USA targeted critical theory as an outdated ideological activity, dismissing the theorists as 'tenured radicals'. They were replaced by new 'content providers', experts and consultants, in a context of increased privatization of academic research. By the turn of the millennium, with the internet as the only true 'content provider', former theorists were relocated to the market-oriented position of 'ideas brokers' and, in the best cases, 'ideas leaders'. Nowadays, we are all entrepreneurs of the mind. The cognitive character of contemporary capitalism and its high technological mediation paradoxically produced a 'post-theory' mood and intensified attacks on radical thought and critical dissent. This negative mood also resulted in criticism of the social and scholarly value of the Humanities, in a neo-liberal corporate university ruled by quantified economics and the profit motive.

And yet, the vitality of critical thinking in the world today is palpable, as is a spirit of insurgency that sustains it. Theoretical practice may have stalled in the academic world, but it exploded with renewed energy in other quarters, in media, society, the arts and the corporate world. New generations of critical 'studies' areas have grown alongside the classical radical epistemologies of the 1970s: gender, feminist, queer, race, postcolonial and subaltern studies, cultural studies, film, television and media studies. The second generation of critical 'studies' areas includes animal studies and ecocriticism; cultural studies of science and society; religion studies; disability studies; fat studies; success studies; celebrity studies; globalization studies; and many more. New media has spawned new meta-fields: software studies, internet studies, game studies, digital post-colonial studies and more. The end of the Cold War has generated conflict studies and peace research; human rights studies, humanitarian management; human rights-oriented medicine; trauma, memory and reconciliation studies; security studies, death studies; suicide studies; and the list is still growing. These different generations of 'studies' now constitute a theoretical force to be reckoned with.

Theory is back!

This series aims to present cartographic accounts of these emerging critical theories and to reflect the vitality and inspirational force of ongoing theoretical debates.

Rosi Braidotti

examine the role of art in the enactment of social agency. Recent publications include *We Roma: A Critical Reader in Contemporary Art* (2013) and *Ex Libris* (2009).

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Introduction
ROSI BRAIDOTTI AND MARIA HLAVAJOVA

What could terms such as 'altergorithm', 'rewilding', 'negentropy' and 'technoanimalism' possibly have in common? The answer lies in the pages of this book: they are all neologisms that attempt to come to terms with the complexities of the posthuman predicament. Every time we refer to some of these neologisms in the introduction, we will insert the inverted commas, as a way of indexing them and alerting the readers to the specific inception of the terms.

This glossary rests on the working definition of the posthuman as a field of enquiry and experimentation that is triggered by the convergence of post-humanism on the one hand and post-anthropocentrism on the other. Posthumanism focuses on the critique of the humanist ideal of 'Man' as the universal representative of the human, while post-anthropocentrism criticizes species hierarchy and advances bio-centred egalitarianism. Equally interdisciplinary in character, they refer back to different traditions, cite different authors and tend to take place in-between different disciplinary areas. The convergence of these two strands is producing a dynamic new field of scholarship right now. Accordingly, in this *Posthuman Glossary* we take the term 'posthuman' to mark the emergence of a transdisciplinary discourse that is more than the sum of posthumanism and post-anthropocentrism, and points to a qualitative leap in a new – perhaps 'post-disciplinary' – critical direction.

This volume consequently is both an attempt to reflect the current state of posthuman scholarship – by providing a selection of key terms and authors – and a critical intervention in the field. The critical part tends to emphasize two main dimensions: the first is the significance of the neo-materialist approaches and of monistic process ontologies in contemporary critical posthuman theory. The second is an ethical concern for the relationship between new concepts and real-life conditions, with strong emphasis being placed throughout the volume on the need for creative responses to the current challenges. This ethical passion drives the volume and it also helps shape its affective tone, in terms of accountability, the respect for diversity and the conviction that critique and creativity work in tandem. In this respect, the *Posthuman Glossary* may be said to both fulfil and defy the usual expectations and aims of a glossary.

ANTHROPOS REDUX

The starting assumption of this volume is that the historical situation of today – ecologically, economically, socio-politically as well as affectively and psychically – is unprecedented. We define our era as the Anthropocene,[1] by which we understand the geological time when humans are having a lasting and negative effect upon the planet's systems. As the 'Generation Anthropocene'[2] we believe that new notions and terms are needed to address the constituencies and configurations of the present and to map future directions. There is the pressure of old and new contemporary concerns, such as the

changes induced by advanced technological developments on the one hand and the structural inequalities of the neoliberal economics of global capitalism on the other. Accordingly, the contributors to the *Posthuman Glossary* analyse both material and discursive conditions: sociological reality and the more epistemic dimensions are taken together, as two sides of the same coin. This assumes, as a starting point, a nature–culture continuum that defies binary thinking. In other words, the 'computational turn' is very 'earth-bound' and the global economy, however 'planetary', is also eminently 'terrestrial'. It is just the case that today, the former 'four elements' (earth, air, water and fire) have mutated into 'geo-hydro-solar-bio-techno-politics'. If this sounds puzzling, it's because it genuinely is so. We need to take on the task of thinking differently about our current predicament.

As a consequence of these mutations, two notions that pertain to residual humanism – the *non*-human and the *in*human – are very important for the *Posthuman Glossary*, because they single out acute aspects of our social reality. The non-human refers to the status of depreciated naturalized 'others' whose existence has been cast outside the realm of anthropocentric thought and confined within non-human life (*zoe*). They are, historically, the members of ethnicities other than the ruling and colonial European powers. But they also refer to vegetable, animal and earth species and, by now, the genes and genomic codes that constitute the basic architecture of Life, or rather its 'epigenetic landscapes'. The reference to epigenetics (see the entry on Epigenetic Landscape) is important to this glossary, in that it contributes to a critique of anthropocentric genetic determinism by stressing that, even at the level of the gene, the human is already interconnected with the wider material world, and with its histories and events.[3] In a broader sense, this glossary assumes that the human is always partially constituted by the non-human and that their interaction is too complex to be reduced to a mere dialectical opposition. All the more so, as nowadays the non-human also involves technologically manufactured 'others' – both modernist appliances and objects and post-industrial 'smart' things. The latter play a crucial role in defining the posthuman moment by stressing the primacy of digital mediation and electronic circuits in our self-definitions and interaction. One of the challenges for the *Posthuman Glossary* consequently is to devise adequate theoretical and artistic representations for the new forms of interconnection between humans and non-human factors and agents.

The boundaries between the 'inhuman' and the 'non-human', however, are porous and dynamic. Many scholars use them interchangeably to refer to other-than-human or less/more-than-human life, enlisting selected aspects of geology, anthropology, theology, zoology and biology to the task of reaching an adequate understanding of these terms. In this glossary, we try to make critical distinctions and by 'inhuman' we refer to a double phenomenon, which raises both analytical and normative questions. Analytically, the term refers to the de-humanizing effects of structural injustice and exclusions upon entire sections of the human population who have not enjoyed the privileges of being considered fully human. Gender and sexual difference, race and ethnicity, class and education, health and able-bodiedness are crucial markers and gatekeepers of acceptable 'humanity'. They are terms that index access to the rights, prerogatives and entitlements of being human. Those who are excluded from a dominant notion of

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the human based on masculinist, classist, racist and Eurocentric parameters see their lives downgraded from the human as pertaining to '*bios*', to a bestialized exist-ence closer to '*zoe*'. This insight about structural exclusions flies in the face of the universalist pretensions of the humanist tradition. This critical position also lies at the core of bio-political analyses of contemporary power relations and feeds into a critique of the limitations of human-ist thought and practices.

Normatively, however, the inhuman also denounces the inhumane, unjust prac-tices of our times. More specifically it stresses the violent and even murderous structure of contemporary geo-political and social relations, also known as 'necro-politics'. These include increasing economic polarisation and the 'expulsion' of people from homes and homelands in an upsurge of global 'neo-colonial' power relations. Holding these different dimensions of the 'inhuman' and their social effects in some sort of critical balance is one of the chal-lenges of the *Posthuman Glossary*.

Many of the contributors address the bio- and necro-politics of the day, notably the strident correlation between the redefinition of the humans' interaction with their ecological and technological environments on the one hand and the brutality of the power relations of today, on the other. In this glossary, 'metadata society' thrives alongside heaps of 'digital rubbish' and the phenomenon known as 'neuronal aesthetics' works in tandem with 'exclusion zone', apparently unperturbed by their internal contradictions. In other words, the new conceptual and terminolo-gical innovations introduced by the contributors are positive interrogations of ongoing new developments, but they do not recoil from assessing also their negative repercussions. The entries of this glossary cover for instance the coexistence

of a double mediation: ubiquitous digital networks and bio-genetic regeneration processes on the one hand and environ-mental destruction on a mass scale on the other. The terminological diversity is very creative: some authors emphasize new 'general ecologies' and 'resilience', while others focus on human and non-human species 'extinction'. Global migration flows – also known as the 'Lampedusa' effect – are read in the frame of enduring patterns of economic, sexualized and racialized oppression. Data flows in virtual space coexist with regimes of earth-bound, spatial management based on growing incarceration and 'execution'. The perpetual 'war' on terror occurs alongside the spread-ing of extensive 'security/surveillance' systems, to name but a few significant markers of our time.

