

PART I

THE HUMANITIES IN ACTION:  
TOPICS AND METHODS



# On the Emergence and Convergence of the New Transversal Humanities

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In the contemporary university over the last twenty years we have witnessed the growth and expansion of programmes, curricula, centres, and institutes in new fields of enquiry, which are known as the Environmental Humanities (Siewers 2015; Emmett and Nye 2017; Heise 2017; Opperman and Iovino 2017), the Digital Humanities (Hayles 1999, 2005; Terras, Nyhan and Vanhoutte 2016; Schreibman, Siemens and Unsworth 2018; Flanders and Jannidis 2019; Callaway et al. 2020), the Biomedical Humanities (Atkinson et al. 2018) and the Public Humanities (Jay 2010; Leavy 2019), as well as other ‘new’ humanities.<sup>1</sup>

These emerging humanities have also spawned a range of attempts to name their discursive and institutional fields as the posthumanities (Wolfe 2010); feminist posthumanities (Åsberg, Koobak and Johnson 2010; Åsberg and Braidotti 2018); inhuman humanities (Grosz 2011); critical or transversal posthumanities (Braidotti 2013); transformative humanities (Epstein 2012); nomadic humanities (Stimpson 2016); transversal posthumanities (Braidotti and Fuller 2019) and adjectival or muscular humanities (de Graef 2016).

Emerging both within the disciplines and across them from a range of interdisciplinary academic areas, they enjoy considerable support from the corporate sector, but also from the arts and popular culture. These new fields of scholarship combine the critical assessment of humanism with a critical analysis of anthropocentrism and for this reason we refer to them as posthuman knowledge production areas. As Braidotti and Fuller argued (2019), the posthumanities start from the recognition of the growing importance of the convergence of factors that are not part of the traditional toolbox of the humanities. These are: computational systems, security issues and warfare, new biomedical advances and drastic ecological damage, which impel us to question the terms of reference for what we used to simply take for granted as humanity. They are also affected by a socio-political context dominated by a series of emergencies, ranging from climate change to public health and epidemics and the growing evidence of social inequalities. In other words, we find ourselves caught between the Fourth Industrial Revolution (Schwab 2015) and the Sixth Extinction (Kolbert 2014), and the urgent question now is how the contemporary humanities can respond to these grand challenges. As we will attempt to demonstrate in this chapter, it is clear that the contemporary humanities have heeded the call for new and creative perspectives (Braidotti 2019) and have come up with significant innovative answers.

This project proposes that, far from being a crisis, this set of circumstances and historical conditions offers productive conditions to renew the profile, the identity and the function of the humanities in a globally linked, ethnically diverse and technologically

mediated world. It may lead to the generation of creative reappraisals of humanism, but also to attempts at overcoming anthropocentrism while preserving the legacy of critical posthumanism (Braidotti 2013). Considering the vitality and creativity of the posthumanities and their distinct flair for neologisms and proliferating ‘post’- fields (Braidotti and Hjlavaova 2018; Åsberg and Braidotti 2018), there is no consensus either in terms of their terminology or of key concepts. Collaborative work, therefore, needs to be done to adequately organise and frame these fast-growing and overlapping fields.

This project pursues a number of interconnected aims: first, it wants to document the existence of the posthumanities as an empirical reality that can be measured and assessed in the European university system. Second, they are already creating institutional changes, developing new curricula and research agendas, as well as new sets of transdisciplinary discourses, practices, and narratives. We will present data and overviews of the institutional structures adopted by the universities participating in this specific project. Third, we will offer a critical theoretical framework to understand and explore further these new fields, as well as an assessment of the risks and opportunities they entail.

## International Context of the New Humanities

This research chapter aims to focus on the emergence of the new humanities in Europe. We need to give some thought to the emergence of the new humanities on a global level. Many developments we witness in Europe are already present in North America, and to a lesser extent in Asia. When we look at the member institutes of the Consortium of Humanities Institutes and Centres, we see representatives of all identified new humanities. For the Digital Humanities, there is the Center for Digital Research in the Humanities at the University of Nebraska, the Center for Humanities and Digital Research at the University of Central Florida, the Centre for Humanities and Information at Pennsylvania State University, the Stevanovich Institute on the Formation of Knowledge at the University of Chicago, and the Yale Digital Humanities Lab. The Public Humanities are represented by the Center for the Humanities and the Public Sphere at the University of Florida and the Publicslab at the City University of New York. The Environmental Humanities are represented by the Sydney Environment Institute at the University of Sydney. The absence of any such member institute from the United States is probably noteworthy. The Biomedical Humanities are represented by the Centre for the Humanities and Health at King’s College London (the only European representation), the Institute for the Medical Humanities at the University of Texas Medical Branch and the Mayo Clinic Center for Humanities in Medicine. Two member institutes of CHCI which might be called ‘convergence phenomena’ or ‘posthuman’ are the Centre for 21st Century Humanities at the University of Newcastle and the Conflucenter for Creative Inquiry at the University of Arizona.

In Asia we want to point out the Asian New Humanities Net, presided by Hsiung Ping-Chen, which is a member of the CIPSH. In the recently published report by our partners from the Global University Network of Innovation (GUNI): Higher Education in the World 7 (HEW7), the humanities are explicitly approached in their relationships beyond their own boundaries: towards science and technology. The HEW7 has as a subtitle ‘Humanities and Higher Education: Synergies between Science, Technology and Humanities’. Methodologically, the report worked with three editorial PIs from all three fields: one from science (David Bueno), one from technology (Josep Casanovas), and one from the humanities (Maria Garcés).

## Modus Operandi

For this project, we look at how these developments of new humanities, posthumanities, transhumanism and the convergence phenomenon have materialised in selected institutes for higher learning in Europe. We do not aim to offer a full assessment of the rise of new humanities throughout Europe but hope to detect meta-patterns and convergences of the new humanities by looking at the institutional formation of the new humanities in these partner institutions. An emergent trend is a strong centralisation of Digital Humanities, and a relative underplaying of the Environmental Humanities. The evolution towards the digital seems to fit the best with cognitive capitalism (Moulier-Boutang 2012) in which knowledge and information need to be centralised on big servers, to make information flows – and thus capital profit – more efficient. The Environmental Humanities, on the other hand, carry a legacy of activism and naturalism that tends to irritate mainstream academia (Plumwood 1993).

We will use the perspective of critical posthumanism to study the convergences of the new humanities, while we focus explicitly on two dimensions: the difference between mainstream or major science and marginal or minor science. As a criterion to differentiate between them we will study the difference between the critical posthumanities and humanities-as-usual, within neo-humanism. This will allow us to make qualitative distinctions between capital-centred for-profit academic developments and to assess how they are intertwined with or separated from each other within the institutional formation of the new humanities. Steering clear of facile dichotomies between categorical rejection and a naïve embrace, we also want to avoid a neo-humanist politics of nostalgia, catastrophism, and protectionism. We will approach our subject matter with an affirmative ethics (Braidotti 2013) in order to imagine both new alternatives – or lines of flight – and a more integrated critique towards a sustainable platform for the future of the critical posthumanities.

