After the Anthropocene

Exploring emancipatory politics through art in times of global ecological disturbances

Still from *Into the Inferno* (dir. Werner Herzog, 2016)

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Ozymandias

I met a traveller from an antique land
Who said: Two vast and trunkless legs of stone
Stand in the desert... near them, on the sand,
Half sunk, a shattered visage lies, whose frown,
And wrinkled lip, and sneer of cold command,
Tell that its sculptor well those passions read
Which yet survive, stamped on these lifeless things,
The hand that mocked them and the heart that fed:
And on the pedestal these words appear:
'My name is Ozymandias, king of kings:
Look on my works, ye Mighty, and despair!'
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away

— Percy Bysshe Shelley, 1818

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Introduction

On 12 December 2015, an event took place that in the established media was heralded as a historic moment in humanity's struggle against climate change. After more than two decades of negotiations, all 195 parties involved in the 'Framework Convention on Climate Change' treaty of the United Nations reached an agreement on an 'acceptable limit' to global warming (namely, that the rise in global temperature needs to remain below 2 degrees Celsius above pre-industrial levels) and on the steps to be taken to reduce greenhouse gas emissions in order to stay below that limit.[1] The Paris Agreement, as it is called, is to succeed the in many regards failed Kyoto Protocol of 1997. In contrast to the latter, the Paris Agreement was ratified by the two biggest industrial powers, China and the United States, and has more ambitious targets. However, due to pressure of these two states, the Paris Agreement is for a large part legally non-binding. The precarious status of the agreement became painfully clear when, less than two years after the Paris Agreement was introduced as the next big step in the fight against anthropogenic climate change, the United States under the presidency of Donald Trump decided to withdraw from it.

While the Paris Agreement, even without the participation of the United States, might have some praiseworthy aspects – the agreement can coordinate the implementation of certain 'green' policies on an international scale, and it might boost investments in the renewable energy industry – it is my contention that it will fundamentally be unable to fulfill its official purpose (to reduce humanity's destabilizing influence on the Earth's ecosystem), and will uphold the structures through which these anthropogenic ecological disturbances could emerge in the first place. If the Paris Agreement will in any way be 'historic', it is as a landmark in a history of failures to effectively respond to climate change and climate pollution. The agreement once more affirmed the inability of institutional politics, the techno-scientific-industrial complex, and mass media to devise new ways of thinking and acting that are needed for the inconceivable and unpredictable challenges that human and non-human beings will be confronted with due to rapid ecological and geological changes. As I will explain, the Paris Agreement is in no way a step towards the development of ecological societies and techniques for living on a planet with environments less stable then during the Holocene epoch. Besides its weak legal status and its limited scope, it is clear that the agreement is in many regards doing too little, too late. A rise in global temperature of nearly 2 degrees Celsius still means a drastic

[1] The agreement, as well as information concerning its history and its current status, can be found on the following website: http://unfccc.int/2860.php

change in the geography of the Earth, of which the precise effects on ecosystems are not known. Moreover, the idea that institutional politics could keep in check the assemblages of capitalist and statist forces that continuously seek to expand and crystallize their power, points to a kind of historical amnesia and naivety. The fact that economic growth and military apparatuses are both still very much dependent on fossil fuels, will cause international efforts to reduce the use of fossil fuels to coincide with increasing distrust and hostility between states and between corporations.[2] Global geopolitical relations and constellations will also come under pressure by growing scarcity of 'natural resources' like freshwater, and increasing occurrences of other kinds of climate disasters, such as floods and droughts, which can become the sources of political and social conflicts and instability, and can send large populations adrift.[3] Moreover, the increasing political and economic power as well as the expanding transnational operations of business organizations, characteristic of the late global stage of capitalism, makes it harder to be able to oversee what these corporations precisely do, where they operate, and who are involved in their vast network of material and immaterial labor, assets, production lines, transportation and distribution systems, et cetera. In effect, it also becomes more difficult to regulate their actions through national and international rules of law. A corporation like the oil and gas giant Royal Dutch Shell can leave behind a trail of disasters, of pollution and destruction of living spaces of humans and other animals, in many cases without serious consequences or large-scale political and public outrage, partly due to their abstruse nature, partly due their extensive lobby machine.[4]

Another indication that the Paris Agreement will not be a step towards the 'global green economy' that the UN envisions, is the growing political influence of parties and leaders that deny or evade the issue of climate change, especially in those states that have historically contributed the most to climate change in terms of the emissions of greenhouse gasses and the production of waste. For example, president Vladimir Putin of Russia as well as president Donald Trump of the United States have denied the scientific consensus which states that human activity is the cause of significant and rapid climate change. In Europe and the United States, extreme conservative and

[2] The current president of the United States, Donald Trump, has (in)famously stated at one point that global warming is a hoax perpetuated by China as part of an economic war with the United States. In an interview conducted during his time as president-elect, he stated that he might acknowledge that human activity is a cause to climate change, as long as this does not negatively affect the competitiveness of American companies. See Stack, Bromwich, Workman & Herrera, 2016

[3] Various climate scientists have argued that droughts and freshwater scarcity in Syria have been significant factors in the development of the Syrian Civil War. See Gleick, 2014; Kelley et al., 2015

[4] It is well known that lobby practices by business organizations are common in the fields of politics, media, and science. However, what influence lobbyists precisely have and how far their power reaches generally remains obscure, which makes it a fertile source of conspiracy theories and popular paranoia. What we do know is that the current Secretary of State in the United States, Rex Tillerson, is the former CEO of oil and gas corporation ExxonMobil. What we also know is that an energy lobby paid media outlets in order to give 'climate-change deniers' a stage. See Emmons, 2016.

right-wing populist thinkers and politicians feed successfully off the growing feelings of economic, cultural and social precarity and anxiety caused by neoliberal capitalism. Against the social democratic and liberal parties' program of a cosmopolitan neoliberalism with 'progressive' ideals (including the false promise of a future that will consists of a global bourgeois culture congruent with a 'green' form of capitalism), they propose a program which is neoliberal in the economic sense (a belief in privatization, free market mechanisms, and minimal regulation by governments), but which is combined with an authoritarian mode of governance when it comes to the spheres of culture and society, which are understood in strongly nationalistic, racist, homogeneous terms. Because of their belief in 'national tribalism' and their aversion against ideas of global responsibilities and global governance, it is not surprising that they either evade the issue of anthropogenic climate change or climate change in general, deny it, or present it as something that should be dealt with on the level of the nation-state.