The effect of the internally contradict-ory developments of the posthuman era is that they contribute to explode the concept of the human. The human is no longer the familiar notion that was previously known and taken for granted, and it is not consen-sually shared (Braidotti, 2013). The drastic transformations of our bio and necro-political regimes have come to mark a 'posthuman condition' that combines exciting new developments with a trouble-some reiteration of old, unresolved prob-lems. The *Posthuman Glossary* assesses this moment as marking the end of the self-referential arrogance of a dominant Eurocentric notion of the human and the opening up of new perspectives.

If art, science, and the academic Humanities have shared one thing, it is their common engagement with construc-tions and representations of the *human* within their respective realms. Artists and Humanities scholars also mirror each other in their mutual explorations of how people process, document and analyse their human experiences. Reference and

appeals to that particular idea of the human, however, pertain to a block of 'common sense' notions that are constantly deployed without ever being seriously defined. Too often still, the term 'human' is simply accepted and circulated without critical analyses of its internal fractures and constitutive hierarchies. The 'human' as concept attains an implicitly normative status as what humans ought to be, or not, as well as what they may actually happen to be. In academic research in the Humanities, the hegemony of humanist values in defining the human is such that one disputes the notion of the human and the worth of humanism at one's own risk and peril. As stated earlier, the *Posthuman Glossary* pursues a double aim: it presents a variety of alternative responses to the critique of humanism and anthropocentrism, while also attempting to sketch a theoretically coherent critical position on the posthuman. Both approaches are sustained by the conviction that neither the limitations set by the anthropomorphic nature of humans nor the excesses of their anthropocentric ambitions have been the target of sustained analysis and criticism.

As a result of this range of perspectives, the posthuman – far from having a stable and coherent identity – manifests itself by a vast number of disparate concerns that do not always coalesce into a single thematic field. A major axis of reflection running across the *Posthuman Glossary* therefore consists in a critical overview and assessment of the multiple discourses that are currently circulating about the notion of the Anthropocene itself. How useful is the notion of the Anthropocene? This book raises sustained critical questions as to whether the awareness of a collective sense of ecological, social and affective responsibility necessarily enhances ethical agency and political consciousness. Besides, how inclusive and how representative is the

'Generation Anthropocene'? The urgency of these questions is equal to the vitality of the field: even as a relative neologism, the Anthropocene has already become another 'Anthropomeme' (Macfarlane 2016). It has spawned several alternative terms, such as 'Capitalocene' (Haraway 2015a, 2015b), 'Anthrop-obscene' (Parikka 2014), but also 'Plantationcene' (Tsing 2015), 'Manthropocene' and 'Plasticene'. This proliferation does not contribute to linear stability, but it rather fosters intellectual and artistic creativity.

Taking the cartographic aim of the *Posthuman Glossary* seriously by surveying the current state of the scholarship, we are also committed to pointing out missing links and exclusions. In this spirit, the glossary attempts to challenge the contemporary manifestations of power in ways that privilege Eurocentric traditions of critical thought and do not engage the work of 'decolonial critique', 'neo-colonial' politics and black studies in a sustained manner. We are strongly opposed to monocultures, also and especially of the posthuman mind (Shiva 1993). Although the glossary offers a few entries in the postcolonial and race fields of posthuman study, we are aware of our critical ellipses and see them as a limitation of this collection – literally, a matter of finitude. Like all cartographies, the *Posthuman Glossary* only offers a partial account and a synoptical view of the field at this point in time.[4]

The *Posthuman Glossary* also attempts to build bridges across a number of other missing links. It aims first of all to connect scholarship and critical thought to the real-life issues and praxes that are of immediate relevance to individuals and society today. Although there is much talk nowadays of the 'impact' of academic work upon the real world, the gulf between the two remains large. This volume starts by filling in this gap. Secondly, the glossary

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aims at connecting artistic and curatorial
practice to scientific research, technolo-
gical innovations and scholarly work.
This implies an open-minded attitude on
both sides and the conviction that there is
much to be gained through these dialogues.
The assumption that we need to experi-
ment with different ways of thinking places
the contemporary artists in a crucial posi-
tion for scholars struggling with the proto-
cols of established academic work and
language, and vice versa.

Thirdly, it is the aim of the glossary to
connect different generations of thinkers
and users of human and non-human tech-
nologies. This is especially relevant now
that electronic networks enter into their
nth operational generation, resulting in
new generations of human on-line users
being defined as 'digital natives'. It is urgent
to study and work across their respective
assessments of our present predicament
and to explore the implications of the fact
that age-indexed differences nowadays are
structured by sizeable infrastructural
divergences, such as access to bio-medical
technologies that extend and segment life
on the one hand and the accumulation of
debt on the other. Such structural inequal-
ities add additional layers of complexity to
the question of intergenerational relations.
Here the posthuman approach offers a
fresh lens with which to frame intergener-
ational justice in the Anthropocene and
across the great digital divide. The need
arises to analyse also the implications of
millennial youth culture's high levels of
technological literacy for their relationship
to the knowledge and experience of older
generations of critical thinkers and, for
instance, the formulation of 'socially just
pedagogies'.

The breadth of terms, scope and
purpose of the *Posthuman Glossary* is not
only quantitative, but also qualitative: we
want to de-segregate the different and

highly specialized spheres of knowledge
production, so as to bring together differ-
ent communities of thinkers and practi-
tioners who may not otherwise come
across each other. As we mentioned before,
this is especially the case for perspectives
developed from decolonial, black and race
studies that are often marginalized in both
new media and posthuman scholarship.
And it is also the case for the artistic and
curatorial community, who can often
appear to be physically held apart from the
academic world, and vice versa. We also
hope to trigger some transdisciplinary
energy and inspiration from these unex-
pected encounters, so as to renew the
scope of critical inquiry and move towards
a more inclusive posthuman critical theory.
The pace is so fast that the speed is breath-
taking. In response, the *Posthuman
Glossary* is a valiant attempt to escape that
velocity and to reach out for some tempor-
ary 'meta-stability', by combining a carto-
graphic approach with a critical response.

THE INTERDISCIPLINARY HUBS

It follows from the above that the notion
of the posthuman is in full expansion,
in terms both of the sheer amount of
scholarship being produced and the new
qualitative perspectives it introduces. The
terminological diversity is admirable and
it goes hand in hand with a variety of
genres and theoretical styles. At this stage it
includes, for instance, a posthuman mani-
festo (Pepperell 2003); a school of inhuman
thought (Lyotard 1991; Grimaldi 2011);
emphasis on non-human agency (Raffnsøe
2013); on posthuman personhood
(Wennemann 2013); on the 'new' human
(Rosendahl Thomsen 2013); the 'a-
human' (MacCormack 2014); the 'dishuman'
(Goodley, Lawthom and Runswick-Cole

2014) and posthuman nomadic subjects (Braidotti 2013). Next to these relatively familiar terms there is a fast-growing world of neologisms and creative interventions.

With 141 contributors and over 160 entries, our volume bears witness to the explosion of this new field of research and proposes its own discursive strategy for dealing with the theoretical and terminological exuberance. As stated from the outset, one of the aims of the *Posthuman Glossary* is to provide an overview of the different critical terms, the many 'turns' and the leading concepts of posthuman critical thought and scholarship in the Humanities today, in dialogue with contemporary artistic and activist practices. The range of theoretical sources the contributors draw from may be limited, but it is not arbitrary. The selection of theoretical references has been left up to each contributor, but the glossary has a strong emphasis on a neo-materialist approach and on process ontologies that function as the point of convergence among many of our authors. The volume was conceived in May and June 2015 as a series of four workshops organized by the Centre for the Humanities at Utrecht University and BAK, the centre for contemporary art (basis voor actuele kunst, Utrecht). Dozens of brilliant papers and art performances took place within the flexible framework of those workshops and the desire to expand and extend the discussions led us to this collective enterprise.[5]

Although we have opted for a presentation based on the alphabetical order of the entries themselves, there are some key operating principles at work in the selection we have made and the structure we have assigned to this glossary. First of all, in order to provide an accurate cartography of the field, we have attempted to reflect the state of existing scholarship and

to discuss the leading scholars writing in the field. In cases where we were not able to secure an original contribution from these scholars themselves, we have drafted specific entries covering their work. Next to this, there are more critical, creative and even experimental entries that aim at devising new schemes of thought to deal with the contemporary challenges. Many of them aim at fulfilling the ethical task of exploring the relationship between new concepts and real-life conditions. The cumulative bibliography included at the end of the volume attempts to reflect as fully as possible both these aspects of the glossary.

As a matter of professional ethics, the glossary is respectful and open to multiple and potentially contradictory interpretations of the posthuman predicament, both on conceptual and on political grounds. This means also that a broad spectrum of academic disciplines is represented in this volume. Multiple new discourses, which call themselves 'studies' (gender studies, postcolonial studies, media studies etc. etc.) however, have grown in-between the disciplines and function as incubators for new ideas, methods, images and representations (Braidotti 2016b). The cross-overs between them are currently producing exciting new perspectives in posthuman scholarship.