In order to gather empirical data on the emergence of the new humanities in these complicated times, we have relied on evidence, data and samples from the partner institutions of the Volkswagen Foundation project for the European Hub of the World Humanities Report: University College London, the University of Göttingen, the University of Belgrade and the University of Bologna. Also, we have found representative samples of the emergence of the new humanities in our own institution, Utrecht University. We are aware of the limits of this approach also in terms of its geographical representation, but we believe it provides relevant empirical data in order to map the current situation and conceptualise the necessary follow-up research projects. In Göttingen, we have interviewed Caroline Sporleder and Franziska Pannach, who are our partners in the Volkswagen project. Also, we also interviewed Ulrike Wuttke in Potsdam, who did research on Digital Humanities centres in Germany. In the UK, we interviewed Sonu Shamdasani and James Wilson, directors of the Health Humanities at University College London. In Utrecht, we interviewed José van Dijck, who studies the digital from a media studies perspective, and discussed the Platform Society. Also in Utrecht, we interviewed Sandra Ponzanesi, who is about to finish an ERC project on migration and digital tools, as well as a project on the role of the public intellectual. In Bologna we interviewed Antonino Rotolo. He is Vice-Rector of Bologna University and studies the ethics of artificial intelligence (AI). He has a background in philosophy and computer science. In Linköping, Sweden, we interviewed Cecilia Åsberg, who is the founder and coordinator of the Posthumanities Hub. Finally, we had contact with James Shulman, director of the American Council of

Learned Societies, who offered us a sober view on the new humanities in the United States in comparison with the European situation.

During the period covered by this research project, the COVID-19 crisis hit the world in full force, with several hubs of infection here in Europe. Universities were closed and most educational activities moved online. The field trips that had been planned to provide empirical evidence for this project, notably to London, Belgrade, and Bologna, had to be postponed or cancelled. Consequently, the interviews that feed this study had to be conducted through video connections and the data was gathered by fieldwork online and intensive study of websites and digital archives. These circumstances were not ideal, but in some ways were apt to the spirit as well as the content of the Utrecht project, being supported by digital infrastructures and experimenting with new pedagogical methods. This way of working also shows how research in the new humanities and the posthumanities will proceed in the mid-term future. It seems that the context calls for a heightened sense of self-reflection: more than ever we have to ask ourselves what it means to do research about the new humanities at a time of such turmoil and suffering. It is clear that compassion and solidarity need to be central features of posthuman scholarship, which cares for the human as much as classical humanism, but simply extends that category to embrace non-human agents, beginning with the environment. As our Bologna-based interlocutor Antonino Rotolo hypothesised, full international travel in research and standard educational exchanges started again in Europe in spring 2021, after the COVID-19 lockdowns. At the same time, in April 2020, an online conference was organised in Taipei on 'Planetary Health and Humanities', in which the implications for the humanities of the COVID-19 pandemic were discussed: a good example of the urgent relevance of the new humanities and a case of international research collaboration in times of corona. Both these aims were pursued through digital platforms, thereby stressing the mediated and interrelational nature of the new research landscape.

## **Crisis or Transformation in the Humanities?**

The emergence of the new humanities also appears against the background of repeated cries concerning the crisis of humanities. The Colombia Global Humanities Project in New York City makes a rather dramatic comparison, when it writes: 'The loss of humanities knowledge thus bears striking resemblance to the loss of biological diversity across the globe' (Pollock 2017). This report witnesses a narrowing of interest in themes in Western universities, with the observation that in comparative literature '90 percent of graduate education and research in the discipline in the United States today is directed toward a mere 3 percent of human literary experience: Euro-American literature since the seventeenth century'. The state of the humanities in the Global South, according to this report, is even more worrying: with the exception of China and Taiwan, the authors of the report argue, the humanities in the Global South appear to be moribund.<sup>2</sup> They, again strikingly, observe that for example 'no Egyptologists are produced in Egyptian universities'.

All this shows the crisis of the university 'as an idea and as representation' (Braidotti 2013). The Renaissance model of the university, as a centre where the scholar-artisan could devote ample time to fundamental humanistic study, has been replaced by the Fordist model of mass production of academic output. The idea that the liberal arts still carry the Renaissance ideal (Nussbaum 1999) has to be discarded as elitist and nostalgic: 'The distracted, numbers-swamped, audit-crazed, grant-chasing life of most contemporary

academics departments is far removed from classical ideals of the contemplative life' (Collini 2012).

In the recently published report on the Higher Education in the World by the Global University Network for Innovation (GUNI 2019), there is an attempt to subvert this bleak perspective. The authors of this report acknowledge and observe that research output is increasingly measured in a quantitative manner, without concern for the humanistic usefulness of the research. Therefore, the report aims to 'to go beyond protectionist nostalgia and catastrophism, and clearly advocates reappraisal and transformation'. José van Dijk argues similarly that the humanities should not tap into the narrative of 'being in crisis', since it would become a self-fulfilling prophecy. It should simply show its value automatically. On the other side of the ocean, these ideas were echoed by James Shulman from the American Council of Learned Societies.

We agree with the intuition and conclusion of GUNI to not wither in the lament of things lost. As always (Braidotti 2006), we prefer to adopt an ethics of affirmation. Posthuman affirmative ethics is central to the project of the posthumanities in that we – critical scholars in the humanities today – need to embrace the opportunities offered by the posthuman convergence. More specifically, we see advantages in the convergence phenomenon, which works through intense and extensive cross-disciplinary collaborations that remove the conventional divisions of the university into discipline-driven faculties. What we propose instead is to steer the humanities in a transversal manner towards new forms of interconnection and mutual support, not only thematically but also methodologically. This transversal approach in turn connects the knowledge production within the university to broader societal challenges, so as to enhance solidarity, social justice and democratic debate and dissent. The praxis of constructing affirmative values, relations and projects is central to sustain these posthuman but all too human aspirations and activities (Braidotti 2006, 2017).

To emphasise affirmative ethics is not a position of naïve optimism, but a practical ethics aimed at reworking negative conditions into generative ones. We acknowledge that problems are real. It is beyond doubt the case that the classical humanities are under increased threat, both in terms of their public image and in view of research funding. There are also strong indications that at least some of the new humanities often serve the corporate interests of capital. During the Fourth Industrial Revolution, we see the increased monetisation and capitalisation of all living organisms, in the form of the incessant harvest and capitalisation of data. The universities are not exempted from this neoliberal logic of producing knowledge for profit, mostly through patenting and the commercialisation of bio-genetic and computational data. The humanities are obviously in no position to generate this sort of wealth, as patenting does not apply to the disciplines that work with ordinary language.

We are doubtful whether a neo-humanistic critique on these processes is sufficient to produce an adequate evaluation of these developments. One can even wonder whether some forms of neo-humanist celebration of individualism is not, in fact, one of the factors facilitating the spread of the disease of profit-making. Can we seriously hope to fight the capitalisation of knowledge by enforcing a notion of possessive individualism (Macpherson 1962)? And what does it mean to even suggest, in such a context, that universities are not for profit (Nussbaum 2017)? The Columbia Global Humanities Project, in this sense, appears to have a greater courage to 'stay with the trouble' (Haraway 2016). It is our assignment to map out institutional and theoretical lines of flight to escape from, or redefine, this predicament, without recoiling immediately into traditional values. We

will be especially careful to examine the terms in which neo-humanist thinking – with its in-built universalistic, Eurocentric and masculinist premises – is reinserted, repurposed and refitted to face the challenges of the posthuman convergence.

## Research Areas

In this project on the emergence of the new humanities and their convergence in the critical posthumanities, we aim to assess especially the institutional rise of the Environmental Humanities, the Digital Humanities, the Biomedical Humanities and the Public Humanities. The Environmental Humanities – subdivided into Green Humanities, dealing with the earth, the soil, geology and minerals – and the Blue Humanities, dealing with oceans and water – are engaged in the discussions of our shared ecological predicament, including climate change, pollution, loss of biodiversity, etc. The Digital or Computational Humanities are engaged with information and communication technology, digital networks, codes, and algorithms. The Biomedical Humanities are involved with the transformation of the human and non-human on the cellular, molecular, viral and genetic levels. The Public Humanities focus on the societal purpose of the humanities, their civic mission, financial worth, and general value for society. As we have seen in Bologna, the new humanities are organised as intersecting interdisciplinary collaborations between different departments. These collaborations aim at transferring the specific competence of the humanities to other departments and serve as a form of cultural exchange.