The growing presence in the media and the growing influence on public debates of these conservative political movements gives space and influence to a campaign to sow doubt about the legitimacy of climate science or to reframe climate change debates in terms of national security or economic interests. A network of conservative 'think tanks' and campaigning movements, receiving a significant share of their funding from multinational corporations, are constantly at work to promote 'climate change denial' via conservative and right-wing populist movements and via mainstream and new media channels.[5] As Bruno Latour points out, in contrast to what such organizations proclaim, the intention is not to inform the public about a balanced scientific debate that is going on between scientists who argue that there is evidence for anthropogenic climate change and scientists that argue that there is no significant change of climate at all or that humans have had no influence on it.[6] After all, there is no such debate in the scientific community, since there is a large consensus among climate scientists that established models and methods have produced an extensive body of evidence for anthropogenic climate change. Latour argues that 'climate change denialism' should rather be understood as an effort to disseminate the idea that such a debate between scientists is going on, in effect producing an air of confusion and doubt around the topic among politicians and the public. As Latour points out, a "science-versus-politics repertoire" dominates debates about climate policies, which perpetuates the idea that science is purely about facts and objective reality, and should therefore be strictly separated from the subjective sphere of politics.[7] According to this

[5] An investigation by Greenpeace into the funding of organizations that push climate change denial revealed that the central figures behind the 'climate denial machine' are the multi-billionaire Koch brothers, principal owners of the massive corporation Koch Industries: see Greenpeace, 2011. For a more in-depth analysis of 'climate change denial' funding, see Brulle, 2013.
[6] Latour, 2015
[7] Ibid., p. 147

paradigm, politics should base their policies only on established scientific facts. The 'denialists' play into the fear that policies could muddle the split between science and politics. By pushing the idea that there is no certainty within the field of climate science, that there is no consensus in the scientific community, they at the same time accuse climate policies of having taken side in this scientific debate and having thus 'polluted' science with political choices.[8] The Manichean view of science and politics thus becomes an effective weapon against efforts to construct any ambitious kind of climate politics.

Taking all of the above into account, it is hard to remain optimistic (if we ever were) about an imminent emergence of something like an 'ecological society'. To trust in local, national, and international institutional politics and techno-scientific industries in finding solutions to the challenges of a drastically changing climate that would be in service of all of humanity as well as the rich diversity of non-human beings on this planet, would be to take a leap of faith even though the current state of affairs indicate that this leap will be a plunge into the abyss. The time in which we can go on with our lives and wait for things to work out, or in which we can once again, reluctantly, put our hopes in those political systems of which we know that they are not working anymore, without this leading to disastrous consequences, is running out, if it has not already passed. But what else can be done?

Industrial capitalism tries to fill the void left by a lack of answers to this question. In many regions in the world, especially in the 'western' countries, so-called 'ecological' industries have emerged. One can now buy shampoo bottles from recycled plastic containing biodegradable shampoo, organic vegetables and fruits from farmers that only use 'natural' pesticides and soil conditioners, water taps and showers that save water, and so forth. Although the emergence of these 'green' commodities might in many cases be a welcome development, it also has serious drawbacks. Besides the standard critiques – many of these products are only available for a small, economically privileged section of the world population; the production processes behind these commodities are in many cases too opaque and complex to determine if they are as 'ecological' as they claim to be – this 'green economy' is damaging because it feeds into the idea that the issues that we are facing and their solutions are a matter of individual consumer choices. As Mark Fisher explains, the ideological effect of this is that it obscures the fact that "the cause of eco-catastrophe is an impersonal structure which, even though it is capable of producing all manner of effects, is precisely not a subject capable of exercising responsibility."[9] A growing number of people try to 'do their bit', to eat a little less meat, to sort their household waste, to replace their light bulbs et cetera. At the same time, they are encouraged to 'think about the economy', to show their 'confidence in

[8] Latour, 2015
[9] Fisher, 2009, p. 66

the market' by spending their money; to replace their car and computer every five years, to move to a bigger residence, to travel more, to experience more, to consume more, to produce more. This consumer subjectivity produced by capital contains a sort of bipolar disorder: the subject's ethical duty is to contribute to economic growth, while at the same time she or he has to feel responsible for and somehow counter the devastating effects of this economic growth imperative.[10]

Meanwhile, news about worrying discoveries and adjusted predictions made by climate scientists keeps rolling in. Growing understanding of the working of the intricate assemblages of ecosystems that make up the climate of this planet has uncovered that seemingly disparate elements of different ecosystems affect each other in all sorts of way. A change in an ecosystem on one side of the globe can turn out to be a cause of a seemingly disparate event on the other side of the globe, or can even lead to a change of climate on a global level. Climate scientists are in the process of discovering the 'tipping points' of ecosystems, geological changes that have irreversible effects and that set into motion a chain of other geological changes. The realization of the existence of such 'tipping points', many of which we are in the process of crossing, once more reaffirms that the Holocene is over. Global warming, rising sea levels, disappearing ecosystems, mass extinction, ocean acidification, droughts, desertification, plastic soups and plastic particle water pollution, plutonium waste, air pollution, depletion of fresh water sources, the emergence of new kinds of parasites and diseases, habitat fragmentation, invasive species, soil degradation, deforestation, oil spills, environmental toxication and poisoning – these events, of which human activity was a significant cause, come on top of other discoveries made in the 19th and 20th century that existence on Earth is all but a secure affair. Contingent events, such as the impact of a large asteroid, or the eruption of a super volcano, could drastically change ecological conditions of our planet. A state with technologically advanced military weaponry could turn a whole continent into a radio-active wasteland. Meanwhile, people try to live their lives, to find some freedom and enjoyment where they can, to work so that they can provide for themselves and for those belonging to their communities the means that are necessary to live a pleasant live in the society they are part of. It seems hard to do this if we would be constantly reminded of the fact that our future is threatened by all sorts of ecological catastrophes. It is therefore not surprising that most people suppress or deny what Timothy Morton calls "the ecological thought", the realization that ecology (in all its messiness and unstableness) underlies everything we are, everything we do, and everything we encounter.[11]

What can be done? This question keeps forcing itself upon us whenever we are reminded of humanity's destabilizing effects on ecosystems, but we seem to lack a fecundity of imagination, we

[10] Mark Fisher has pointed out that capitalism itself follows a bipolar logic, oscillating between a manic period of seemingly infinite economic growth and a sudden collapse into a state of depression. See Fisher, 2009, p. 35
[11] Morton, 2010

seem to lack ways of thinking and speaking that are needed to articulate satisfying responses. As Isabelle Stengers has argued, we find ourselves in a state of suspense between two histories: a history of eternal 'economic growth' and accumulation of wealth that is currently imposed on us by capitalism, and a history of what Stengers calls 'the intrusion of Gaia', the violent experience that 'the environment' or 'planet Earth' are not the impregnable backgrounds to the activities of the human species that we thought they were.[12] Our capitalist social organization keeps us in this state of suspense. We must come to terms with the fact that the first history binds us to the second one, and to find a way out of the first history in order to live with the second history. This means finding escapes from what Mark Fisher calls "capitalist realism", the ideological structure that conflates capitalism with reality, and that works to paralyze thinking of alternatives to capitalism, and from deeper structures of hierarchy and domination that have culminated in this system of production.[13]

The idea central to this thesis is that we need to learn to reconcile with 'the ecological thought', with the 'intrusion of Gaia', to learn to think with catastrophe and finitude, and that we have to find escapes out of the deadlocks of capitalism and other structures of domination. This 'double move' is needed to conceive of new kinds of social organizations that revolve around ecological resilience and fecundity, and that can be responsible to both human and non-human life, as well as to the non-living entities, that reside on this planet. In the first chapter, I will go into the recent emergence of the concept of the Anthropocene, a strange historico-geological term that has brought together academics of all sorts of fields and that has provoked new inquiries and debates about questions of ecology. The Anthropocene, a new geological period in which the human species has become a significant geological force, challenges many of our conceptions about mankind and the world, and confronts us with new questions and problems. I will discuss the Anthropocene as both the emergence of a new period which grows out of a history of the emergence of hierarchy and domination, and as a specific event that consists of a sudden large-spread awareness of our being in this new period.