Some meta-patterns are emerging across the different entries in this volume. We have detected a number of crucial interdisciplinary hubs that play the role of creative nuclei and we have consequently taken them as points of reference for this glossary. They are not discrete and neatly defined areas, but rather like rhizomic lines that zigzag through many contributions, allowing the authors to belong to several of them at the same time. Examples of these interdisciplinary hubs are, to begin with: comparative literature and cultural

studies, which have played a pioneering role in posthuman scholarship (Wolfe 2003, 2010; Herbrechter 2011; Nayar 2013) and have innovated on methods as well as themes, especially eco-criticism, animal studies and 'ecomaterialism' (Iovino and Opperman 2014a; Alaimo 2010). Another pioneering field is new media studies, which has taken a more material turn in order to account for the political economy of human/non-human interaction and 'networked affect' in our times (Parikka, Paasonen, Fuller, Gabrys, Terranova in this volume). Environmental studies is another crucial innovator in posthuman thinking, both the first Gaia generation (Lovelock 2009) and more recent work on the post-anthropocentric as a metamorphic entity (Clarke 2008); multi-species analysis (van Dooren 2014) and zoontologies (De Fontaney 1998; Gray 2001, Wolfe 2003).

Science and technology studies can be taken as a nursery of posthuman insights, as testified by the seminal work of Donna Haraway (1985, 1989, 1997, 2008), Isabelle Stengers (1987) and feminist cultural studies of science (Franklin, Lury and Stacey 2000). Recent scholarship returns to Darwin (Creed 2009; Midgley 2010; Grosz 2011), an author who had received little critical attention in the Humanities, with the exception of the pioneering efforts of Gillian Beer (1983), Stephen Jay Gould (1997) and Hilary Rose (2000).

Feminist, gender and LBGT+ theory, as well as postcolonial studies, are another intersectional critical hub. Feminists have long been theorizing the non-human and more especially the continuum between the human and the non-human (Balsamo 1996; Braidotti 2002; Grosz 2011; Halberstam and Livingston 1995; Halberstam 2012). That trend is now accelerating in queer posthuman and inhuman theories (Giffney and Hird 2008; Hird and Roberts 2011; Gruen and Weil 2012;

Livingston and Puar 2011; Colebrook 2014) and the emphasis on 'posthuman sexuality' (McCormack 2012). The turn to new materialism (Dolphijn and van der Tuin 2012; Coole and Frost 2010; Neimanis 2014; Laboria Cuboniks 2015) and the affective turn (Clough 2008) are also significant. Emphasis on bodily materialism (Braidotti 1991, 1994) and carnal thought (Sobchack 2004) mutates into 'vibrant matter' (Bennett 2010); and inventive life (Fraser, Kember and Lury 2006); 'trans-corporeality' (Alaimo 2010) and 'post-human performativity' (Barad 2007). Of course the list is not exhaustive and it demonstrates the staggering vitality of the new thinkers – such as those who drafted the 'xenofeminism' manifesto – who are inspired as much by 'Lady Gaga' as by the feminist classics.

A brief overview of these interdisciplinary hubs also fulfils another purpose. Our hope is that it may serve as a navigational tool to help non-specialists steer a course from relatively familiar interdisciplinary discourses, into the wilder and more transdisciplinary field of posthuman studies. The bibliographical references to these interdisciplinary hubs, in other words, trace as many road-maps leading outwards, from within the academic disciplines and the critical 'studies' areas.

MULTIPLE AXES

The embarrassment of interdisciplinary riches offered by the fast-growing field of posthuman scholarship is manifold and multi-layered. Therefore the *Posthuman Glossary* strives to strike a balance between providing a survey and defining some meta-patterns, or emerging theoretical lines among the different contributions.

As stated above, the first theoretical orientations we foreground rotate around neo-materialism, 'ecosophy' and monistic vital philosophies, in the wake of Deleuze and Guattari's agenda-setting philosophy. Some contributions argue explicitly that monism is the philosophical grounding for 'posthuman critical theory' (Braidotti, Dolphijn, MacCormack and others), because it allows for rethinking matter as self-organizing process ontology. A monistic ontology, as both material and vital, offers possibilities of grounding the embodied and embedded posthuman subject in process (Braidotti 2006b). Moreover, by focusing on the dynamic interaction of Sameness and Difference, monism moves outside the scheme of dialectical opposition, stressing instead the generative force of living matter itself (Ansell Pearson 1997, 1999). Freed from the distinction between natural and constructed events, a monistic philosophy of intelligent, self-organizing matter produces a materialist political physics and 'political affect' (Bonta and Protevi 2004; Protevi 2001, 2009, 2013).

The influence of Deleuze and Guattari's ideas, which is felt strongly in this volume, is, however, not exclusive. Several contributors follow different ways of 'mattering', that is to say of exploring matter as a dynamic process. Many other process-oriented ontologies are at work, for instance in the references to Derrida, Whitehead, Wittgenstein, Meillassoux, Latour, Haraway and others. A major point of theoretical convergence between them is the need to overcome binaries and to state that matter, the world and humans themselves are not dualistic entities structured according to dialectical principles of internal or external opposition, but rather materially embedded subjects-in-process circulating within webs of relation with forces, entities and encounters.

In the context of the Anthropocene, that is to say amidst increasing global environmental degradation, the century-old divide between nature and culture has to be questioned and displaced. A combination of factors encourages this critical move. Such factors occur in a wide range of fields, like 'artificial intelligence'; advances in the Life sciences, notably bio-genetics; the introduction of large-scale technological mediation through consumer electronics; and the rise of neural sciences and computational cultures. In critical theory as in artistic practice the notion of a nature–culture continuum has become quite accepted, though its implications are seldom borne out. Contemporary posthuman scholarship pushes the nature–cultural continuum further, introducing terms such as 'medianatures', 'ecomaterialism' and 'make-human' to replace the old divides.

The methodological challenge for the *Posthuman Glossary* consequently becomes how to represent theoretically and artistically the profound interconnections between humans and non-human factors and agents. And how to fulfil this task, moreover, while keeping in mind the structural inequalities that control access to the dominant category of the 'human' to begin with. In accepting the shift towards monistic, neo-materialist, holistic or 'process ontologies', we also need to redefine the very terms of the nature–culture and human/non-human interrelations. Many authors in this volume address the question of how models of thought and practice in contemporary scholarship and the arts have been redefined by new forms of interconnection and interaction between humans and non-humans. Others wonder to what an extent process-oriented, 'object-oriented', neo-spinozist, vital monistic philosophies can sustain a shift towards

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The human/non-human; nature–culture; medianatures continuum includes the impact of networked cultures. Digital mediation has introduced a new public sphere, through the specificity of its 'algorithmic studies' and culture. Therefore a new set of questions arises, which again covers both the material and the imma-terial aspect of mediation. For instance, many contributors explore the correlation between embedded discourses and prac-tices around 'digital citizenship' and many forms of 'undocumented citizenship'. Digital activism, in groups such as 'Anonymous', stands alongside the 'Occupy' movement, in a public sphere that is thickly material, yet completely mediated.

At the centre of the public debate about the digital public sphere is the question of what may be the social, legal, ethical and political relevance for the 'bodies politic' of the 'hypersocial' subjects in the 'post-internet' era. A key issue, for instance, is how to assess the different digital agendas that are being set up by governments, corporations, the military, the global media and users themselves. The over-emphasis on corporate priorities such as transpar-ency and digital rights in public debates may work to the detriment of more fundamental analyses of how posthuman subjectivity is being re-structured by the current technological mediation. In this regard, the *Posthuman Glossary* takes a critical distance from 'transhumanism' and its human enhancement project, which serves the corporate interests of the robot-ics sector and of the more deterministic strands of contemporary brain research (see Ferrando in this volume).

Furthermore, as advanced computa-tional networks have come to provide the basic logistical infrastructure for the global economy – as in the stock exchange

networks – and for war weaponry – as in the case of semi-automated drones – the issue of their relative independence of direct human control raises some ethical and political concerns. In this regard, the *Posthuman Glossary* offers a number of models of resistance selected from contemporary critical thought, arts and media activism, such as ideas of 'stateless state' and 'posthuman rights', as well as 'postanimalism' and 'robophilosophy'. The issue of how to bury the digital dead also receives a great deal of attention. It concerns defunct people's email addresses and social network links and pages, but also dead codes, obsolete technologies and programmes and other forms of 'static glow'. Electronic *Pietas* is here to stay.

These questions flow inevitably towards the issue of bio-political management of life – see for instance the growing import-ance of 'food studies' and 'wearable techno-logies'. More specifically they explore contemporary necro-political govern-mentality, that is to say the management of death and dying, which often relies on algorithmic cultures and digital security. Technologies have always been linked to the military and to population control, but such a link has undergone significant mutations today. Many of the entries in this glossary consequently address the impact of contemporary digital technolo-gies upon the mechanisms and the tech-niques of surveillance and monitoring of the social space, of border areas and war zones. Other authors address questions about the kinds of changes that have come upon visual technologies in the process of being turned into tracking devices. The question of defining the appropriate objects of study in relation to a culture of security, surveillance, counter-terrorism and the militarization of the social space raises the related issue of the responsibility of the critical thinkers who are dealing

with them. How can critical theorists and artistic practitioners address effectively the key terms of reference of the current political economy of visual representation and its impact on posthuman subject-formation?