All four separately, these domains of posthuman enquiry, engage with issues of societal relevance that transcend the domain of ‘the human’ and expand it to include non-human factors, agents, and entities. These range from soil and water, to cells, genes, codes, and microbes. Therefore, they function in a non- or post-humanist and a non- or post-anthropocentric framework (Braidotti 2019).

The **Environmental Humanities** raise issues linked to the Anthropocene, the place of humans in planetary history, and their ability to self-destruct, and the motivation to construct sustainable futures. The Environmental Humanities study ways to develop social imaginaries that move beyond the extremes of apocalypse and utopia, to provide concrete ways to raise public awareness of global climate change (Buell 2005). This field is in dialogue with multiple interlocutors, starting from the polluting agencies themselves. According to Naomi Klein, ninety corporations in the developed world are responsible for the majority of carbon emissions. They also interact with government and international agencies working on climate change, as well as many activist organisations. In some cases, they dialogue with indigenous, postcolonial, de-colonial, and non-Western perspectives on the Earth, the management of environmental resources and sustainable futures (Chakrabarty 2009; Wynter 2015; Whyte 2016).

The Environmental Humanities appear to be the most ‘minoritarian’ of the new humanities, at least in Europe. The Environmental Humanities originated mostly from literature departments. First, we would need to note the Cambridge Interdisciplinary Research on the Environment. This centre hosts the ‘Pathways Project’, which is a collaboration between the Division of Social Anthropology and the Faculty of Education. Its primary research focus is on the experience of people of environmental change, the relation between the imagination of the environmental past and the environmental future (climate change), and the connections between local environmental events in different places in the world.



It does not appear to be common to have an institute explicitly devoted to it at European research institutions. It does, however, sometimes appear in other forms, such as the Institute for Global Challenges and Climate Change in Bologna. This Institute brings together more than 120 researchers from about twenty departments. It also harbours the WHO 'One Health' programme and aims at studying strategies to mitigate the impact of the big environmental and social challenges of the twenty-first century, including migration and anthropological changes. One of the most important European centres in the Environmental Humanities is the Rachel Carson Centre for Environment and Society in Munich. There is also the emerging Centre for Environmental History in Vienna. Most significant is the representation of the Environmental Humanities in the Nordic countries. There is the Nordic Network for Interdisciplinary Environmental Studies (NIES), which was founded in 2006 in Oslo. Other than that, there is the Environmental Humanities Laboratory in Stockholm, and the Centre for Sustainable Development and the Mind and Nature Node in Uppsala.

The **Digital Humanities** connects the debate about the new digital media and information technologies to the civic mission of the university to train responsible, active and informed citizens. A related term is Humanistic Informatics. It raises issues of digital citizenship, security and surveillance, warfare and cybercrime. Special attention is paid to the historical, cultural, and literary aspects of the field (Hayles 1999, 2005).

The Digital Humanities appear to be by far the most developed and institutionalised of the four new humanities we have identified in this chapter. The digital appears to be everywhere. It has become clear that we even need to make a distinction between different conceptions of the Digital Humanities. On the one hand, there is the understanding of Digital Humanities as 'the use of computational tools and methods to traditional humanities subjects, such as literature, history, and philosophy'. On the other hand, there is the research that engages with the digital as an expression of human culture, or looks at how digital technologies change humans, humanity and societies. Although we have chosen to use 'Digital Humanities', to reflect on both (or maybe even more) forms of Digital Humanities, it has become clear that most institutionalised forms of Digital Humanities use mostly the former definition of Digital Humanities. This has both historical and pragmatic reasons. Of our interlocutors, Sporleder, Pannach and Wuttke operate mainly within the former definition of the Digital Humanities. Van Dijck, Ponzanesi and Bojic rather are part of the Digital Humanities in the second understanding (though all of them will acknowledge they are doing something like Digital Humanities, they all affirm that they are not part of the Digital Humanities in the former definition).

We have participated in the 'Digital Humanities im deutschsprachigen Raum' (DHd2020) conference in Paderborn, as an observer, to understand the dynamics of the Digital Humanities domain. We interviewed Sporleder and Pannach, who are partners in our project at the University of Göttingen, as well as Ulrike Wuttke at the University of Potsdam, who did research on Digital Humanities research centres in Germany. As most people, such as Sporleder and Wuttke, we spoke with in explicit Digital Humanities institutes which use the first understanding of DH, it is thought to be necessary to have a clearly defined understanding of Digital Humanities, thereby explicitly excluding the study of the digital as a topic of humanities studies from this field. Wuttke says that the question of definition must always steer clear of a definition that is so wide that it includes almost everything, and is therefore not practical anymore, and one that is too narrow, which would exclude too many important questions. The Digital Humanities, in the 'focused' definition, are explicitly interdisciplinary and situate themselves in the overlap between

computer sciences and humanities. The Digital Humanities finds its origin in philology, where computational tools could help in the processing of texts.

The Digital Humanities at UCL are represented as a department of the Faculty of Arts and Humanities, the Department of Information Studies, coordinated by Fernando Alves Dos Santos. There is also a Centre for Digital Humanities at the Faculty of Social and Historical Sciences, directed by Simon Mahony. The Centre for Digital Humanities defines itself as ‘undertaking research at the intersection of digital technologies and humanities’. Further, it ‘studies the impact of these techniques on cultural heritage, memory institutions, libraries, archives and digital culture.’

At the University of Bologna there is the small Digital Humanities Advanced Research Centre. This centre hosts about eleven people from the humanities and computational sciences and is aimed at Digital Humanities collaboration in the strict meaning of the term DH: using computational tools and methods to study traditional humanities disciplines such as literature, history and philosophy.

Ljubisa Bojic is coordinator of the *Digital Sociometrics Lab* (Digilab) in Belgrade, which was founded in September 2019. The lab hosts twenty researchers, from different universities and from different faculties within sociology, philosophy, and the political and technical sciences. It understands Digital Humanities as looking at the digital aspects of humanities (as opposed to using digital tools to study the humanities).

The Digilab works with big data, software analysis and data science. One of its research projects analyses whether the weather influences emotions in people’s expressions on Twitter. Its main aim, however, is theoretical: the Digilab mostly looks at the social implications of technology. For example, it uses data from Twitter, or other publicly available data, and then combines this data or applies machine statistics, in order to reach useful findings about society. The lab operates without any independent funding, though a project proposal is now pending with the Serbian Scientific funding body.

We have concluded that there are two understandings of the Digital Humanities, one focused and one broader. The focused definition limits the Digital Humanities to the study of the humanities with digital tool and methods. This is a dynamic field which appears to have collaborative interdisciplinary institutes represented in many higher education institutes in Europe. This is distinct from the understanding of Digital Humanities as the study of the digital as human culture itself. The approaches of José van Dijck and Sandra Ponzanesi, but also those of the Digilab, are more aligned with this understanding.

The first understanding of the Digital Humanities does reflect more on the methods of humanities research, instead of the content itself. The object of study is the idealistic unaltered study object of the classic humanities, but with digital methods added. This is distinct from the second understanding of the digital humanities, in which the relationship between the human and new technologies becomes the object of study itself. Here the vision of the human is also decidedly altered: no longer are the productions of an idealised ‘human culture’ studied, but the transformed human-technological network itself. The first definition of the Digital Humanities is neither neo-humanistic nor transhumanistic, but rather agnostic. The second definition of the humanities can be neo-humanistic, in the way that it emphasises the ‘risk’ of new technologies (cf. Huw Price); transhumanistic, in as far as it understands digital technologies as an opportunity for humanity to move towards a transhuman singularity; or posthumanistic, emphasising the political challenges of the transformation towards us as posthuman agents.