In the second chapter I will expand on Jameson's idea of 'cognitive mapping', arguing that it is a helpful tool for relating subjective positions to the totality of socio-economic relations, making it possible to cognitively grasp, through figuration, the ways in which we are entangled in the social organizations of the Anthropocene. Cognitive mapping is a necessary activity to counter processes of alienation that emerge in industrial capitalist social organizations, and to make it possible to get a grasp on the Anthropocene as a political problem. The cognitive map can then serve as a starting point for conceiving an emancipatory politics, political alternatives and tactics of resistance. As I will discuss, narrative art is especially useful for the practice of cognitive mapping. Taking the French

[12] Stengers, 2015
[13] Fisher, 2009

graphic novel tetralogy *Snowpiercer* (*Le Transperceneige*, published between 1982 and 2015) and its film adaptation (released in 2015) as case studies, I will show how science-fiction narratives in particular can form helpful cognitive maps for the Anthropocene. What my cognitive mapping reveals, however, is that the Anthropocene causes a kind of disruption in the relation that Jameson sees between cognitive mapping and what he calls Utopian imagination, the imagining of alternatives to our current social organization. This happens because Jameson's idea of Utopianism and emancipatory politics is grounded in traditional Marxist and socialist ways of thinking. As I will show, *Snowpiercer* as a cognitive map of the Anthropocene shows why such ways of thinking are not useful, since they are entangled in structures of hierarchy and domination that we precisely need to get rid of in order to make possible the emergence of free and ecologically fecund societies.

A different kind of Utopian politics will be explored in the third chapter, by taking Guattari's ethico-aesthetic 'ecosophy' as a starting point. I will use *Encounters at the End of the World* (2007) and several other works by the filmmaker Werner Herzog as case studies to explore how art can be of help in producing ways of thinking with geology, thinking with the interconnectedness of human and non-human nature, thinking with hyperobjects like climate change and deep time, and thinking with catastrophe. As will be shown, Herzog is particularly interested in the tension between the will to master nature that drives Civilization, and a fundamentally different desire that revolves around encountering something in and through nature that goes beyond the comprehension and time scales of human being. I will argue that Herzog's works, by exploring this tension, can help us think about other kind of ecological relations and affects outside of the frame work of industrial capitalism and other structures of domination, domestication, and exploitation.

With this thesis, I seek to contribute to the increasingly urgent question of conceiving a radical emancipatory politics that strives towards both freedom from domination and hierarchy, as well as ecological fecundity, a responsibility for non-human life, and an adaptability to the changing rhythms and interactions of ecological and geological forces. As will become clear, my approach to 'the problem of the Anthropocene' is informed by an anarchist perspective, as well as by theories of 'late' and 'post-'marxists such as Adorno and Guattari. The reason why I attach so much importance to 'emancipatory politics', is not only because I believe that a humanities scholar should aspire to contribute to the creation of a better world (or better worlds), but also because I believe that the question of politics is thoroughly interlinked with the question of ecology and climate change.

Chapter 1

The deep roots of the Anthropocene

"Human beings purchase the increase in their power with estrangement from that over which it is exerted. Enlightenment stands in the same relationship to things as the dictator to human beings. He knows them to the extent that he can manipulate them."

– Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment*[14]

The emergence of hierarchy and domination

Like other complex organisms, the human being has emerged, developed, and survived as the result of a history of random mutations that, filtered through the process of what Darwin called 'natural selection', led to a set of biological structures, functions and capacities adapted to specific environmental circumstances. This process of evolution through mutations and selection, and thus of the emergence of life, is itself a coincidental product of random series of differentiation, fluctuation, expansion, and interaction of matter that have led to the development of the universe. The remarkable aspect of the human being, and to a lesser extent of some other animals, is that they are assemblages of matter that have become aware of themselves. The cognitive faculties of humans enable an awareness of their own being and of their relation to material processes surrounding them, which make it possible for them to give value, purpose and direction to their own existence, as well as to that of their environments. The law of natural selection makes sure that life forms have the faculties necessary to survive and reproduce or die out, but it is only in the human being that this has developed fully into a *will to life*, a desire to exist that causes it to no longer depend on mutations on the genetic level in order to adapt and survive, but instead to willfully mutate its material surroundings, to creatively adapt its environment in order to prosper.

In that sense, ecology, the understanding of the interactions between living and non-living entities that make up a given environment, has always been a fundamental concern for the human being. Ecology is the original *logos*, and technique is its corresponding praxis.[15] Since their 'primitive' stage, humans have reshaped materials into 'tools' in order to secure survival and prolong life. In

[14] Horkheimer & Adorno, p. 6

[15] In his monumental work on mankind's relation to technique and technology, *The Technological Society*, Jacques Ellul defines 'technique' as "the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity." He also uses the word to refer to this or that specific technique within this technical totality. See: Ellul, 1964, p. xxv

this, the human animal is not exceptional: other primates, but also for example elephants and crows, use tools for these reasons. However, humans have the cognitive capacities to develop a thorough understanding of environments over time, in a degree that is unlike that of any other (known) animal. In the hands of humans, tools become part of a technique, namely the rational reorganization of the environment in order to yield material forces as much as possible to the desires of human life. Ecology (*oiko-logia*, the study of the dwelling place) and economy (*oiko-nomia*, the management of the dwelling place) are interwoven: mankind's struggle to understand the working of the environment leads, via technique, to an effort to 'manage' that environment. As Ellul points out, it is "through technique, [that] man is able to utilize to his profit powers that are alien or hostile. He is able to manipulate his surroundings so that they are no longer merely his surroundings but become a factor of equilibrium and of profit to him."[16] This study and management of the dwelling place are an embryonic form of a bifurcation of man and nature: mankind desires itself beyond the restrictions and potentials of the material environment of which it is part, wanting to overcome the former and increase the latter. The use of tools to create fire, to produce shelters and clothes, to contain spaces for the plantation of crops and the herding of animals, all attest to a desire to rearrange the material world in order to extract surplus energy, which can be used to further this process of energy accumulation, allowing the human being to increase their physical and cognitive potentialities and to dwell into environments that were unsuitable for human life at first.

These material techniques are not the only expression of mankind's desire to master nature. Magic and myths, as Jacques Ellul as well as Theodor Adorno and Max Horkheimer point out, also functioned to make sense of the overwhelming and at some times destructive forces of nature and to find ways to make these forces manageable.[17] At first, this set of techniques for the establishment and expansion of a human order created only temporary, small-scale territories of relative stability within the seemingly infinite, unknowable chaotic whole that was nature. However, the interchange of the accumulation of energy and of improving techniques to create enclaves of order made increasingly complex social organizations of human beings possible, leading to the emergence of societies. Perhaps due to this growing complexity of social organization – an effect of the growing number of people, growing territories, and the increasing types of labor that had to be performed in order to keep these societies from collapsing – institutional social hierarchy took over from a 'unity of diversity' with a more reversible hierarchy as the principle through which societies were organized.[18] This shift has extensively been explored by the philosopher Murray Bookchin. Whereas standard liberal and Marxist readings of the history of hierarchy have understood the emergence of social