To answer this burning question, new evaluation criteria are needed to assess the computational turn in media and cultural studies in relation to issues of power and security. The *Posthuman Glossary* offers many resources to come to terms with this challenge: from explorations of 'biological arts' to very diverse theoretical constructs, such as 'rationalist inhumanism' and 'immanent humanism', to name a few.

THE NEED FOR CREATIVITY

Another major operating principle of the *Posthuman Glossary* is the conviction that we cannot solve problems by using the same kind of thinking we used when we created them, as Albert Einstein lucidly put it.[6] We need new terms. And new terminologies require conceptual creativity, which means to trust in the powers of the imagination, as well as rely on academic credentials and conventions. Such creativity is not an optional extra, but a necessity in both cognitive and ethical terms, in order to keep up with the emerging scholarship. We think that the interdisciplinary hubs we outlined above provide useful connections between critique and creativity, by framing inter- and trans-disciplinary scholarship as a particularly fruitful source of conceptual creativity.

Posthuman scholars are not inventing new words or coining new concepts just for the sake of it, or out of disrespectful impatience with the limitations of past frameworks. The experimental approach is rather an integral part of the effort to produce adequate representations of our real-life conditions in fast-changing times. We might go so far as to suggest that uncritical reliance on terminological conventions today betrays a form of intellectual laziness that is ethically inconsistent, considering the urgency of some of the issues we are facing. In this glossary, ethical accountability works in tandem with the production of adequate intellectual cartographies. Accordingly we have encouraged the contributors to experiment with what we can only describe as a grounded, pragmatic and accountable approach to theoretical creativity. We want to examine the many ways in which the collective imagination is able to draw terminological inspiration from a variety of theoretical and real-life sources.

The *Posthuman Glossary* pursues this aim by way of a twofold enquiry: on the one hand the volume questions the ability of any one field of contemporary knowledge production in isolation – be it art, science, or the academic Humanities – to provide relevant analyses, let alone adequate solutions. More than ever we need to bring together interdisciplinary scholarship and even aim at a more transdisciplinary approach in order to embrace the complexity of the issues confronting us. The parallelism of science, philosophy and the arts – so dear to Gilles Deleuze and Felix Guattari – is more relevant than ever in this endeavour.

On the other hand we argue that much more – and different kinds of – effort is needed to achieve new ways of thinking: we may need to draw resources from areas of expertise that do not always meet scientific standards of excellence. One of these fields is the arts: the *Posthuman Glossary* actively pursues the interconnection between academic work and arts theory and practice by exploring what particular kinds of research are developed

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Considering the importance of experi-
menting with new ways of thinking that
exceed the determination of existing
categories, throughout the glossary the
readers will find several visual essays that
explore the concepts pertaining to post-
human predicament (from 'geomytholo-
gies' to 'anthropocene observatory', 'forests
as polis and politics' to 'hypersea') through
the language of visual arts. Several contrib-
utors raise the following questions: which
are the assumed subjects and presumed
object matters of the arts and how do they
intersect – or fail to – with academic schol-
arship? What can artistic practice and
scholarly research do to strengthen and
inspire each other on the issue of the in/
non/post/-human? What methodological
and political alliances do we need to
sustain in order to co-create robust con-
ceptual and experimental terminologies
that may be adequate to the complexity
of our times? This glossary provides a
broad spectrum of answers to these crucial
questions.

MULTIPLE HUMANITIES

The ambitious goal of filling in missing
links and bringing together several
communities takes us back to some funda-
mental self-questioning, namely: who are
'we', exactly? In some ways the continued
emphasis on a general idea of the posthu-
man and the Anthropocene – all variations
and puns notwithstanding – becomes yet
another way of perpetuating a narcissistic
form of anthropocentrism. This general-
ized notion entails a further risk that, by
creating a new sense and image of pan-
human interconnection, it may actually
erase categorical differences, structural
injustices and disparities in access to

natural and constructed resources (Shiva
1997; Chakrabarty 2009; Braidotti 2013,
Haraway 1985, 2015a).

Thus, the glossary focuses on how
contemporary scholarship and the arts
respond to the posthuman predicament –
not only in the propositional content of
their arguments, but also through the
hybrid and complex methods by which
they bring these questions to bear. The
assumption that the Anthropocenic social
imaginary is created by images and meta-
phors, representations and anticipations
that emerge from the arts, literature,
cinema and new media entails crucial
implications in terms of their social
responsibility. This book raises serious
questions about the ways in which
academic scholarship in the Humanities
is reacting to this situation and how it
assesses the role culture plays in shaping
the contemporary social imaginary. Some
contributors question which images can be
taken as emblematic of the posthuman
condition: is the icon the spectacular, shiny
body of cybernetic mechanism? Or should
we rather value to the more humble icon
that is the anti-conception 'Pill'?

Wary of the fact that the 'human' has
never been a neutral term, but rather a
notion that indexes access to entitlements
and power, and ever mindful that 'we'
are not human to the same degree,
extent and scale, 'we' have a problem of
both self-representation and recognition
of devalorized 'others'. This critical insight
is politically significant considering that in
the public debate at present there is a great
deal of stated cognitive and moral anxiety
about the state of the health of the human
(Armstrong and Montag 2009); the status
of Anthropos today (Rabinow 2003; Rose
2007; Esposito 2008a); the crisis of the
humanist vision of the human (Habermas
2003; Sloterdijk 2009a; Pope Francis 2015);
fear of the posthuman future (Fukuyama

2002) and of possible extinction (Klein 2014). The effect of these, often reactive, positions is that they result in hasty re-compositions of a new pan-humanity bonded in fear and anxiety about its own survival. Following this position, a new 'humanity' thus arises from the ashes of its Anthropocenic self-destruction. In this glossary, we want to resist such generalizations, while taking our responsibility for the multitude of problems in which we find ourselves – together. While 'we' are not the same, we are in *this* together.

Accordingly, the *Posthuman Glossary* gathers contributors who propose a wide range of alternative visions emerging from the implosion of the category of the 'human' and the explosion of multiple forms of inhuman, non-human and posthuman subject positions. Such diversification is both quantitative and qualitative: it expresses geo-political and socio-economic differences while sustaining common concerns in a post-anthropocentric world order. Analyses of bio- and necro-power run throughout this glossary. They take the form of neo-materialist, grounded or immanent interconnections that are both embedded and embodied, relational and affective cartographies of the new power relations that are emerging. Significant markers of human 'normality' based on traditional views of class, race, gender, age and able-bodiedness continue to be at work as key factors in framing the notion of and policing access to something we may call 'human' or 'humanity'. Thus, although there is no denying the global reach of the problems we are facing today, which indicates that 'we' are in *this* anthropocentric crisis together, it is equally true that such awareness must not be allowed to flatten out the power differentials that sustain the collective subject ('we') and its endeavour ('*this*'). We need sharper analyses of the politics of our locations and adequate representations of their contradictions.

Crucial to this project is therefore the question: how do power differences based on race, class, gender, sexuality, ethnicity, religion, age and able-bodiedness feature in the posthuman universe? How can we both analyse and resist the violence of the times? Where do art and scholarship sit within this resistance, and what role can they play here? What epistemic and methodological transformations do practices need to undergo in order that they should not reproduce the inhuman structures of our times? The entries in the volume show that we need to acknowledge that there may well be multiple and potentially contradictory projects at stake in the complex re-compositions of the human, inhuman, non-human and posthuman at work right now.

MULTIPLE AFFECTS

The multi-layered and pluri-directional lines of thought pursued by the 'Anthropocene Generation' contribute also to install an intense affective economy, expressed in concepts or images. What is the sensory and perceptive apparatus of posthuman subjects like? A survey of the literature reveals some fundamental alterations of our 'ethereal scent', 'sensing practices' and affective responses. We alternate between euphoria and despair, in a manic-depressive cycle of frenzy and fear, narcissism and paranoia. Schizoid loops and systemic double-binds mark, together with xenophobic paranoia, the political economy of affects in advanced capitalism. They enact the double imperative of global consumerism and the inherent deferral of commodified pleasure,

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which induces addictive habits of repeti-tion without difference. Deleuze and Guattari's critique of capitalism as schizo-phrenia (1980) is a highly relevant analysis of this perverse political economy.