The **Biomedical Humanities** move beyond bioethics to develop an interdisciplinary field that studies the impact of genomics, synthetic biology, and stem cell research, but

also the neural sciences, not only on medical practice, but also on society as a whole. Related terms are the Bio-Humanities, the Medical Humanities, the Neural Humanities or the Evolutionary Humanities. The 'Medical Humanities' appear to be the most institutionalized.<sup>3</sup> Special attention in this field could be paid to Disability Studies (Goodley, Lawthorn and Runswick 2014) and social studies of the life sciences (Rose 2013) and to alternative ways of caring for both the human and the non-human inhabitants of the planet. The understanding of the transformation that is initiated by the Biomedical Humanities has become increasingly urgent in light of the COVID-19 pandemic of 2020.

Health Humanities or Medical Humanities seem to be an established field, with similar organisational structures as the Digital Humanities. In the UK and in Bologna we see Health Humanities institutes, which explicitly use a two-directional methodology: the expression of the biomedical in the humanities (literature, film, theatre . . .) and the use of humanities (such as ethics) for medical issues. Also, it is an interdisciplinary field which in its organisation will bring together staff with various disciplinary affiliations (at medical faculties, within literature and philosophy, etc.) in an overarching institute, commonly without additional funding.

The Faculty of Social and Historical Sciences at UCL hosts the Health Humanities Centre, which is aimed at interdisciplinary research in the humanities and social sciences connected to health. Its approach is also two-directional. On the one hand it studies how methods from the humanities, such as ethics, can be used in the study of biomedicine, clinical practice and health care. On the other hand, it looks at the depiction of health-related practices in literature, film, and theatre. It is organised into four research units: Evaluation and Measurement of Health and Well-being; Public Health and Global Health Ethics; Bioethics; and the History of Psychological Disciplines.

At the University of Bologna there is the small Medical Humanities institute which brings together about twenty-five people from different departments. It aims first and foremost at studying all aspects of the relation of trust between doctors and patients.

From Sonu Shamdasani and James Wilson we have learned that the Health Humanities at their institute is still very much a matter of 'humanities'. With the Digital Humanities, we saw that computational (new) methods are used to study a fundamentally classical subject matter; in the Health Humanities we see that the (old) methods of the humanities are used to study a new subject: health (for example in its historical dimension). Both Shamdasani and Wilson emphasised that what they do is fundamentally human centred. Health and the biomedical are seen as dimensions of human existence, and in that form should be studied with the methodological tools that the humanities have to offer. The aim of this research is also fundamentally slow (in a positive sense): not emphasising rapidly changing hypotheses or future trajectories (such as those that COVID-19 might be pointing us towards) but rather focused on the historical genealogy and relationships between health and humanity.

The **Public Humanities** aim at using the potential of the humanities to connect to a broader societal purpose. By critically assessing heritage, civic culture, and traditions, the public humanities try to (re)connect the humanistic studies which gathered their information from human society back to that society (Quay, Veninga and Sokal 1990). Associated with this are, for example, the Experimental Humanities, the domain of cultural heritage studies, Engaged Humanities (Jay 2010) and public sociology.

The Public Humanities should be seen as an increasingly important function of all humanities research. Though there are some institutes devoted to Public Humanities explicitly, it may be best to consider the question regarding the role of the public

intellectual as an increasingly self-reflective mode of the humanities on the one hand, and part of the increasing importance of the societal relevance of humanities research on the other hand. Sandra Ponzanesi's research on the postcolonial intellectual is a good example of Public Humanities research that engages with contemporary questions of identity, post-colonial critiques and the role of the intellectual. The Public Humanities are also strongly represented in almost all research that we can identify as Digital Humanities. Questions regarding literacy, the accessibility of digital tools, and the influence of digital technology on 'our' lives (cf. the Platform Society) and the lives of migrants are some key topics. The Public is everywhere. Since COVID-19 has moved research in education towards video-conferencing tools, the critical reflection of the digital and its influence on society has perhaps become more important than ever.

The Public Humanities do not have as explicitly a posthuman subject as the other three new humanities. They do, however, emphasise the role of the human in their interaction with society. Public Humanities are aimed at democratisation and start from the idea that we should make the knowledge production of the university open and accessible to the larger public. Therefore, they challenge the classic distinction between academia and society at large. They change the focus to the function of human curiosity and enquiry.

A few centres go beyond this division of the new humanities. We could call these the **Convergence Humanities**. One is the Future of Humanity Institute at Oxford University, directed by Nick Bostrom; the other is the Centre for the Study of Existential Risk at Cambridge University, directed by Martin Rees and Huw Price. The former is engaged with studying how humanity can be improved, by using a variety of disciplines and methodologies, such as theoretical physical, neuroscience, logic, AI and philosophy. The latter studies the challenges, opportunities and risks associated with AI. This centre also aims to be connected to the world of policy and of technology. In addition, at the University of Bologna there is a large institute engaged with AI: the *Alma Mater Research Institute for Human-Centered Artificial Intelligence*, which brings together about 300 people from about twenty-seven departments. It harbours seven ERCs and a total of more than 180 projects, for a total of 49 million euros in funding. Its methodological approach is two-directional: it studies the impact of humanity on technology, such as AI on the one hand, and the impact of these technologies on humanity and social relations on the other hand. The research institute is organised in several scientific units, among which the following are most noteworthy from the perspective of the new humanities: humanistic AI (convergence of ethics and technology), AI for health and well-being (possibly related to the Biomedical Humanities), and AI for law and governance (related to the Public Humanities). Though neither of these centres can be categorised in any of our four new humanities, we might say both centres express convergence phenomena, with an emphasis on a posthuman or even transhuman future.

In the Nordic countries, especially in Sweden, we see the first example of an interdisciplinary research hub that is explicitly using a posthumanities methodology, strongly embedded in feminist materialist theory, with the Posthumanities Hub, directed by Cecilia Åsberg, who we interviewed for this chapter, and co-directed by Marietta Radomska. They refer to themselves as 'post-disciplinary' rather than interdisciplinary with an emphasis on 'more-than-human humanities'. Åsberg says that 'we have to understand that disciplines develop and always change over time'. The hub is a member of the Posthumanism International Network (PIN). The Posthumanities Hub is based at the Royal Institute of Technology (KTH) in Stockholm and at Linköping University. It aims to be a network for PhD candidates, postdoctoral researchers and senior scholars on Environmental

Humanities, Digital and Technological Humanities, Medical Humanities, and new media studies, among others. All of it is based on a feminist methodology. It is the most advanced collaborative structure of the convergences of the new humanities we have encountered so far.

Finally, we should note the FRINGE centre at UCL, which might not be a new humanities centre strictly speaking, though it does point at a more open understanding of the humanities. It understands itself a cross-disciplinary project which ‘explores the roles that complexity, ambivalence and immeasurability play in social and cultural phenomena’.

These convergence humanities hover between more neo-humanistic and more post-humanistic approaches: in Bologna the search for AI is explicitly ‘human-centred’, and therefore looks at how AI influences humanity. The Posthumanities Hub in Sweden is strongly grounded in posthuman feminist materialism and therefore goes beyond the human. Furthermore, as its subject of knowledge the Posthumanities Hub also goes beyond a separation of the environmental and the digital, instead showing how strongly intertwined they are when observed from a feminist materialist perspective. The ethics of the Posthumanities Hub emerge from an advanced cultural critique, but with an emphasis on playfulness and an ethics of joy.