[16] Ellul, 1964, p. 25
[17] Ibid.; Horkheimer & Adorno, 2002
[18] Bookchin, 1982

hierarchy as an effect of increasing material abundance and the struggles for its distribution, Bookchin suggests that there are deeper causes for the crystallization of social roles into a hierarchical system.[19] Taking cue from anthropological research, he speculates how hierarchy has become a crystallized social institution. What anthropological accounts of 'primitive' or 'tribal' communties make clear is that it seems that the basis of most of these early social organizations consisted of the division of different social tasks on the basis of age, sex and lineage.[20] By reason of differences in bio-physiological capacities of the body, people of different sex and age were often assigned those kinds of roles that they would be able to perform most efficiently. At that point, these different roles were seen as equally important for the survival of the society, which was structured around a kind of social contract based on lineage. Bookchin argues that two forces caused this distribution of labor to eventually give rise to a system of hierarchy. First of all, the tasks that were in most cases assigned to males – i.e. hunting and defending – became increasingly important when societies started to grow and war over territory between societies became increasingly common. Second of all, the division based on biological capacities meant that elders who, due to their loss of strength and physical abilities, could no longer perform the tasks they were meant to perform, were in fear of being discarded in times of hardship. This drives them towards capitalizing upon their social power: "They have the most to gain by the institutionalization of society and the emergence of hierarchy, for it is within this realm and as a result of this process that they can retain powers that are denied to them by physical weakness and infirmity."[21] While they might lack physical strength, they do have extensive knowledge of crafts and of nature. Making this knowledge a scarce good that can only be passed on by ritual practices initiated by the elders, gives elders a social power and authority that secures their being taken care of. According to Bookchin, the shaman plays a special role in this. The shaman, in most cases a male elder, turns the privileged access to magical techniques that elders were believed to have into a privilege of a special segment of this group, and in effect "professionalizes power."[22] He or she was both driven by and benefiting from a fear of nature and a desire to be safeguarded from or even to overcome the forces of nature. The shaman would use its authority as a mediator between a seemingly antagonistic suprahuman nature and

[19] Bookchin, 1982

[20] It must be noted that the social organizations of 'tribal societies' are much more complex and differentiated than represented here, and that the currently existing non-hierarchical societies of which we have (some) knowledge cannot simply be equated with early human societies. This is perhaps not acknowledged enough by Bookchin himself. However, what can be said, and what is of main importance here, is that civic, political societies knows structures of hierarchy, authority, and domination that are fundamentally different from those of 'tribal societies,' and that these structures changes the relation between the human being and 'nature.'

[21] Bookchin, 1982, p. 81

[22] Ibid., p. 83

human society in order to protect themselves, by forming alliances with other elders and with the increasingly important male warriors.

Bookchin stresses that these crude forms of hierarchy were in essence techniques for accumulating social power in the form of prestige, and not for the appropriation of material gains into private hands. The social contract based on the 'blood oath' still made sure that material gains were in service of the community or society: "Hierarchy and domination remain captive to the blood oath until an entirely new social terrain can be established to support class relations and the systematic exploitation of human by human."[23] In other words, these seeds of hierarchy and domination are a base form of a certain structure of power relations that could, as the history of many human societies has given us proof of, grow into the more complex stratified structures of Class and State.[24] What is essential here, as will be discussed more fully below, is that within the emergence of hierarchy in early human societies, we also find the seed for a further bifurcation of human and nature, where nature becomes an antagonistic, fearsome force, that needs to be dominated in full. Bookchin argues that is not the case that the human's effort to dominate nature led to a domination of humans by humans, as is often assumed. In contrast, it was a specific state of mind and structure of social organization – for which Bookchin uses the concept "epistemologies of rule" – that made it possible to think of nature as something that can and must be dominated by the human being, and those epistemologies of rule stem from the presence of hierarchy and domination between humans.[25] Early human societies were intent on 'mastering' nature to an extent that society could remain a relatively stable structure within the whole of nature, out of which this society grew and of which it always remained part. Technique had to develop further before certain techniques of mastery and domination first used within the social domain made possible the ideology of a total domination of nature by mankind, that which Adorno and Horkheimer consigned under the concept of 'Enlightenment'.[26]

What made the emergence of such techniques in the social sphere possible, and why was it in Europe that these techniques could eventually develop into an imperial project intent on, and largely successful in, stratifying and dominating the entire world according to its own 'epistemologies of rule'? To find an answer to such questions, we would have to take into account a vast and complex set of social, political, and ecological factors, as well as all kinds of contingent events, that made possible the right conditions for that development. It is not my intention, nor is it in my ability, to

[23] Bookchin, 1982 p. 86
[24] With an emphasis on 'could.' As Bookchin rightfully stresses, we must not forget that many non-European societies never developed such forms of stratification and domination, and that there are still societies that in this regard are more free than those living under the rule of capitalist and socialist states.
[25] Bookchin, 1982, p. 89
[26] Horkheimer & Adorno, 2002

map out such a history of hierarchy, domination, and imperialism. However, I will sketch a broad overview of certain developments that are relevant for the phenomenon that I am trying to grasp here, namely the development of a certain type of social and technical organization that turned the material environment into an assemblage of resources to be exploited. As stated earlier, society first had to lose the 'blood oath' as its fundamental social contract, before hierarchy and domination could become an institutionalized structure of power relations. The driving force behind that event is the force of technique, which grew out of the human's will to create new territories, to surpass the limitations of a given environment in order to fulfill new desires, to open up new potentialities for human life. From the start, this 'force of technique' already worked through a process of what Gilles Deleuze and Félix Guattari call territorialization, deterritorialization and reterritorialization.[27] Technique, as a set of methods for the transcendence of material constraints, causes a continuous undoing (deterritorialization) of social organizations established within the chaos of nature (territories), in order to replace it with a new kind of social organization (reterritorialization). A growing efficiency in the accumulation of energy and the furthering of ecological understanding in order to stabilize territories on a larger scale and for longer periods, made possible more crystallized forms of living in large villages, then cities, and eventually in networks of rural villages and cities. In such increasingly complex and extensive forms of social organization, the earlier social contract based on the 'blood oath' loses its persuasiveness, since relations of kinship becomes increasingly muddled, and the growing number and intricacy of labor tasks needed to uphold this social organization asks for a division of society into a variety of specialized labor communities. This deterritorialization of kinship as the organizing principle, which until then made sure difference within society was still seen in an egalitarian manner as interlinked manifestations of a whole, necessitated a reterritorialization through a new kind of principle that could tie society together. The technical climate of urban society – with its general potential for material surpluses, its further removal from the unbridled ecologies of unicellar and multicellar organisms, and its dissolution of an organic web of interdependent social relations into a network of separated specialized spheres – removed objective and subjective factors that restrained structures of hierarchy, domination, and authority already lingering in earlier societies from becoming the basis of social organization. With the dissolution of an organic 'unity in diversity,' of the experience of a wholeness of society within every manifestation of that society, something needed to be introduced that could keep society unified, that could impose unity on a chaotic field of difference. Possible means for this were the means of force and servitude. Thus, as Bookchin argues, shamanism transformed into religion, changing from mediation between man and nature to mediation between the servant Man and its