The posthuman is not only a mode of critical thought, but also a mood of affect-ive belonging. It introduces a multi-faceted 'affective turn' that combines emotions usually held as opposites: nostalgia with the passion for utopian vision; the politics of life itself with the spectre of mass extinc-tion; melancholia with anticipation; mourning for the past with a brutalist passion for the not-yet. In this respect, Pathos and Thanatos stare at each other in the eyes while Eros looks away. The *Posthuman Glossary* is as much a rhetor-ical and aesthetic exploration of the posthuman condition as a literal descrip-tion of its defining features and analytic conditions of possibility. The eco-elegiac tone of some of our contributors is echoed by the flair for 'eco-horror' expressed by others. New affects require new languages: what do you call that haunting feeling of ecological memories of landscapes trans-figured by violent development? Eco-nostalgia? Remembrance of trees past? Geo-physical semiotics? Portrait of a young wasteland? Colonial transfigura-tions? Scar wars? Terrestrial delirium? And how should we describe that sinking feeling at the thought of the unsustainabil-ity of our future? Post-anthropocentric nausea? Extinction-attraction syndrome? Global obscenities overload? No country for any human?

The affective dimension is central to the aims of the *Posthuman Glossary* and cannot be separated from conceptual creativity. In an era that is increasingly defined by the critique of anthropocentric apathy and the recognition of the vitality of matter and of non-human agency, this book wants to explore the new critical

angles and creative insights about affect that are emerging between theory, science and the arts. Our authors argue that these domains combine forces in addressing the challenge of our collective 'ecopathy'. Or, to paraphrase Donna Haraway: why are the machines so lively and the humans so inert?

The *Posthuman Glossary* attempts to strike a balance between these multiple theoretical lines, swinging moods and over-active interdisciplinary hubs. The volume wants to think about and highlight the interconnection between our fascina-tion for novel technological artefacts, environmental degradation, economic disparities, structural injustice and the recrudescence of power differences claimed to have been left behind. In other words, the passion that sustains this volume is essentially ethical: how can we come to terms with the breathtaking trans-formations of our times while being able to endure and to resist? How to keep in mind issues of social, feminist, queer, trans, decolonial, anti-racist, inter-species, dis-ability and transnational justice while keeping pace with the amazing bio-scientific, media and communication, and the cognitive technological advances of our times?

Faced with such complexity and the wealth of new perspectives emerging from posthuman investigations, another crucial question that emerges from this glossary is whether multiple forms of alternative humanisms – of the non-Western; non-liberal; non-masculinist; non-heterosexist; non-anthropocentric and non-imperial kind – are feasible today. And how would these inspiring but poten-tially contradictory approaches fare in the conflictual geo-political forum of today's world?

Asking these questions across the multiple axes, the proliferating glossaries

and the theoretical vitality of our 141 contributors express an act of confidence in the capacity of collective and individual critical thought to address head-on the challenges of today. But in order to succeed in this daunting task, the critical thinkers in this volume have taken the institutional and intellectual freedom to roam across a variety of fields of competence and areas of 'studies'. Freedom from need, constraints and censorship, but also the freedom to take risks and to experiment.

In conclusion, the *Posthuman Glossary* hopes that some fundamental gratuity – a principle of non-profit – will be re-stated as the core value of fundamental posthuman critical theory in the arts, sciences and the Humanities today. We need to cement the bond between conceptual creativity and intellectual courage, so as to dare to dream up new scenarios in the midst of the roller-coaster of exciting new developments and brutal old injustices which is characteristic of our times. To be worthy of these new contradictions and challenges, we need to break old partitions and vested interests and install dialogues of a qualitative different kind. It is our hope that the *Posthuman Glossary* can

contribute a first set of premises towards that kind of dialogue.

Notes

1. The Nobel Prize-winning chemist Paul Crutzen coined the term 'Anthropocene' in 2002, to describe our current geological era in terms of human impact upon the sustainability of the planet. The term was officially adopted by the International Geological Association in Cape Town in August 2016.
2. See Robert Macfarlane: 'Generation Anthropocene: how humans have altered the planet forever', *The Guardian*, 1 April 2016.
3. With thanks to Stacy Alaimo.
4. With thanks to Shannon Winnubst.
5. The glossary is also produced as an e-book and some items are available on the Bloomsbury Academic website. For more information on the original seminars, consult the websites of the Centre for the Humanities at Utrecht University (http://cfh-lectures.hum.uu.nl) or of BAK in Utrecht (http://www.bakonline.org/nl/Index).
6. In 'The Real Problem is in the Hearts of Men', *New York Times Magazine*, 23 June 1946.

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JOY, ETHICS OF

Posthuman critical theory produces an ethics of joy or affirmation. A joyful ethics rests on an enlarged sense of a vital interconnection with a multitude of (human and non-human) others by removing the obstacle of self-centred individualism and anthropocentrism on the one hand and the barriers of negativity on the other. It assumes a new-materialist philosophy that rejects dualistic oppositions and posits all subjects as differential modulations of a common matter. This political vision rejects the dialectics that pitches self-versus-other. It is critical of the importance granted to negativity in the dialectical scheme, where difference is traditionally defined as 'different from' a dominant norm, which is hence interpreted as 'less than'. A joyful ethics frees difference from pejoration and replaces it with positivity.

Consequently the politics flowing from affirmative ethics does not postulate subjectivity along the binary oppositional axes that separate humans from non-humans, culture from nature, 'us' from 'them'. On the contrary, posthuman subjectivity is nomadic, distributed, relational and process-oriented. This process ontology, inspired by feminist theory (Lloyd 1994) and contemporary re-readings of Spinoza in French philosophy (Deleuze 1988b, 1992b), asserts a trustful relationship with the world and allows for greater interaction between humans and non-humans. An affirmative stance proposes an ethical coding that distinguishes power relations that are empowering – affirmative or active – from those that are entrapping – disempowering or reactive. The former enhance *potentia* (the positive face of power), whereas the latter play into *potestas* (the restrictive face of power). Politically, it is associated with an ontological form of pacifism that is especially relevant for ecological justice, environmental activism and posthuman ethics.

The ethics of joy requires the following conditions. First, given that power is a complex strategic situation that humans constantly inhabit, but with different degrees of entrapment and empowerment, it is best posited as a continuum. This implies that terms like active and reactive, negative and positive, are not to be understood as dialectical opposites, but rather as negotiable and reversible points of encounter with others.

Second, 'affirmative/positive' and 'reactive/negative' affects are not to be taken as emotional states in a psychological frame that assumes the liberal individual as point of reference. Within a posthuman framework affects are rather to be understood as transversal, non-human forces that need to be assessed in terms of their impact on subjects and on the world. The ethical behaviour is what can activate and increase relational capacities (*potentia*) and the unethical is what restricts or hampers them. This assumes that the ethical subject desires and is driven to the

affirmation of a positive essence (*conatus*) that yearns for the expression of its freedom and force. In other words, humans – like all living entities – are drawn to perpetuate and structurally gravitate around positivity.

Third, the notion of the negative refers less to a normative value than to the effect of arrest and blockage that often comes as a result of a hurt, a shock, an act of moral, epistemic or emotional violence, or by intense tedium. Negative passions destroy the self's capacity to act as they harm the self's ability to inter-relate to others – both human and non-human – and thus decrease one's relationship to the world. On a larger spectrum, negative affects diminish the capacity to express the high levels of inter-dependence, the vital reliance on others, that constitute the key to an affirmative or joyful ethics.

Fourth, joyful ethics redefines the persistence of destructive or negative relations. Mindful that not all relations are *a priori* positive, it makes the ethical distinction between, for instance, affirmative encounters and aggressive disempowerment. The ethics of joy does not deny the reality of pain, trauma and violence, but rather proposes a different way of dealing with them. It warns against the pious harmonization of conflicts and offers an alternative structure of dealing with difference, which is not oppositional in a dialectical mode but still allows for antagonism. Joyful ethics consists in being able to tell the difference, but to recognize it positively, so as to enact the transmutation of a negative relation into an affirmative mode.

The ethics of joy does not equate acquiescence with the conditions of the present: endurance is not resignation and immanence is not the mystical acceptance that all that lives is holy. What is required instead is an active practice of collective transformation of negative relations and passions into affirmative ones: a political praxis. Cooperation means active labouring towards an adequate understanding of conditions, which is not the same as endorsing them. The aim of producing an adequate cartography of the present conditions is to identify points of resistance.

What is positive in the ethics of affirmation is the belief that negative relations and passions can be transformed through an engagement in collective practices of change. This implies a dynamic view of passions and affects, even those that freeze us in pain, horror or mourning. The ethical subject is the one with the force to grasp the freedom to depersonalize the event and transform its negative charge. This is in keeping with the method of de-familiarization that is central to posthuman thought (see *critical posthuman theory* in this volume). Affirmative ethics puts the motion back into *e*-motion and the active back into activism.

Consequently, the ethics of joy is about transcending the force of the negative by acknowledging negative emotions like pain, anger, greed and fear. It is about a process of becoming: becoming-ethical. This is a far cry from applying moral rules and protocols as a form of self-protection. *Endurance* is the Spinozist term for this process, which has both a spatial and a temporal aspect. The spatial aspect has to do with the body as an enfleshed, affective field of actualization of passions or forces. Endurance combines vulnerability with resilience. It stresses the struggle to sustain the pain without being annihilated by it. It thus opens the temporal dimension; the duration in time. Joyful or affirmative ethics is based on a collective praxis of enduring – surviving and lasting – by constructing positivity. This means to undo existing conditions so as to actualize alternatives. Every event contains within

it the potential for being overcome and overtaken: its negative charge can always be transposed (Glissant 1997).