## The New Humanities as a Convergence Phenomenon

We might ask ourselves what is ‘new’ about the new humanities? Should we say these humanities are reaching beyond the classical humanities? Are they opposed to them, or do they form merely an addition to them? Do the new humanities come to replace the ‘classical’ humanities? To what extent do the new humanities break the dichotomy between sciences and humanities that has so long defined the academy? Also, we might ask ourselves what is still ‘human’ about the new humanities, being engaged as they are with the digital, the environment, and biology. What was ‘human’ about the humanities in the first place? It is with these questions that we see the posthuman convergence take centre stage: the convergence of the critique of humanism (the critique of the universal ‘Man’) and the critique of anthropocentrism. This convergence produces a chain of theoretical, political and social effects.

The interdisciplinary humanities or ‘studies’ transcend the boundaries of the ‘human’ by emphasising the relations between the human and the digital, the human and the environmental, and the human and the biological and biomedical. According to Antonino Rotolo, the research and education structure at the University of Bologna emphasises the interdisciplinary nature of the new humanities. Methodologically, they engage with the transformation of the concept of the human and look at the various ways in which ‘humanity’ is interacting with technology and its environment in new ways. Antonino Rotolo emphasises the two-directional and interdisciplinary approach of the new humanities. We start from the assumption that the various fields of ‘new humanities’ are increasingly converging into what can be called the posthumanities; convergence of the new humanities as a result of the critical assessment of the ‘posthuman’ in its transversal, nomadic, and multispecies appearances. We should not uncritically adopt this as a new label for another of these new humanities. Whereas we see a stratification of ‘new humanities’ in faculties around Europe, especially with regards to the Digital and the Medical Humanities, our aim is to employ the marker of the ‘posthumanities’ as a critical tool to assess this multiplicity, and critical potential, of the convergences and proliferations, but also the new boundary formations that the new humanities enable. On the other hand, a new perspective is

opened in what can be called transhumanism, a field which aims at the enhancement or improvement of the human species towards a transhuman future in which humanity will transcend its current capabilities. The discourse of this field is teeming with an optimistic, progressive view of history.

While on the one hand, we see a convergence of posthuman approaches in the new humanities, on the other hand, at least institutionally, the new humanities appear to engage in a new mode of specialisation. This almost appears as a paradox. The new humanities emerge from a desire for interdisciplinary work: to cluster departments by shared topics with multiple methodologies, instead of the other way around; to cluster departments around one methodology to study various topics. But now, these new clusters of new humanities organise themselves in even more secluded departments, making real interdisciplinary work even harder.

Is this the result of a form of austerity politics, which has taken a grip on academia as well? Or is it the increased demand from society for ‘valorisation’ of scientific output? Is it a lack of interest or skill to do genuine interdisciplinary work? Or is this just the beginning of a wider transformation, maybe of the whole of academia, towards a more integrated and connected, less dichotomous and stationary, more mobile and dynamic, scholarship?

## Major and Minor Science

In all four of these domains of new humanities, we become aware of a tension between the so-called Majoritarian or Royal approaches and Minoritarian or Nomadic approaches. Some institutional emergences of Environmental, Digital, Biomedical or Public Humanities serve established interests and common or universal goals. Others from the onset are emerging from a critical – for instance feminist, decolonial, disability, indigenous, animal – perspective. In our assessment we aim to dissect this tension, but also to make it productive. The Major Sciences (Royal, Major, Majoritarian) we understand as being in the function of profit-driven reterritorialisations of capital. Also, they function to maintain the status quo of established interests. As challengers to the Major Sciences, we see alternative epistemologies rising, be they from the standpoint of feminist perspectives, from an environmental concern, from a concern with social justice, or from a concern with the indigenous. However, these Minor Sciences have not seen the same amount of institutionalisation as the Major Sciences: there are no migrant, poor, decolonial, diasporic, or disabled humanities yet. Minor Sciences are often subsumed under a field of ‘studies’, such as Gender Studies, Postcolonial Studies or Queer Studies. As we have seen before, it is often a matter of time before challenging epistemologies become part of the Major(itarian) Sciences. There is a majority-driven epistemic acceleration of funded science. This is what we see happening with the new humanities as well. Does the accelerated institutionalisation of the new humanities equal an encapsulation of critical potentialities? The Minor Sciences appear driven by curiosity as not-for-profit and heterogeneous forms. How long can those impulses last? In what ways does the institutionalisation of the new humanities help to even dismantle the classical humanities, by using the critical potential of the new humanities, in order precisely to benefit the Majoritarian positions? What do we lose when we so easily erase the ‘classical’ humanities in favour of a big department of Digital Humanities? Have we allowed ourselves enough time to grieve to cope with these transformations?

The research object of the new humanities is mostly non-human or beyond the sphere of the human. The aim of the humanities, however, is alternately defined by a re-emphasis

of human exceptionalism and universalism, in a way that we could label as neo-humanism; an understanding that the current digital, environmental and biomedical challenges are first and foremost *human* challenges; that is, challenges for the human, to be solved by the human. This line of thought is represented by philosophers such as Jürgen Habermas and Martha Nussbaum or Manuel Castells (2010). Major Science expresses itself by an ethical commitment to humanist universalism, in line with liberal humanism.

## Neo-humanism

As a good example of the theoretical position, and a defender of the values of Major Science, within the moral universalist tradition of humanism we could refer to Martha Nussbaum (2009). Nussbaum is one of the most vocal proponents of the need for universal values, which she understands as a necessary remedy for the fragmentation of values as a result of poststructuralism and postmodernism. Her specific form of humanistic cosmopolitanism works as a form of abstract universalism, which serves to counter the nationalism and ethnocentrism which are so prevalent in the contemporary world. Liberal individualism serves as the universal humanism of choice: individualistic, fixed identities, and a clear distinction between self and other, for which the boundaries must be constantly negotiated in a non-violent manner. The individual is settled in networks of family, state, nation and humanity, and has a fixed position in this system. Nussbaum's idea of the subject is individual and solidified. From that position, the subject is best equipped to negotiate difference.

The emphasis on neo-human values has some clear advantages. By now, human universalism and the value of promoting transhuman peace and understanding have become proverbial and self-evident. They have become embedded in our constitutions, in our international agreements of the highest authority, by the United Nations; they form the foundation of inter-religious understanding, global cooperation and peace-building engagements globally. Reference to human dignity is recognisable and uncontroversial. Furthermore, our system of rule of law is based on the humanistic persona. Despite attempts to grant rights to rivers and mountains in recent years, the idea of the human individual is a strong foundational principle of our legislative frameworks.

However, neo-humanism appears to be increasingly outdated and conservative. It easily slips into either a protective mode, or a feeling of superiority over STEM disconnected from the real world. The neo-humanist protectionism of the humanities emerged from a dualistic epistemology which differentiates strongly between the 'humanities' and the 'sciences', between 'culture' and 'nature'. What the new humanities show, if anything, is how deeply entangled are human culture and natural and artificial or technological phenomena.

## Transhumanism

The critical posthumanities are not the only alternative to humanistic universalism and its expression in various forms of neo-humanism. Transhumanism also rejects human universalism and aims at human enhancement to improve its condition. Ultimately, the human needs to be transcended. According to Nick Bostrom, director of the Future for Humanity Institute in Oxford, transhumanism is defined as the rejection of the assumption that the 'human condition' is at root a constant (Bostrom 2005). In short, he argues that there is nothing 'natural' about 'human nature' and that the idea of humanity as

something immutable should be reassessed. Nick Bostrom writes: 'Clearing away that mental block allows one to see a dazzling landscape of radical possibilities, ranging from unlimited bliss to the extinction of intelligent life.'