[27] Deleuze & Guattari, 1983; Deleuze & Guattari, 1987

transcendental Master God(s). Warrior communities, now experiencing themselves as making up an independent social strata, transformed into institutions of coercive power seeking to keep the social diversity within civic society unified.[28] This marks the shift towards political societies based on the principle of governance, a social technique for keeping society in check. In effect, a kind of *social* ecology and economy, in the manner that I have used these terms earlier (i.e. the study and management of 'the dwelling place'), emerged. As Western philosophy has shown from its onset, human thought became preoccupied with the question of holding together this field of forces no longer unified organically, suggesting 'ideal' forms of governance such as a mastery by an intellectual class protected by the military, or a balanced alternation of a rule of 'the one, the few and the many.'[29] It seems as if as soon as society accepts that it needs a technique of governance, this technique demands absolute efficiency, and that what it tries to prevent from occurring (the disintegration of society) becomes a fundamentally intolerable event. It is for such reasons that Ellul is inclined to see 'technique' as an autonomous force, a sort of viral logic that inserts itself into every human effort and pushes it towards absolute rationality and efficiently, beyond what is graspable and controllable for individual human beings.[30] In the case of governance, this 'imperative of efficiency' meant a constant struggle to crystallize and expand (spatially, temporally, socially) structures for exerting power over others. This opened up a process in which society became (and has never fully seized to be) a latent civil war zone in which there is a constant struggle over the power to govern and the appropriation and invention of means to achieve further efficiency in this field, and a struggle of resistance against this power. What was necessitated by this technique of governance was the production of a 'knowledge of the human being', a knowledge of how to restrain and mold its desires and potentialities, either by means of violence or by efforts to construct and rework its interiority. In hindsight, we can see the history of 'civilization' as a tumultuous and uneven history of deterritorializations and reterritorializations of forms of governance, forms for 'managing' the civic human being, including different types of coercion and hierarchical subjectification.[31]

It was an objective matter of reorganizing social relations on the basis of social strata instead of communal being, as well as a cognitive restructuring that made possible an internalization of these forms of hierarchy and domination. It was not only the relation between humans themselves that changed through this process, but also the relation between humans and the material world at large. The will to overcome material scarcity and to increase potentialities for the creation and fulfillment

[28] Bookchin, 1982
[29] Sloterdijk, 2013
[30] Ellul, 1964
[31] 'Subjectification' both in the sense that a human being experiences itself as subjected to power structures, and that its experience of being a certain subject is the product of those power structures. This process has been examined in depth in the works of Michel Foucault, Gilles Deleuze and Félix Guattari.

of new desires served as the original ecological relationship of human societies with nature at large. However, in a civil society, this will becomes stratified as well. For these hierarchical societies organized through governance to work, some class in society needs to own the means to exert power over others. Thus, certain groups within society become self-interested in that they want to appropriate and secure the means of coercion and the means of production. By securing material gains for their specific group instead of society as a whole, they are able to accumulate political power, to rework society so that it works towards the fulfillment of their own desires and to avoid becoming subjugated by other groups that for the same reasons are seeking to appropriate power for themselves. Again, this effort develops as technique: the emergence of class societies attests to an increasing efficiency in accumulating means of domination within specific strata of society, through the subjectification and exploitation of those belonging to lower strata. There arises a vicious circle where the subjugation of lower classes further increases the power of the dominating classes to subjugate others. For subjugated classes within society, their labor is no longer in first instance for the benefit of the whole of society, but for the class constituting their masters, and it is only through toil for their masters that they themselves can regain access to a fraction of the material gains that they have produced. Both the dominated 'working classes', who are trying to regain the fruits of their own labor and free themselves from the necessity of toil, and the dominating classes, who are ever trying to accumulate means of domination and to further crystallize power relations, come to see continuous expansion of production as a necessity. In this process, the relation between mankind and the natural sphere in which it has constructed its territory or world changes, as technique increasingly pushes human beings towards seeing the material world as a resource for the aggregation of power. It is in the interest of civil society to transpose the forms of hierarchy and domination that already permeated the social sphere unto the sphere of nature.[32] At the same time, the loss of 'unity in diversity' as the organizing principle of society coincided with a loss of a sensibility for the same relation between human beings and ecology at large, with the human being starting to understand itself as a self-contained being against an 'outside world', instead of a being-in-flux that finds its unity within an ecological diversity in the form of a processual relation.[33] In civic societies with class stratification and state governance, which tries to transform

[32] An example of where the effect of social hierarchy and domination on our view of nature comes to light is in our inclination to speak of the mesh-like ecology of energy flows between organisms in terms of a hierarchical 'food pyramid,' or to see in the fluid, reversible division of roles in the communities of other social animals a 'dominance hierarchy.'

[33] In Europe, the idea of the human individual as a sealed-off subject that can observe and come to know the world in a disinterested, objective way, became a central ontological premise with the development of modern science. It was in the philosophies of Descartes and Kant that the self as a fixed, immaterial essence came to be seen as the ontological center of the world. Post-Kantian thinkers such as Nietzsche, Heidegger, Adorno, and Deleuze have tried to re-think the human being and 'nature' as being in a relation of becoming, instead of being fixed essences. In that sense, the philosophical projects of these thinkers can be seen as deeply ecological.

human beings into self-contained 'subjects', a logic of domination invades structures of feeling and thought. The subject, alienated from the world and the socius, sees domination as the only way to get rid of its straitjacket. The human being's relation with nature is reworked as an antagonistic relation, where there is a choice of either dominating 'the forces of nature' or to be dominated by them, just as there is seemingly only the choice of dominating other humans or being dominated by them.

As Bookchin argues, it is at this point that there emerges an ideology of the 'stinginess of nature', in which the human being is understood as having always been a self-contained being that is split from and opposed to a violent nature that threatens its further survival. This ideology, and the technique to exploit both humans and nature at large as sites of resources, develops with the emergence of hierarchical society, but only finds it true force in the period that we have come to know as classical modernity. As Ellul states, it was as if technique needed to wait for the scientific method to emerge before it could take on its full force.[34] Through the concept of 'Enlightenment,' Adorno and Horkheimer try to understand the workings of the ideology of 'stingy nature' and the corresponding efforts of modern science to subjugate nature in its totality emerging in this period in European history. They argue that modern science reworks the relation between human and nature, and reified nature as a resource for means of domination: "What human beings seek to learn from nature is how to use it to dominate wholly both it and human beings."[35] They argue that 'the advancement of thought' in the form of modern science constitutes a program that eradicates difference, singularity, uniqueness, in favor of a total unification of everything, so that everything can be endowed with value, can be measured, and can be compared. The objective is to make everything calculable, and in effect to make everything manageable and governable. In order to know the totality of nature as a operational unity, this technique drives societies towards continuous expansion of production and territory. The emergence of capitalism as an economic system and social organization, as a mode of production, is a technique based on this logic. As Karl Marx and Friedrich Engels have so thoroughly shown in their analyses of political economy, the central functioning of the capitalist system can be summarized as follows: "Accumulation for accumulation's sake, production for production's sake."[36] Its purpose to accumulate and produce more and more in increasingly large 'orbits' was first witnessed in the near-complete colonization of the Earth by European states.[37] The tragedy of human history is that those structures that led to the emergence of State and Capital proved more 'efficient' compared to those that were less stratified, in the sense that fundamentally hierarchical societies made possible a furthering of technical methods that, in the

[34] Ellul, 1964
[35] Horkheimer & Adorno, 2002, p. 2
[36] Marx, 2013, p. 415
[37] Jameson, 1998

industrial capitalist stage, were able expand on a global scale and overtake nearly all other kinds of societies.