The ethics of joy is thus at heart a process of becoming. Because such a becoming is not contained in present conditions, and cannot emerge from them, it has to be brought about creatively by a qualitative leap of collective praxis and ethical imagination. To accomplish an ethics of joy, 'we' need to compose a community and produce a qualitative leap that breaks productively with the present. The first step consists in reaching an adequate cartography of the conditions of bondage. The ethics of joy proposes an alternative way of extracting knowledge from pain, that starts with and is conveyed by the quest for an adequate understanding of power. The analysis of power as a complex and multi-layered situation subjects are caught in is consequently the beginning of ethical wisdom.

The second step consists in mobilizing a subject's ontological desire – the vital *potentia* of the subject – by reframing it in disruptive directions capable of resisting codes and powers. The ethics of joy is engendered by the collective construction of ethical subjects who actively desire otherwise and thus break with the *doxa*, the acquiescent application of established norm and values, by de-territorializing them and introducing alternative ethical flows. An ethics of joy shows that the motor of political change is an affirmative force, not merely dialectical opposition.

The third step is to create a laboratory of the new. To live out the shared capacity to affect and to be affected, posthuman subjects need to disengage the process of subject formation from negativity by attaching it to affirmative and relational vision of the self. The ethics of joy is a pragmatic engagement with the present in order to collectively construct conditions

that transform and empower the capacity to act ethically and produce social horizons of hope and sustainable futures (Braidotti 2006a).

A fourth step to achieve an ethics of joy is to acknowledge life as a generative force of becoming. This means that life, *zoe*, is a-personal and non-anthropocentric. What is affirmed in the ethics of joy is precisely the power of *zoe*/life itself – its very *potentia*. Life is a dynamic force that unfolds through vital flows of connections and becoming. An ethics of joy taps into that flow. The Kantian imperative not to do unto others what you would not want done to you gets thus enlarged. In affirmative ethics the harm you do to others is immediately reflected in the harm you do to yourself; what's more, life itself gets diminished in terms of loss of *potentia*, the capacity to relate, and to explore one's freedom.

A fifth step for an ethics of joy entails sustaining processes of subject-formation that do not comply with the dominant norms. For posthuman theory, the subject is fully immersed in and immanent to a network of non-human relations: animal, vegetable, viral, technological. This process-oriented vision of the subject expresses a grounded form of accountability, based on renewed claim to community and belonging to 'a collaborative morality' (Lloyd 1996: 74). When applied to environmental issues, the ethics of joy thus involves continuous negotiations with both dominant norms and values and the politics of affirmative and sustainable alternatives. It entails a new way of combining ethical values with the well-being of an enlarged sense of community. It expresses multiple ecologies of belonging that acknowledge the collective nature and outward-bound direction of the nomadic self. The posthuman era needs to create ethical subjects through a collective practice activated

around the shared desire to actualize new potentials. An ethics of joy then means that 'we' are becoming posthuman ethical subjects in our evolving capacities for cooperating in the composition of affirmative relations.

See also Posthuman Critical Theory; Posthuman Ethics; Process Ontologies; Neo/New Materialism; Mattering; Nonhuman Agency.

Rosi Braidotti

from a naturalized regime of subjugation. Why are other images so hastily embraced as posthuman icons, like the destructive image of the mushroom cloud of a nuclear bomb, for instance, or the over-exposed mix of metal and wires in robotics? Instead of these rather overbearing images we suggest the humble Pill as one of the posthuman icons. The more modest 'wetware' of the Pill should be recognized for its revolutionary impact: it is a frontal attack on the naturalization of gender inequalities. The Pill testifies to the visceral call that, if nature is unjust, then we must change nature (Xenofeminist Manifesto 2015).

See also Bodies Politic; Geo-Hydro-Solar-Bio-Techno Politics; Pregnant Posthuman; Xenofeminism; Placenta Politics.

Anneke Smelik and Elisa Fiore

PLACENTA POLITICS

Placenta politics is a term that I coined to indicate the materialist feminist bio-politics of the relation between the material maternal body, the placenta and the foetus. I transpose this maternal-placental-foetal connection into a nomadic frame so as to argue that it composes a generative assemblage. The placental assemblage raises key issues of relationality, immunity and auto-immunity, which are best served by a neo-materialist philosophy of becoming and affirmative ethics within a monistic understanding of matter. I draw on the work of French feminist biologist Hélène Rouch (1987), who was inspired by the philosopher Luce Irigaray (1985a, 1985b) and by Lacanian psychoanalysis to propose the biological entity of the placenta as a third party that redefines the relationship between the maternal body and the other

body, the foetus, in immunological terms. The placenta splits the subject from within, in a non-dialectical process of internal differentiations that predicates the primacy of the 'other within'. Yet, this highly significant configuration has remained unrepresented within phallo-logocentric logic.

Therefore, I suggest moving placenta politics centre stage, but into a different theoretical direction. Firstly, placenta politics upholds an affirmative and non-aggressive bio-politics that opposes the military terminology and concepts that are customary in scientific discussions of immunology. The immunization process is usually formulated in terms of the individual and collective bodies' struggle for homeostatic stability and protection against external aggressive forces. Secondly, this approach to immunology has been taken as an analogy for politics and governance. For instance, Esposito's work on bio-politics (2008b) explores the immunological political economy of hospitality and hostility. I find it disappointing that what was originally a politics of life – bio-politics – which also included a reappraisal of the politics of dying and letting die, has become almost exclusively focused on thanato-politics, to use Foucault's term (1977). In contemporary discussions, this issue blends with necro-politics (Mbembe 2003), that is to say extermination and extinction. Bio-politics should not position life only on the horizon of death, but also as the generative force of both human and non-human organisms (Braidotti 2006b). In terms of the immunological debate this means that the question is not that and how the organism is capable of self-preservation at the expense of some of its weak or diseased parts, but rather that in most cases it actually does not attack them. And I would like to add that, specifically in pregnancy, the organism does usually not expel the foetal other, but rather hosts it and nurtures it.

Wolfe (2010) explores the immunological paradox with Derrida's notion of the pharmakon. This refers to the process by which poison is injected so that the presence of what Nancy (2000) would call 'an intruder' is registered by a constituted system. That encounter, which triggers the infection or the disease, also creates a first line of defence against it. The first line of auto-immunological defence gestures towards a cure or to secure immunity from the very disease that is triggering the composition of the encounter. The auto-immunological principle is that the pathogen that is injected in controlled doses into the body does not destroy the entirety of the organism, but helps the immune system to learn how to defend itself. Derrida's ethics of immunity proposes not the exclusion, but the incorporation and vicarious substitution of the vital/lethal other.

None of these bio-political thinkers, however, ever take the maternal body and the placental assemblage into consideration, which makes Rouch's work all the more significant. Thus, they miss a crucial dimension of the immunity process. In my view, placenta politics is necessary to understand the specific form of auto-immunity that is the maternal-placental-foetal assemblage. Pregnancy foregrounds the crucial idea that the immune system does not always attack what has been injected into the body. If we focus on insemination, gestation and birth, the question shifts to another plateau: what are we to make of the fact that the female body actually hosts and cares for the egg, then embryo, then foetus, then baby? The placenta is the operative factor of immunologically compatibility: it is formed by the extension of the maternal body's blood vessels into another tissue that both connects and separates the embryo from the maternal organism. It is ejected as an extra entity about thirty minutes after the birth has taken place. This is a far cry from the thanato-political or necro-political discourse of the tactical expulsion of alien elements or the aggressive elimination of the alien other. The paradigm of placenta politics presents instead a model of generative relationality.

In feminist materialist terms the mother-placenta-fetus assemblage can be read as a state of pacifist cooperation and co-creation between organisms, in a specific relational frame that facilitates their co-existence, interaction and growth. The placenta stresses the notion of evolution through mutual cooperation. I argue that the placenta is a powerful figuration – Deleuze (1994) would call it 'conceptual persona' – for a co-creative and collaborative model between separate yet related organisms, agents and living matter: maternal, placental and foetal. Placenta politics is about affirmative ethical encounters – it is the original form of trans-corporeality.

I want to argue further that the placenta is the perfect figuration for thinking both unity and diversity, specificity and difference within a monistic frame. It foregrounds nomadic difference as a process of differential modulations by organisms that define themselves by mutual relations within a common matter. By extension it allows us to rethink political and ethical interaction on the basis of a materially grounded understanding of subject-formation. Becoming subject is an embedded and embodied, relational and ethical process framed by multiple encounters with both human and non-human factors and agents.

In order to conceptualize this vision, the best theoretical allies are the ontologically pacifist theorists, inspired by critical Spinozism, like Deleuze (1988b; 1992a). A monistic philosophy allows us to theorize organic processes of collaborative growth,

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inserting complexity at the heart of philo-sophical thought. In this context, the maternal-placental-fetal assemblage can be understood as a figuration of affirmat-ive relationality and multiple becomings. The placenta functions as an interface of multiple particles and components that jointly sustain the dynamic process of forming new organisms. This living process enacts a complex dynamics and expresses an affirmative vision of life as a cooperative effort. Placenta politics so defined expresses the vital force of the multiple agents and forces that co-exist through transformative encounters. Thus it is not only the case that the bio-political and the thanato-political relations exist in a continuum – in keeping with Foucault's original insight – but also that they are constituted by heterogeneous assemblages of diverse components. Placenta politics can be fully situated within the contem-porary posthuman landscape.