Transhumanism commits to the idea of a transhuman singularity (Kurzweil 2006): the idea of a moment in the future in which machine intelligence will become superior to human intelligence. Associated with this is the quest for immortality. Some older transhumanists are aiming at lengthening their life span in order to last until the proposed date of the transhuman singularity, in order to enjoy the fruit of immortality. The transhuman commitments have become most emphatically expressed in the hyper-libertarian ideology of Silicon Valley, where the tech sector is explicitly diverting massive funds towards 'doomsday preparation', buying offshore territories and betting on cryonics technology to ensure the fruits of eternal life in case the singularity would take longer than expected.

Transhumanism puts enormous faith in the progress of humanity, to such an extent that it believes in the overcoming of the human itself. We have seen how Antonino Rotolo and Huw Price attempt for the technological advancement to be human centred (Rotolo) or analyse its risk (Price). For Kurzweil, Bostrom and the ideologues of Silicon Valley, such as Elon Musk, there is no question that the technological progress is positive. The environmental crisis is seen as no more than a technological challenge which will certainly be overcome easily. The optimism of transhumanism might be catching, but it is also characterised by a disregard for social exclusion, the enormity of the environmental crisis, and the dangers of technology.

There is both an analytic and a normative dimension to this Bostromian project of the transhuman. Analytically: the rejection of the abiding nature of 'human'; normatively: the venture to actively design a movement beyond the current state of human nature. We are not sure whether this amounts to a similar normative neo-humanism as we appear to witness in several of the new humanities. One suggestion could be that transhumanism indeed rejects the universalist image of man, and is therefore posthuman, but, however, it does not fundamentally move away from the species exceptionalism of anthropocentrism. Transhumanism aims to move beyond man starting from man. The critical potential of transhumanism is not emancipatory in the feminist or postcolonial meaning of the term. We do, however, make a more thorough assessment of the transhuman project to reach a final conclusion.

## Posthumanism

In a recent encyclopaedic article, it is stated that posthumanism 'refers to any worldview, belief, or ideology that is critical of traditional humanism and associated theories about the superiority of humanity' (Kopnina 2020). We appear to witness increasing convergences within the new humanities of the shared critique of this superiority of man. It remains, however, questionable what end this rejection serves. Though the new humanities carry within them the potential of imagining alternative political realities, or even the imagination of a new 'we', a new multispecies network with a shared, though not necessarily a unified, responsibility, these developments should not be applauded uncritically. Though we are very cautious to recoil in neo-humanist critique of the so-called 'inhuman' developments within the new humanities, it is important to take stock of what is lost in this process towards the posthuman 'new', and what is gained.

Built into this project is the question of how to renew the social responsibility of the contemporary humanities outside the jargon of corporate directives, by posing questions



that have less to do with morality than with ethics. The former deals with rules and regulations, while the latter poses questions of power in the dual sense of entrapment (*potestas*) and empowerment (*potentia*). As a discourse about forces and relations, ethics is a transversal concern that exposes the contradictions of the moralisation of public life, including scientific research, under neoliberal governance.

Foremost among these contradictions is the normative injunction that defines the dominant practice of contemporary techno-science as analytically post-humanist but normatively neo-humanist. For example, individuals are encouraged to develop a sense of moral responsibility for their health – via the management of lifestyle and the monitoring of quantified selves – without necessarily raising issues of power and social justice. The same goes for the management of one's genes, mental health, and reproductive functions.

I singled out (Braidotti 2013) examples of this dominant paradigm from brain research (Rose 2013), primatology (de Waal 2009) and media studies (Castells 2010; Verbeek 2011). I recommend some critical distance from this popular but internally incoherent injunction to combine analytic posthumanism with normative neo-humanism. What this perspective neglects is the analysis of power relations, in their multiplicity and complexity. To account for them, it is useful to suspend questions of normative judgement and focus instead on issues of power, with Foucault (1995) and empowerment, with Deleuze (1988) and his rereadings of Spinoza (1996 [1677]). This allows us to address social issues of inequality and lack of access to, for instance, the new technologies and to foreground the necro-political aspects of contemporary power. These include notably the rise of security concerns and the weaponisation of the social sphere in a continuing 'war on terror', which impacts negatively on the critical function of the university and on academic freedom. These ethico-political concerns are also the means by which we can increase the social relevance of the humanities and address many of the complex issues facing the world today.

## What are the Critical Posthumanities?

The institutionalisation of the new humanities happens behind the background of the convergence phenomenon of post-anthropocentrism and posthumanism (Braidotti 2019) in what we call the critical posthumanities. The posthumanities must be distinguished from the critical posthumanities. The critical posthumanities entail the dual rejection of man in the posthuman – a rejection of the universalist image of 'man' – and *Anthropos* in the post-anthropocentric – a rejection of human exceptionalism. As Braidotti has argued, these developments run parallel to each other, but do not always overlap. We could question whether the new humanities have to be interpreted as (a) a post-anthropocentric development, thus rejecting the superiority of the human species, (b) a posthuman development, thus rejecting the universalist image of man, (c) a convergence phenomenon of both, or (d) intrinsically neo-humanist. Our hypothesis is that both the convergence of this dual rejection as well as a neo-humanist subcurrent take place within the new humanities. The emergence of the new humanities often expresses itself analytically as posthumanist, by taking posthuman objects seriously, but normatively as neo-humanist (Braidotti 2019). That is to say: they do not critique but rather re-emphasise the humanistic tradition, though they superficially appear to divert from the anthropocentrism that runs concurrent with them.

The critical posthumanities are engaged with those societal and environmental transformations that we have come to understand as the convergence of the Fourth Industrial

Revolution and the Sixth Mass Extinction. These include, but are not limited to, climate change, loss of biodiversity, digitalisation of knowledge, AI, gene technology, robotics and algorithms, and since very recently the COVID-19 pandemic and the accelerated digitisation of work on video-conferencing networks such as Zoom.

The critical posthumanities are aimed at developing an enlarged, distributed and transversal concept of the subject. They assume that the knowing subject is neither the 'homo universalis', nor 'Anthropos'. We need to move beyond anthropocentric and humanistic understandings of the subject to arrive at a multispecies, multi-ontological heterogeneous subject assemblage. This stands in contrast to the concept of the subject as it is expressed by liberal individualism, with an atomised and human-centred perspective on the subject. Though the object of the new humanities is decidedly non-human, its aims are often still formulated towards the human subject of liberal individualism. The subject of the critical posthumanities is decidedly more complex: an embodied and embedded subject, which is non-unitary but relational; its subject is affective and transversal. The key word here is collaboration: the subject of the critical posthumanities is linked to a material web of human and non-human agents.

Methodologically the critical posthumanities emphasise transversality and cartographies. They transcend the ruling paradigm of disciplinary research. The scholar is always embodied and embedded and should 'speak from somewhere' and make their own transversal cartographies of the current predicament, that is cutting across the board of knowledge production. The critical posthumanities are also sceptical of 'interdisciplinarity', not only because it has become a managerial buzzword, but also because it re-emphasises disciplinary approaches, and thereby prevents scholars from becoming truly transdisciplinary.

When 'we' refer to ourselves in the first person plural, we assume this references something which is 'human'. But to refer to the human as human is also an indexation of power. It is ironic that humanities scholars rarely ask the question about what the human is, and rather leave this to scientists in the life sciences, such as biologists, or maybe to philosophical anthropology. The question of the human, however, should be at the heart of the matter. In fact, our whole epistemological framework as scholars since the Enlightenment has been defined around an unacknowledged privileging of the human, over other bodies. It is precisely this tacit species supremacy that is challenged in the critical posthumanities. From a posthumanistic perspective, this subject formation needs to be transformed to an understanding of the human as materially embedded and embodied, differential, affective and relational. Therefore, posthumanism rejects abstract universalism, the idea of a universal 'human subject'.