As we know now, capitalism would in a later stage also expand by means of 'consumption for the sake of consumption' – intent on reworking the desires of people so that they are more prone to accept and even enjoy capitalist governance – and would eventually reach into a kind of 'hyperreal' cybertechnological virtual sphere of financial speculation and high-frequency trading.[38] Capitalism has thereby achieved the domination of 'first', 'second' as well as 'third nature' on a near-total level.[39] As stated earlier, however, capitalism is itself not the foundation of the totalitarian presence of the domination principle, but (for now) the most efficient technique for achieving this. As Bookchin has shown, it is just as well in the works Marx and Engels – who were deeply concerned with ecology, the metabolic relation between human and non-human nature, and man's alienation from nature by capitalism – that a deeper ideology of nature as something to be dominated by Man still comes to the fore. [40]

The anthropologist David Graeber has argued that "[t]he war against the imagination is the only one the capitalists seem to have definitively won," but we might be facing a deeper problem, namely that 'capitalist realism' is the latest effect of a war against the imagination already won by the principles of domination, hierarchy and exploitation.[41] As I will discuss in more detail later on, in order to work towards societies that are both free and ecologically fecund, it is not enough to critique capitalism and to imagine alternatives to capitalism alone. We need to find ways to free our imagination from the deeper structures of domination, hierarchy, and authoritarianism that now have been reterritorialized by capitalism.

The Anthropocene—an ending, a beginning

In discussions about the ecologically disastrous effects of capitalism and the apparent inability to escape this system that seems intent on a total exploitation of nature until there is nothing left to exploit, reference is often made to the saying by Frederic Jameson that it is now harder to imagine the end of capitalism then it is to imagine the end of the world. The first time this phrase was used by Jameson was in the essay *Future City* from 2003, in which he puts it as follows: "Someone once said that it is easier to imagine the end of the world than to imagine the end of capitalism. We can now

[38] Jameson, 1998

[39] With 'first nature' I mean a kind of base material ecology. With 'second nature' I refer to the social organizations of human beings that emerge through their reworking of 'first nature,' and the specific social relations and ways of being that are emerging as a result of these organizations. I borrow the concept of 'third nature' from McKenzie Wark, who uses it to refer to a reworking of first and second nature onto a new plane of digital and virtual information flows. See: Wark, 2015a

[40] Bookchin, 1982

[41] Graeber, 2011

revise that and witness the attempt to imagine capitalism by way of imagining the end of the world."[42] There are two interesting aspects in this original quote that are often omitted in later uses of the phrase. First of all, Jameson's remark that capitalism is now often imagined as the end of the world itself. This situation will be explored in more depth in the second chapter of this thesis. Second of all, the fact that Jameson attributes it to an unknown 'someone.' It might be the case that Jameson has forgotten when and where he heard this, but it could as well be the case that the idea cannot be traced back to a specific author, that Jameson was simply putting into words a general feeling that was lingering in capitalist societies after the so-called 'end of history.' After all, the 'Cold War' in the second half of the twentieth century made people acutely aware that industrial civilizations had developed the capacity to destroy a large part of life on Earth, and that making use of this capacity was not off limits in the struggle for total domination. Moreover, it was in the same period that the environmental and ecological sciences started to uncover the full extent and consequences of the devastating effects of the industrial exploitation of the Earth, at the same time that a 'Cold War' was being waged precisely about how this exploitation on industrial levels should be organized and imposed on the rest of the world. The eventual victory of capitalism and demise of Soviet socialism might have felt as a relief in the sense that the likelihood of a global catastrophe by means of nuclear weapons seemed to have declined drastically. But in the end, the war between capitalism and the state socialism of the Soviet Union was a war between two ideologies of domination over man and nature, two ideologies that, combined with industrial production, inevitably led to the death and destruction of life and livable space. Even though the ideologues of capitalism heralded the demise of the grand narrative of socialism and communism as the beginning of a peaceful new world order, it was clear that this was going to be an "order that will not hesitate to destroy itself if that's what it takes to destroy its enemies."[43] That we are now dealing with what David Graeber calls 'kamikaze capitalism' became all the more clear when news about anthropogenic causes of climate change, and prospects of mass degradation of habitats and increasing rates of natural disasters, started reaching the public consciousness. This new consciousness is most strongly encapsulated in the emergence of the concept of the 'Anthropocene'. In 2000, biologist Eugene F. Stoermer joined forces with atmospheric chemist and Nobel laureate Paul J. Crutzen, in order to formalize this concept and propose using it as a standard scientific term refering to the specific and unique geological and ecological situation that has emerged in the last two centuries. In an article for the International Geosphere-Biosphere program they argue the following: "Considering [the] major and still growing impacts of human activities on earth and atmosphere, and at all, including global, scales, it seems to us more than appropriate to emphasize the central role of mankind in geology and ecology by

[42] Jameson, 2003, p. 76
[43] Graeber, 2011

proposing to use the term “anthropocene” for the current geological epoch."[44] Crutzen further popularized the term in both scientific and popular circles by publishing an article on the concept in 2002 in the highly influential scientific journal Nature.[45] Although, as the historians Cristophe Bonneuil and Jean-Baptiste Fressoz show in their work *The Shock of the Anthropocene*, the idea that humans have become a significant geological force within the 'Earth system' is already more than a century old, it was not until Crutzen's intervention that this idea started to be accepted by the scientific community and by societies at large.[46]

Thus, although the idea that the ways in which industrial societies came to be organized had devastating effects on the vitality of all sorts of ecosystems was already circulating for some time, it is the concept of the 'Anthropocene' that has been able to raise awareness of the full extent and the urgency of this situation within academic circles, and increasingly in media and politics as well. One reason is that the second half of the twentieth century saw the emergence of increasingly globalized societies, connected through digital information systems and a global infrastructure that enables the movement of goods and people with a constantly increasing speed and scale. The experience of living in 'global network societies,' combined with the dissemination of the first photographic images of the planet on which we live, lay the foundation for a new kind of planetary vision as well as a species vision, an image of planet Earth as a meta-world, and of humanity as a meta-community that lives on this Earth.[47] As McLuhan argues, it was at this moment that ecology became planetary as well.[48] The situated ecologies through which this or that society or community territorializes itself now become part of larger whole, an abstract totality called planet Earth or the 'Earth system,' an ecosystem of ecosystems. In his book *A Vast Machine,* Paul N. Edwards, describes how in this period local and regional institutions and technologies for the registration of weather and climate data came to be connected into a giant global network intent on mapping the weather and climate patterns of the whole planet.[49] The 'vast machine' in the title of his book could refer to this assemblage of different institutions and technologies, but also to planet Earth, which could now be studied through the aggravation of weather and climate data as a giant machine regulating a global ecological system.

For the first time, through climate models of the Earth, we started to get insight into the development of the climate on a global scale, and the impact of human societies on ecosystems and the geosphere of the Earth. This new understanding of our 'dwelling space' as also having a planetary scale that affects and is affected by local ecosystems, meant that our ideas of ecology and economy

[44] Crutzen & Stoermer, 2000, p. 17
[45] Crutzen, 2002
[46] Bonneuil & Fressoz, 2016
[47] McLuhan, 1973
[48] Ibid.
[49] Edwards, 2010

(again in the literal senses of knowing and managing the dwelling space) had to be revised, and was in need of a new subject that could be understood as inhabiting the global dwelling space. This new subject was the human being as one manifestation of a whole species, of humanity as a concrete entity. That the accelerated globalization of the twentieth century made possible global statistics about the human population, as well as increased communication and exposure between people from different societies, cultures, and regions of the world, made this idea of belonging to a global species of humans all the more conceivable.[50] The concept of the 'Anthropocene' is able to encapsulate this new understanding; it combines the idea of the 'anthropos', of man, with a geological 'kainos', the newest period in the geological history of the Earth, and suggests that there is now an inseparable relation between the two: the human being is dependent for its well-being and survival on interactions between geological spheres on a global scale, but the future state of this whole 'Earth system' is in turn partly dependent on the behavior of the human beings as a totality.