This has a number of implications also for contemporary posthuman feminist politics (Braidotti 2016a). Firstly, knowing that contemporary nomadic or 'dividual' posthuman subjects are constituted through processes of mutual specification and differential modulation, we can define sexual difference as one of the motors of multiple differing within a common matter. The binary gender system is just a mechanism to capture this sexed multi-plicity, which aims at reducing and dis-ciplining the infinite modulations and the 'thousand little sexes' (Deleuze and Guattari 1988: 277), which constitute our virtual embodied and embedded, affective and relational structure.

Secondly, we need to consider the high level of technological mediation – both bio-genetic and informational – that surrounds sexuality and reproduction today. Contemporary bodies are shaped by a complex interaction of social and bio-

genetic elements, including the multiple hormonally loaded, contraceptive-pill driven, technologically mediated extended mother-machines (Roberts 2016). The toxic pharmacological aspects of contem-porary reproduction (Preciado 2013) expose the gender system as a machinery that is currently multiplied, pulped, upheld, hacked, re-constructed and abolished on a daily basis. Both gene-editing and gender-editing have become part of our vocabu-lary and our social as well as technological practices.

It follows that we need more studies of placenta politics and the immunological paradigm within the feminist framework of bodily neo-materialist posthuman thought. By extension, it is also important to re-frame the maternal body. Where placenta politics offers a new line of thought for bio-politics and thereby a new possibility for critical reflection on both relational ethics and reproductive labour, the category of the pregnant posthuman (see Pregnant Posthuman) posits the maternal body as a subject, which supplies us with a figure as a starting point for critique, for re-thinking itself, and for developing and defending a different, sexuate ethics.

Cyberfeminism and Xenofeminism argue that the maternal body – technically female (see Xenofeminsim) – is not one. The myriad of technologically mediated practices and socially differentiated modes of mothering, ranging from surrogacy to the recently approved three-parent family, are the result of the pervasive impact of the apparatus of reproductive technologies and socio-economic practices. The explosion of the alleged linearity of the reproductive process also introduces new actors, from external donors to internal gene-editing practices, all of them reliant on technolo-gical mediation. Placenta politics respects this complexity while foregrounding the

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specificity of the maternal-placental-fetal assemblage.

A posthuman theory of the subject emerges therefore as an empirical project that aims at experimenting with what contemporary, bio-technologically mediated bodies are capable of doing. These non-profit experiments with contemporary subjectivity actualize the virtual possibilities of an expanded, relational self that functions in a nature-culture continuum and is technologically mediated. Not surprisingly, this non-profit, experimental approach to different practices of subjectivity runs against the spirit of contemporary capitalism. The perversity of this system, and its undeniable success, consists in re-attaching the potential for experimentation with new subject formations, back to an overinflated notion of possessive individualism (Macpherson 1962), fuelled by a quantitative range of consumers' choices. This is precisely the opposite direction from the non-profit experimentations with intensity, which I defend in my theory of posthuman subjectivity.

A neo-materialist nomadic approach allows us to analyse and re-think this posthuman 'exploded maternal body' thoroughly and to situate 'feminicity' (see Feminicity) in an ethically accountable framework. The impact of the fast-progressing reproductive technologies upon the complex maternal assemblage is best addressed within a neo-materialist nomadic philosophy of becoming geared to an affirmative relational ethics. The emphasis on monism casts a new light on explorations of the shifting boundaries between life and death and on the ethical and political implications for posthuman thought. Placenta politics expresses not only a new immunological paradigm, but also the posthuman politics of affirmation of life as radical immanence.

See also Pill, the; Pregnant Posthuman; Joy; Bios; Material Feminisms; Feminist Posthumanities; Trans-corporeality; Trans*; Feminicity.

Rosi Braidotti

PLANETARY

The planetary can be taken as a critique of the profit-minded logic of globalization. The image of the 'blue planet', in particular the photo taken of the Earth rising above the Moon by the Apollo 8 crew in 1968, along with the ultimate 'blue marble' photo taken four years later, allowed the planet to be perceived visually for the first time in its entirety. Looking in on our world from the cosmic 'outside' represented a new stage in human self-consciousness. It functioned like a Lacanian mirroring – both fragmented and harmonious – that brought awareness of the unity but also the finitude of the Earth. At a time in which the world was riven by the ideological divides of the Cold War and living in fear of nuclear catastrophe, the image projected both a reassuring vision of harmony and a presentiment of environmental risk. With its associations of a sublime, interconnected and fragile biosphere, the symbolism of the blue planet countered the utilitarian, technological and economic logic of the global, with which planetary consciousness has been forced to compete since the outset.

The meteoric rise of economic globalization in the wake of the signing of world trade deals in the post-Cold War era created a major obstacle to efforts to tackle climate change on a global scale, while unprecedented levels of economic growth have further fuelled carbon emissions. The legal and policy framework enforced by the WTO guaranteed the rights of multi-national

that the world hasn't seen. Released from the deep-freeze, they begin to assemble genetic futures. Apprehension flushes into the cold water and blends with new matter, intensely communicating with fragile marine systems.

(4) With the melting of the Arctic ice comes the steady release of massive new genetic materials with which humanity is not acquainted. The ice allows microbes to enjoy a sort of immortality, allowing creatures that have long disappeared from the planet to someday return. With the Earth's sixth mass extinction under way, the logic of this evolutionary strategy becomes comprehensible: preserving genetic blueprints by storing them in deep-freeze for a future re-entry. Evolutionary biologists estimate that the total biomass of the microorganisms in and beneath the ice sheet may amount to be a thousand times that of all the humans on Earth. To be posthuman increasingly means to relocate in a new genetic planet-ary milieu. Rather speculative than predictive, the she-scientist – become diver, videographer and metaphysician – engages in the inevitable transformation of the chemical and genetic composition of the earth by reconfiguring its historical terms, reworking its tempi, resetting its landmarks, and rerouting its premises.

See also Animism (Limulus); Ecosophy; Naturecultures; Hypersea; Planetary; Speculative Posthumanism; Vertigo Sea.

Ursula Biemann

POSTHUMAN CRITICAL THEORY

Posthuman critical theory unfolds at the intersection between post-humanism on the one hand and post-anthropocentrism on the other. The former proposes the

philosophical critique of the Western Humanist ideal of 'Man' as the allegedly universal measure of all things, whereas the latter rests on the rejection of species hier-archy and human exceptionalism. They are equally relevant discourses, but they refer to different theoretical and philosophical genealogies and engender different polit-ical stances. Their convergence in posthu-man critical thought produces a chain of theoretical, social and political effects that is more than the sum of its parts and points to a qualitative leap in new conceptual directions (Braidotti 2013).

The relevance of posthuman critical theory is enhanced by the contextual urgency of the Anthropocene condition, which, read in the light of Felix Guattari's *Three Ecologies* (2000), becomes an envir-onmental, social-economical, as well as affective and psychical phenomenon of unprecedented proportions. The combina-tion of fast technological advances on the one hand and growing economic and social inequalities on the other makes for a conflict-ridden landscape marked by violent and inhumane power relations.

There are many challenges for post-human critical theory: the first one is to acknowledge that subjectivity is not the exclusive prerogative of *Anthropos*. This means that it is not linked to transcen-dental reason and that it is unhinged from the dialectics of recognition. Secondly, the challenge is to develop a dynamic and sustainable notion of vitalist materialism that encompasses non-human agents, ranging from plants and animals to tech-nological artefacts. Thirdly, it means to enlarge the frame and scope of ethical accountability along the transversal lines of post-anthropocentric relations. In other words, the challenge is to create assemblages of human and non-human actors.

To meet these manifold challenges posthuman critical theory draws from

two sources: feminist theory and Deleuze and Guattari's neo-materialist philosophy. The combination of feminist and neo-materialist philosophies allows for an anti-humanist and post-anthropocentric stance, which can innovate and invigorate discussions of naturalism, the environment, ecological justice and the shifting status of the human. This results in the rejection of dualism. It is important here to emphasize the feminist notion of embodied and embedded locations, which I take as the original manifestation of the concept of radical immanence. The encounter of feminist theory with neo-materialist philosophy (sometimes called neo-Spinozist materialism) results in the reappraisal of the notion of immanence, as opposed to transcendental universalism (Deleuze 1988b; 1990; Braidotti 1991, 1994; Gatens and Lloyd 1999). Posthuman critical theory can thus be described as vital-materialist, embodied and embedded, and immanent. Elsewhere, I have described this way of thinking as 'nomadic' (Braidotti 2011a, 2011b).