The current transformational crises might lead us to despair: a whole range of literature has come out on the lament and the process of loss and grief, as the affective sentiment of choice in posthuman times. But maybe our ethical response to the crises of our time, such as the COVID-19 pandemic, should not only mean learning to die in the Anthropocene (Scranton 2015). Critical posthumanism emphasises an ethics of affirmativity, in optimistic rejection of the affectivity of the lament: the subject of posthumanism is oriented towards a freedom to express all they are capable of becoming (Braidotti 2019). When we say that the critical posthumanities describes a convergence phenomenon, we mean that it is not only a threat of crisis and extinction, but also a time of tremendous dynamism and potential for growth.

The posthumanities share a number of assumptions, beyond a mere focus on non-human objects of enquiry. Firstly, that the knower – the knowing subject – is neither man – homo

universalis – nor *Anthropos* alone. The knowing subject is no longer the liberal individual, but a more complex transversal ensemble: of *zoe/geo/techno*-related factors, which include humans, as collaboratively linked to a material web of human and non-human agents. For instance, the subject of knowledge for the digital humanities is AI-mediated; for the environmental humanities, it is *geo-*, *meteo-* and *hydro-*centred.

These transversal subjectivities, composed in the mode of eco-sophical assemblages that include non-human actors, stress the grounded, situated and perspectivist dimension of knowledge. Affirmative ethics is what binds them, by composing transversal subject assemblages that actualise the unrealised or virtual potential of what ‘we’ are capable of becoming. Posthuman subjects are a work in progress: they emerge as both a critical and a creative project within the posthuman convergence along posthumanist and post-anthropocentric axes of interrogation. Their very transversality pre-empts any predetermined outcome for the process of composition of new subjects of knowledge: what they may become is a matter of relational alliances and ongoing material practices. This is no relativism, but rather immanent neo-materialism and situated perspectivism. What constitutes subjectivity is a structural relational capacity, that is to say the specific degree of relational force or power that any one entity is endowed with: its ability to extend towards and in proximity with others. Living entities are both embedded and embodied and have relational and affective powers. As such they are capable of different things and different speeds of becoming (Braidotti 2002). Subjects defined as transversal relational entities do not coincide with a liberal individual but are rather a ‘haecceity’ – which means an event of complex singularities or intensities (Deleuze and Guattari 1994). Subjectivity is thus both post-personal and pre-individual and fully immersed in the conditions that it is trying to understand and modify, if not overturn. We are after all variations on a common matter; in other words, we differ from each other all the more as we co-define ourselves within the same living matter – environmentally, socially, and affectively.

A second crucial feature of the posthumanities therefore is that they assert the diversity of *zoe* – non-human life – in a non-hierarchical manner that acknowledges the differential intelligence of matter and the respective degrees of ability and creativity of all organisms. *Zoe/geo/techno* entities are partners in knowledge production, which means that thinking and knowing are not the prerogative of humans alone but take place in the world. The world is defined by the co-existence of multiple organic species, computational networks and technological artefacts alongside each other (Guattari 2000; Alaimo 2010).

What is critical and what is posthuman about the transversal posthumanities is a question of thematic, methodological and conceptual aspects. Thematically, as stated above, they include non-anthropomorphic objects of study, including networked technological apparatus and big data sets. Methodologically, the defining feature of the posthumanities is their transversal and ‘supra-disciplinary’ character. The driving force for their knowledge production is not the policing of disciplinary purity, but rather multiple forms of relation and cross-hybridisation. In the language of my affirmative ethics: their strength is directly proportional to their relational ability to open up to each other and to the world. They overcome the vision of a de-naturalised social order somehow disconnected from its environmental and organic foundations and enact a set of *zoe/geo/techno* mediations that entail qualitative and methodological shifts of perspective. We will return to the issue of transversality below.

Taking a mainstream academic location, one could say that the posthumanities are a reaction to the epistemic acceleration of cognitive capitalism. They provide institutional answers to the posthuman convergence, within the contemporary neoliberal governance

of universities, which encourages academic research to reach out for external encounters with a broad spectrum of corporate, civic, public, artistic, and activist venues. They support an array of research, development and experimentation with new ways of producing knowledge. These developments are therefore resonating with the mainstream developments of advanced capitalism.

## Meta-Patterns of the New Humanities

By now we can confirm that the new humanities are an empirically observable reality, which reshapes not only the field of humanities, but also its academic relation between science and technology. The GUNI report emphasises above all the relationship between humanities, sciences and technology as a new reality for the humanities. The new humanities explicitly work not only across disciplinary boundaries, but also across the boundary between science and humanities. These means that in some of the organisations we have studied so far, those institutes that are devoted to new humanities, this is usually done in an interdisciplinary way. Staff is associated with one disciplinary department – for example philosophy or computer sciences – and then collaborates in research institutes devoted, for example, to the digital humanities. We do find evidence for a more transversal type of researcher: the focus in many new humanities institutes is strongly focused on transversal collaborations and relations between different disciplinary approaches. This requires a more open type of researcher. As Huw Price says: ‘One of the challenges is not only bringing the people together who can answer the questions, but who can ask the questions.’ New centres of humanities often start from a bottom-up or grass-roots approach, whereas people start working together because they have felt limited by their own disciplines in order to engage with certain kinds of questions they encountered.

Throughout the new humanities we see that interdisciplinary approaches are the methodological and organisational starting point. This necessarily spawns new approaches, new methodologies and new posthuman and forms of knowledge enquiry. We see how the Public Humanities are increasingly being practised throughout the humanities. The Digital Humanities have become a huge force already but this is still a young field. It can still move into many different directions. The Biomedical Humanities might have received a renewed momentum with the COVID-19 pandemic, while the Environmental Humanities are ever important in the context of climate change as the ultimate global challenge of the twenty-first century. But the COVID-19 crisis can also be read as a victory for the Digital Humanities, especially as we see that the core tasks of the university, research and education have been pushed with astonishing swiftness to the digital realm. In what form the university will emerge from the COVID-19 crisis, and whether there will be a role for ‘physical spaces’ for research and education in the humanities, becomes increasingly unclear. In Europe, some developments in the new humanities are delayed responses to the North American emergence of the new humanities. But Europe, with its strong history in critical theory, also brings new approaches to the table. How this will exactly develop remains an open question.

The transversal posthumanities emerge within this fast-moving landscape, both as a reaction to the convulsive changes of cognitive capitalism and as an active or affirmative attempt to repurpose these changes towards non-profit and critical aims. The posthumanities operationalise this qualitative shift and redefine the parameters of thought along heterogeneous lines of transversality (Braidotti 2019). The transversal posthumanities come about when communities of scholars recognise the specific kind of contradictory intercon-

nections emerging in the posthuman convergence between academic work and scholarly research, based on critical thinking, and materially embedded and embodied social formations. The link between them is forged by the new modes of knowledge production of cognitive capitalism that cut across traditional institutional divides and add new urgency to the issues at stake. For instance, the Environmental and Digital Humanities, which are the two pillars of the transversal posthumanities, are prompted by the understanding that we need to work with but also go beyond posthumanism and post-anthropocentrism. Thinking outside the box, which seemed blasphemous in the 1970s, has become the norm at times of neoliberal governance.

The minimal requirement for the qualitative change of perspective introduced by the transversal posthumanities is to reposition terrestrial, planetary, cosmic concerns, the naturalised others like animals and plants, and the technological apparatus, as serious agents and co-constructors of transversal thinking and knowing. Because the posthuman condition is computational, as well as environmental and ecological, and because it is also fraught with inequalities, it demands a critical turn towards *zoe/geo/techno*-bound perspectives. This reorientation requires that the humanities accept the need to rework their relationship to the sciences, and vice versa, thus allowing for a culture of mutual respect to emerge. At the same time, it is paradoxical to note that the humanities end up providing most of the terminology, metaphors and representations for cyberspace, with posthuman agents their weird objects of study.