The concept of the Anthropocene has generally been embraced by humanities scholars writing about ecology and the relations between the human and the non-human, but often not without hesitation and critical remarks. There are two main critiques of the concept, namely that it is anthropocentric, and that it is Eurocentric. As Donna Haraway suggests, the Anthropocene could once again install the human as the alpha and omega of the universe, and could obscure the complex interactions of living and non-living entities which makes life possible, and in and through which the human being constantly needs to constitute itself.[51] She therefore supplements the narrative of the Anthropocene with what she calls a narrative of the 'Chthulucene,' "a name for the dynamic ongoing sym-chthonic forces and powers of which people are a part, within which ongoingness is at stake."[52] To this can be added an infinite number of other '-cenes' that can highlight and make graspable a particular aspect of the complex interactions of living and non-living entities that make up our current geological en ecological situation. On the other hand, I would argue that we need a kind of anthropocentrism that highlights the particular and historically unique role that humans play at this moment on a geological level. However, this new role is not due to an inherent quality of the 'anthropos' as a species, but due to an 'anthropos' that developed large-scale stratified societies determined upon subjugating and exploiting 'nature' to the fullest extent.

[50] The relation of the individual human being to its species has also been explored by Karl Marx through his concept of 'species-being.' For Marx, however, species-being was mostly man's relation with the biological drives of their species, and not a concrete understanding of being part of a species, of a kind of global community of humans that are connected on the basis of the idea of a shared 'humanness.' See Marx, 1988

[51] "No species, not even our own arrogant one pretending to be good individuals in so-called modern Western scripts, acts alone; assemblages of organic species and of abiotic actors make history, the evolutionary kind and the other kinds too." Haraway, 2015, p. 159

[52] Ibid., p. 160

The second, related, critique, namely that the Anthropocene is Eurocentric, must also be taken into account. Bonneuil and Fressoz articulate the problem with the following two questions: "The anthropocenologists' official narrative heralds the return of the human species into history. But what is this anthropos, the generic human being of the Anthropocene? Is it not eminently diverse, with extremely different responsibilities in the global ecological disturbance?"[53] It must be acknowledged that there have been and still are societies that have had radically different relations with nature and ecology, with far less destructive and polluting effects on the milieus of themselves and of other living beings with which they share a living space. It must also not be forgotten that industrial civilization emerged in Europe and imposed itself on the rest of the world, often wiping out different forms of living together. The philosopher Peter Sloterdijk thus states: "When Crutzen talks about the "Anthropocene," one is confronted with a gesture of Dutch politeness—or fear of conflict. In this case one should rather speak of a "Eurocene" or a "Technocene" initiated by Europeans."[54] However, a term like 'Eurocene' might obscure the fact that we are dealing with a problem of forms of social organization on a global scale that cannot be fully understood by a critique of European colonialism and Europe's share in the emergence of ecological disturbances and catastrophes alone. The fact that most societies in the world are now organized on the basis of specific principles of hierarchy and domination, and a specific production system of capitalist exploitation of living beings and nature at large, may be an effect of Europe's technical and imperial history, but forms of social organization emerging outside of the frame of Euro-American capitalism will not necessarily lead to a more free and more fecund relation between humans and humans, humans and non-humans, and humans and ecosystems – that is, unless they undo themselves on all levels from the crystallization of hierarchy and domination.

Related to this is the proposal of certain theorists to use the term 'Capitalocene' instead of 'Anthropocene,' arguing that the main cause of ecological disturbances on a global scale is capitalism.[55] It must indeed be acknowledged that it is under a capitalist production system that we have reached this point, and that capitalism need to be the main focus of critique, since it is currently the dominant technique for the exploitation of life on Earth and of the Earth itself. However, as stated earlier, capitalism is a particular manifestation of a logic of hierarchy and domination that has deeper roots than capitalism. Indeed, one only has to look at the history of the Soviet Union to see that hierarchy, domination, and authority do not lose their force as soon as capitalism is displaced, and that any ideology that upholds the idea of a mankind that must free itself from 'stingy' nature and that must make nature into resource for its own self-realization, will be ecologically disastrous

[53] Bonneuil & Fressoz, 2016, ch. 4
[54] Sloterdijk, 2015, p. 328
[55] The most prominent proponent of the concept of the Capitalocene is the environmental historian Jason W. Moore. See: Moore, 2015

once it forms the basis of civic society, especially when that society is industrial. We must therefore not see capitalism as the sole cause of the current and future ecological disaster, but as a specific assemblage of multiple structures that can function independently of capitalism, and that work to crystallize hierarchical and authoritarian power relations, such as State and Class.[56] As Bookchin remarks, the State form is also driven by an imperative of endless and increasingly efficient accumulation and exploitation: "Like the market, the State knows no limits; it can easily become a self-generating and self-expanding force for its own sake, the institutional form in which domination for the sake of domination acquires palpability."[57] Capitalism and State can in fact be seen as two entangled forces that might have an antagonistic relation at times but that rely on each other in order to drive forwards towards the further accumulation of capital, power, and domination.

Having taken into account the pitfalls and possible blind spots of the 'Anthropocene' concept, we might ask what is the particular merit of sticking to this concept? As McKenzie Wark notes, the concept 'Anthropocene' is still worth using, if with caution, for it is somehow able to spark new intellectual and creative endeavors concerning the topics of ecology and social organization, bringing together people and knowledges that were formerly separated by the structures of disciplinary and specialized knowledge.[58] The Anthropocene poses itself as a problem that transcends disciplines, and that can only be addressed and understood fully by means of transdisciplinary interactions between those coming from diverse fields such as geology, biology, history, philosophy, mechanics, political science, art history, etc. Moreover, the concept harbors an essential critical potential, since it brings together human history or 'historical time,' and natural history or 'deep time.' In that way, it can disrupt the ideologies of the subjugation of nature that reached its fullest expression in modernity and 'Enlightenment' and its corresponding humanist ethical and philosophical discourses. The Anthropocene can free us from thinking of nature as a stable background for human history and as an external sphere that must be subjugated and exploited for Man's self-realization. Moreover, it can rekindle a sensibility for the historical existence of, and the importance of a diversity of ways of living in and with nature. As Bonneuil and Fressoz put it, "the Anthropocene is political inasmuch as it requires arbitrating between various conflicting human forcings on the planet, between the footprints of different human groups (classes, nations), between different technological and industrial options, or between different ways of life and consumption."[59] However, in order to keep alive the critical force of the concept of the Anthropocene, we must resists its inevitable

[56] Here, 'State' must not be understood in the narrow sense of a 'nation state', but as a structure for the governance of civic societies. It can emerge as a nation state, or as an assemblage of nation states, but it can also emerge in the form of corporate governance. The question of governance in relation to the Anthropocene will be discussed in more depth in the second chapter.
[57] Bookchin, 1982, p. 127
[58] Wark, 2015b
[59] Bonneuil & Fressoz, 2016, ch. 2

appropriation and reworking by State bureaucracies and capitalist industries. We must constantly uncover the Anthropocene as an event with revolutionary potentialities. We should see the Anthropocene as an event in the sense that we should actively resist understanding it as a new epoch in which humanity's acquired geological power will be the new center on the basis of which we understand the present and future of life on this planet, and on the basis of which we should increase our domination of and control over life. As Donna Haraway explains it: "the Anthropocene is more a boundary event than an epoch [...]. I think our job is to make the Anthropocene as short/thin as possible and to cultivate with each other in every way imaginable epochs to come that can replenish [ecological] refuge."[60] Bonneuil and Fressoz explain in more depth what approaching the Anthropocene as an event would mean in a political sense:

> To see the Anthropocene as an event rather than a thing means taking history seriously and learning to work with the natural sciences, without becoming mere chroniclers of a natural history of interactions between the human species and the Earth system. It also means noting that it is not enough to measure in order to understand, and that we cannot count on the accumulation of scientific data to carry out the necessary revolutions or involutions. It means deconstructing the official account in its managerial and non-conflictual variants, and forging new narratives for the Anthropocene and thus new imaginaries. Rethinking the past to open up the future.[61]

In the next two chapters, I will explore how narrative art forms can be of help in this effort, by providing cognitive maps of both our social and geological totality, and by providing new possibilities for thinking with and living with the Anthropocene.