The defining features of posthuman critical theory are then that it rests on a neo-materialist philosophy of immanence, which assumes that all matter is one (monism); that matter is intelligent and self-organizing (autopoiesis); that the subject is not unitary but nomadic; and that subjectivity includes relations to a multitude of non-human 'others'. In this framework 'life' is not only defined as *bios*, but also as a *zoe*-centred, non-human process (Braidotti 2006b). Posthuman critical theory celebrates the diversity of life – as *zoe* – as non-hierarchical matter, which recognizes the respective degrees of intelligence and creativity of all organisms. This implies that thinking is *not* the prerogative of humans alone, which allows for a form of relational and collaborative ethics.

Posthuman critical theory consequently embraces the eco-sophical co-creation of the world – our terrestrial, grounded location – by recognizing the specific abilities and capacities of anthropomorphic and non-anthropomorphic beings alike. The expanded definition of life also allows for the inclusion of and interaction with technological artefacts and thus accounts for technological mediation ('machinic autopoiesis'). This idea discards the nature–culture divide and replaces it with a philosophy of relationality and multiple interconnections. The embrace of the technological realm resists the over-coding of technology by the financial profit principle, which is the axiom of advanced capitalism.

If it is a challenge to acknowledge that subjectivity is not the exclusive prerogative of the human, then a posthuman theory of the subject emerges as an empirical project of experimenting with what contemporary, bio-technologically mediated bodies are capable of 'becoming'. The pursuit of one's freedom to become is framed by a neo-Spinozist ethics of joy or affirmation, which indexes the processes of becoming onto a relational bond to a multiplicity of others whose well-being affect one's own. Posthuman critical theory supports the composition of nomadic subjectivities whose relational capacities are multifold and open to non-anthropomorphic elements. The ethics of the posthuman subject is *zoe*-centred egalitarianism, based on respect for the non-human, as the vital force that cuts across previously segregated species, categories and domains. Neo-materialist immanence requires a collaborative morality in the sense of ethical accountability for the sustainability of these relational assemblages or nomadic compositions of posthuman subjectivity (Braidotti 2002, 2006a). The non-profit experiments with intensive modes of posthuman

subjectivity actualize the virtual possibilities of a nomadic, relational self that functions in a nature–culture continuum and is technologically mediated. Not surprisingly, this non-profit, experimental approach to different practices of subjectivity runs against the spirit of contemporary capitalism, fuelled by a notion of possessive individualism based on quantitative options (Macpherson 1962). The theory of posthuman subjectivity runs precisely in the opposite direction towards non-profit experimentations with intensity.

As a consequence, the task of critical thought is defined as both critical and creative. The *critical* side is operationalized through cartographies of the power (*potestas*) relations at work in the production of discourses and social practices, with special emphasis on their effects upon subject-formation. The *creative* side enlists the resources of the imagination and proposes a new alliance of critique with creativity, philosophy with the arts, for the purpose of learning to think differently, inventing new concepts and actualizing alternatives to the dominant humanistic vision of the subject.

Neo-materialist nomadic thought proposes the parallelism of philosophy, art and the sciences, by arguing that thinking is the counterpart of the embodied subject's ability to enter into multiple modes of relation. 'Thought' is consequently the expression of ontological relationality, that is to say of the power (*potentia*) to affect and be affected (Deleuze and Guattari 1994). Furthermore, thinking is about the creation of new concepts in that it pursues the actualization of intensive or virtual relations. Posthuman critical thought can thus be understood as a multi-directional philosophy of relational ethics. In other words, posthuman critical theory foregrounds a relational ethics of joy and a politics of affirmation.

Methodologically, posthuman critical theory rejects any form of nostalgia for humanism, that is to say the vision of the human as the enlightened 'Man of reason' (Lloyd 1984). Both in Deleuze's philosophy and in feminist epistemology, the non-nostalgic approach is cultivated through the method and the pedagogical tactic of anti-oedipal de-familiarization. This entails un-learning old habits of thought, and the forms of masculinist and Eurocentric representations they sustain. Such a methodological process goes hand-in-hand with the analysis of power relations, through the cartographic politics of location mentioned above. The point of cartographies is to account for and learn to relinquish unearned privileges and implicit power privileges. The method of dis-identification from the familiar is one of the most productive points of contact between neo-materialism and feminist theory (Braidotti 2016a). Keeping firmly in mind the nomadic aim of speaking truth to power and of de-territorializing philosophy from the despotic machine that has coded it over time, posthuman critical theory emphasizes the importance of learning to think differently about what we are in the process of becoming.

The meta-methodological angle is crucial to posthuman critical theory which, being a practical philosophy, pays special attention to the criteria needed to set up experiments with both virtual and concrete applications. The general concepts get operationalized in a series of methodological guidelines. The first guideline is a practical, problem-oriented approach to philosophical thinking, which is open to non-human agents and factors, including technological mediation. Secondly, we need non-linearity or nomadic thinking which entails both putting the creative powers of the imagination to work and the strategy of de-familiarization (Braidotti 2013). Thirdly, a trans- and

supra-disciplinary approach to the production of knowledge is necessary. Such an approach is nomadic in relation to disciplinary power and devoted to experimentation rather than the repetition of tradition. Fourth comes cartographic accuracy, with the corollary of ethical accountability. Finally, posthuman critical theory embraces the combination of critique with creativity, including a flair for paradoxes and the recognition of the specificity of art practices.

Politically speaking, posthuman critical theory is a practical philosophy that aims at composing a 'missing people', that is to say it creates a plane of encounter for subjects who share concerns and desires. Critical thinking needs to construct its community around the shared affects and concepts of collectively drawn cartographies of power. The plane of composition of 'we' – a community of nomadic and accountable scholars – constitutes the shareable workbench of critical posthuman scholars. It expresses the affirmative, ethical dimension of becoming-posthuman as a gesture of collective self-styling. It actualizes a community that is not bound negatively by shared vulnerability, the guilt of ancestral communal violence, or the melancholia of unpayable ontological debts, but rather by a collaborative ethics of becoming. Posthuman critical thinkers are bonded by the compassionate acknowledgment of their interdependence with multiple, human and non-human, others.

See also Critical Posthumanism; Anthropocene; Transhumanism/Posthumanism; Insurgent Posthumanism Feminist Posthumanities; In-human; the Joy; Monster/the Unhuman; Neo/New Materialism; Process Ontologies.

Rosi Braidotti

POSTHUMAN DISABILITY AND DISHUMAN STUDIES

In a recent paper by Goodley, Lawthom and Runswick-Cole (2014) we asked: what does it mean to be human in the twenty-first century and in what ways does disability enhance these meanings? In addressing these questions we found ourselves working through the entanglements of nature, society, technology, medicine, biopower and culture, particularly inspired by Rosi Braidotti's work on the posthuman condition (Braidotti 2003, 2006b, 2013). But how does disability speak to the posthuman (and vice versa)? We understand disability as a political category, an identity and a moment of relational ethics. Our community of scholars and activists – critical disability studies – are, we believe, perfectly at ease with the posthuman because disability has *always* contravened the traditional classical humanist conception of what it means to be human (see Goodley, Lawthom and Runswick-Cole 2014). But, we argue, disability also invites a critical analysis of the posthuman (and for that matter humanism). We draw on one of Braidotti's posthuman themes developed in her 2013 text: *life beyond the self.* We illustrate the ways in which disability epitomizes a posthuman enhancement of the self while, simultaneously, demanding recognition of the self in the humanist register. This leads us neatly to our recent work in which we have started to develop a theory of *DisHuman Studies* (see Goodley et al. 2014; Goodley, Runswick-Cole and Liddiard, 2016) which, we contend, simultaneously acknowledges the possibilities offered by disability to trouble, reshape and re-fashion the human (crip and posthuman ambitions) while at the same time asserting disabled people's humanity (normative and humanistic desires).

'Whether moving from one entry to the next or following affective or theoretical threads by engaging in the conceptual paths mapped across the book, the reader will travel the creative and vibrant seas of posthumanist thinking, bursting with new concepts and ideas. This transdisciplinary venture provides essential tools for those who want to contest their anthropocentric, humanistic thinking and tackle the challenges of our unprecedented and troubled times. It is a necessary task.'

CHRISTINE DAIGLE, Director, Posthumanism Research Institute and Professor of Philosophy, Brock University, Canada

'This is an indispensable volume with insightful contributions from stars, rising and established. It lays out the field of an important area of theory today in a way that will delight experts and the curious alike. The editors have done a thorough and commendable job in what is an audacious work of theoretical scholarship.'

MARTIN MCQUILLAN, Professor of Literary Theory and Cultural Analysis, Kingston University, London, UK

In art, science and the humanities we are now experiencing a 'posthuman condition'. Under the pressure of new developments – such as the neoliberal economics of global capitalism, migration, technological advances, environmental destruction on a mass scale, the perpetual war on terror and extensive security systems – the concept of the human as we had previously known it has undergone dramatic transformations.

Providing an outline of the critical terms of posthumanity in present-day artistic and intellectual work, this book builds on the broad thematic topics of anthropocene/capitalocene, ecosophies, digital activism, algorithmic cultures, security and the inhuman. It outlines potential artistic, intellectual, and activist routes for working through the 'posthuman condition', and creates an understanding of the altered meanings that result from present-day critiques.

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