The posthumanities defy established patterns of humanistic and anthropocentric thought, by challenging the nature-culture, human/non-human, *bios/zoe* distinctions. These categorical divides are not only conceptual but also methodological, in that they support a social constructivist methodology which has proved foundational for the traditional humanities and the critical studies alike (one is not born, one becomes, a critical thinker). This binary method, however, does not always help to deal with the challenges of our eco-sophical, post-anthropocentric, geo-bound and techno-mediated milieus. We propose instead a new affirmative method of co-construction and expression of vital, neo-materialist locations and perspectives.

In other words, the dominant meta-pattern driven by the speed of reterritorialisation of neoliberal economics, and thus limited by it, is not the full picture. Saturation by capital does not exhaust the potential of the environmental, the digital, or of any other posthumanities. There is another way of approaching the phenomenon, which points to both the methods and the ethical aspirations of their critical powers. This approach stresses the transversal force of the posthumanities as a constitutive flow of supra-disciplinary discourses indexed on the becoming-minoritarian of knowing subjects and knowledge practices. They are carried by affirmative ethical forces.

At least two kinds of knowledge economies are thus at work in the posthuman convergence. The first is contiguous with the epistemic accelerationism of advanced capitalism (Braidotti 2019) in the service of dominant or 'Major Science' (Deleuze and Guattari 1994). The second engages with minorities, involving an affirmative diversity of knowledge traditions or 'minor nomad sciences'. The relationship between these qualitatively distinct practices is neither binary nor dialectical but is constituted by constant negotiations and contestations. Their dynamic and often antagonistic interaction fuels the immense energy of the fast-growing field of the transversal posthumanities.

Transversality becomes the operative word in distinguishing between dominant states of 'Major Science' and the transversal becoming of 'Minor Science'. This distinction is ethical, but its effects are political as well as institutional. 'We' – critical posthuman

thinkers – are capable of sustaining affirmative assemblages, knowing that their political force lies in actualising collective imaginings (Gatens and Lloyd 1999).

The term transversality is introduced to psychoanalytic theory and philosophy in the work of Guattari (1984) and of Deleuze (2000), and the two together (1994). The concept is meant to de-link the force of desire from the Lacanian dialectics of Lack and Law and turn it instead towards a neo-Spinozist notion of desire as plenitude. Transversality positions desire as a positive force capable of subverting, but also restructuring, relations between entities in the world. In this major shift, unconscious processes get redefined not as the emanation of a centralised linguistic master code, but as the result of collectively enacted material interventions in the world. Unconscious desires are both disruptive and generative.

This non-dialectical understanding of desire has important implications for marginalised, under-represented and virtual modes of thinking and knowing. What is not yet known, in other words, does not fall into the negative regime of unknowability. It rather remains transversal, virtual, in that it expresses an un-coded, transgressive and at times illicit mode of knowledge that has not yet received the official seal of approval. It is in the process of being actualised, through the collective praxis of forming a transversal subject assemblage that can carry out the task of actually implementing new ways of knowing.

By extension, transdisciplinary, interdisciplinary, and post-disciplinary scholars have expertise and know-how without necessarily being (recognised as) disciplinary experts, or in spite of what they may know about the limitations of those disciplines. Marginal knowledge is dynamic, vital and unruly in its very aspirations to change the rules of the game. This inner tension, and the positive force of the desire that sustains it, articulates some of the shifting ground that constitutes the posthumanities and supports the intense transdisciplinarity they require. The transversal approach has proved inspirational for posthuman pedagogy and education (Semetsky 2008; Semetsky and Masny 2013) by building on the idea of subject formation as an event that takes place transversally, in-between nature/technology, male/female, black/white, local/global, present/past – in assemblages that flow across and displace binary oppositions (Braidotti 1994). Posthuman critical thinkers and educators situate themselves in and as part of the world, defending an idea of knowledge production as embedded, embodied, affective and relational.

The emphasis on vital neo-materialism, which provides the ontological grounding for critical posthuman scholarship as a transversal field of knowledge, is also a way to resist the business model of neoliberal higher education. Posthuman transversality was developed (Cole and Bradley 2018) as an organisational principle that criticises this pyramidal academic structure and the hierarchical chain of command at the core of most institutions of higher learning. It also calls into question the role of capital in higher education designed as a global market, and the unequal labour relations it engenders, with a vast ‘precariat’ at the bottom of the academic scale. For most participants, the reality of an academic education today is a high debt and under-employment. Practices of community-driven ‘transversality’ are the antidote to the corporatisation of the university and the monetarisation of knowledge, in that they introduce a non-hierarchical model of relationality and the gratuity of affect in education.

As Åsberg (Åsberg, Koobak and Johnson 2010) and Lykke (2018) suggest, the posthumanities foreground post-disciplinarity as a transformative principle to destabilise the hegemonic power of distinct disciplines and the hierarchies of knowledge that structure the academic divides between the human, social and natural sciences. New institutional modes and methods of organising posthuman knowledge need to unfold in transversal

conversations, through collaborative, shareable academic spaces, where community work can be enacted in a non-competitive frame.

This emphasis on the politics of immanence allows the inclusion in education of non-anthropomorphic elements, be it animals, natural entities or technological apparatus. *Zoe/geo/techno* transversal entities allow us to think across previously segregated species, categories and domains. Transversality facilitates links to animality, to algorithmic systems, to planetary organism, on equal but rhizomic terms that involve territories, geologies, ecologies and technologies of survival. It relocates both students and educators into the very world they are trying to learn about.

The different posthumanities are best approached as non-linear assemblages themselves: they resonate and intersect with each other in disjunctive as well as conjunctive ways. One of the binding affects that flows through them is the desire to reach a more adequate understanding of the conditions that sustain the posthuman convergence, by adopting an affirmative transversal approach. There are multiple inhumane and unjust factors in the contemporary posthuman condition, as well as a wealth of possibilities. As I argued above, transversality is a non-normative but nonetheless highly ethical approach that demands collective praxis and implies a shift in habits, in frames of reference, but also in daily interactions and activities.

The posthumanities are a clear expression of the current energy and creativity of a field so many in neoliberal governance have given up for dead. They are intensely critical and creative without being bound to any disciplinary identity, and that can also be a means for intellectuals and researchers to develop critical attention to their own working habits and modes of thought. Beyond the established and too often binary requirements of constructivist methodology and the mere cognitive mapping required by recognition of situation, the transversality in the posthumanities goes beyond discourse analysis by pushing their critical reach to the field of knowledge production that is co-extensive with cognitive capitalism and its material consequences.

## Notes

1. Many new humanities have been identified: energy humanities, food humanities, urban humanities, blue humanities, geo humanities, bio humanities, earth humanities, neural humanities, cognitive humanities, evolutionary humanities, experimental humanities, engaged humanities, civic humanities, global humanities . . . .
2. Though counter-trends are also visible. Take for example the 'Digital Humanities Association of Southern Africa' (DHASA). Whether the development of new humanities in the Global South replaces the classical humanities, or is added to them, remains to be seen.
3. On the Medical Humanities: 'The humanities and arts provide insight into the human condition, suffering, personhood, our responsibility to each other, and offer a historical perspective on medical practice. Attention to literature and the arts helps to develop and nurture skills of observation, analysis, empathy, and self-reflection – skills that are essential for humane medical care. The social sciences help us to understand how bioscience and medicine take place within cultural and social contexts and how culture interacts with the individual experience of illness and the way medicine is practiced' (Aull 2011).

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