[60] Haraway, 2015, p. 160
[61] Bonneuil & Fressoz, 2016, preface

Chapter 2

Snowpiercer and the prison of Progress

"Marx says that revolutions are the locomotive of world history. But perhaps it is quite otherwise. Perhaps revolutions are an attempt by the passengers on this train—namely, the human race—to activate the emergency brake."
– Walter Benjamin, *Paralipomena to "On the Concept of History"*[62]

'There Is No Alternative' in times of climate change

There is a certain difficulty or even impossibility in truly grasping the idea that we are complicit in upholding systems of production and governance that lead directly to all kinds of drastic ecological disturbances on both local and global levels. Modern civil societies organized by the abstract and unrepresentable forces of Capital, State, and Technique are experienced by its subjects as a naturally given world or order that comes prior to those inhabiting it. As stated in the previous chapter, it seems that we as subjects of such societies lack the capacity to imagine the world differently, to propose any fundamentally different kind of social organization, any fundamentally different way of being in and living with the world, precisely because we lack an image of the totality of those forces that produce this world, including our own complicity in its reproduction. However, the Anthropocene event pushes us to do exactly this 'thinking beyond', since the alternative (i.e. maintaining the status quo) will most likely result in a future of constant conflict and disaster, and of a planet increasingly uninhabitable for higher life forms. Therefore, we need to find ways to go beyond our incapacity of thinking and imagining outside the logic of the present systems and structures that will move us to such a future, which means that we in the first place have to understand why this feeling of incapacity takes hold over our imagination and 'political unconscious'. To do this, we need to take into account the process of alienation from social and natural worlds that has been taking place since the emergence of civil societies – as I have already discussed in the previous chapter – which has had especially devastating effects in the period after the industrial revolutions. In this chapter, I will address this problem, and explore through Fredric Jameson's theory of cognitive mapping and through the multimedia science fiction series *Snowpiercer* the possibilities of overcoming this incapacity and of creating rifts for Utopian imagination, for thinking the future differently. Before I go deeper into the problem of alienation and unrepresentable totality, and

[62] Benjamin, 2003, p. 402

cognitive mapping as a method to overcome these problems to some extent, I will first give an overview of the *Snowpiercer* series. I will then discuss the usefulness of approaching *Snowpiercer* through Jameson's method of cognitive mapping. However, what *Snowpiercer* as a cognitive map will show us is that an aspect that for Jameson is fundamentally related to cognitive mapping, namely the making possible of a kind of Utopian thinking through which we can imagine a kind of political totality different to capitalism, is being challenged by the idea of the Anthropocene, and must itself be imagined in new ways.

The train as a symbol of industrial progress

From the invention of the steam locomotive in the beginning of the 19th century onwards, the train served as a typical industrial figure that represents the characteristics of the industrial revolution as a whole. This huge machine powered by the energy extracted from burning fossil fuel was one of the most notable examples of what Marx called "the annihilation of space by time," a new stage in the technological means of communication and transport that compresses space and time to an extent far exceeding that of earlier periods.[63] The steam engine powered train made possible the flows of people and commodities over vast stretches of land, a fundamental factor in the emergence of industrial capitalism.[64] It is therefore not surprising that the train also became an important subject matter for many canonical artists of the nineteenth century. For example, the train is an important figure or character in paintings by Turner, Manet and Monet, in Tolstoy's *Anna Karenina*, and in the early films of Edison and the Lumière brothers. Both frightening, exciting, and captivating, it served as the symbol of a new era that could not be fully comprehended yet. Karl Marx was intrigued by the figure of the locomotive as well. In his article *Consequences of June 13, 1849* he states: "Revolutions are the locomotives of history."[65] It is not hard to imagine why he would use this image. Like the train, in its movement stuck to the path laid out by the railway tracks, history in Marx's view was destined to move in a specific direction, namely towards the end point of a classless society on the communist horizon. Until that moment is arrived at, class struggle and revolution would drive history forward, like a locomotive.

A century later, there is not much left of the hope that capitalism would soon be left behind as part of a historically inevitable progression towards a communist utopia. The twentieth century showed the darkest side of modern civilization; in the first half the rise of fascism and authoritarian socialism, and two horrific World Wars, in the second half the clash between American capitalist

[63] Marx, 1993, p. 524

[64] An important example of the locomotive's role in the emergence of increasingly extensive spaces for the smooth flow of commodities and labor power is the introduction of 'railway time,' the synchronization of local times into one unified, standard time in order to increase the efficiency of train schedules.

[65] Marx, 2010, p. 62

imperialism and Soviet socialist imperialism, as well as the first indications of life-threatening global ecological and geological disturbances. The figure of the train and the railway, as well as the teleological idea of history as progress, became severely tainted by the horrible events of the Shoah. Moreover, the idea of an inevitable progression towards a future free from hierarchy, domination, and exploitation became less conceivable and less likely than a future in which these phenomena are coupled with and intensified by global climate catastrophes and political chaos. Within this context, two French artists once again became captivated by the figure of the train as a figure through which we can understand the current social and political situation. In their graphic novel *Snowpiercer: The Escape* (originally released as *Le Transperceneige*), published in 1982, comic book writer Jacques Lob and illustrator Jean-Marc Rochette use the figure of a train that no longer carries the promise of technical and historical progress.[66] Instead, the train becomes a cage or prison, and the locomotive becomes a dictator that forces humans to keep moving with it. Moving forward no longer carries the promise of progress, but only of an endless reproduction of the same catastrophic situation, until 'the end of times'.

In *Snowpiecer: The Escape,* a radical change in climate has turned planet Earth into a desert of snow and ice that is seemingly unsuitable for complex life forms. A group of humans has survived by boarding a high-tech 'luxury train' designed to function as a self-sustainable biosphere, powered by a perpetual motion engine. Since the number of people that have boarded far exceeds the train's intended capacity, a large part of the passengers have to reside in the tail-section, a section of the train that was not intended for passengers but for the storage of supplies. In the tail-section, the people barely have any living space and must hope that the upper sections will keep providing them with supplies of food and water. The rest of the train is divided into carriages for the 'normal' passengers, carriages for personnel of what we can call the train State – i.e. those who own the means of production (food production carriages) and the means of violence (police and military for keeping the order) – and a frontal section full of luxury reserved for those of the elite that were able to secure a space there before the climate chaos ensued. The main character of the story is Proloff, a man who escaped from the tail-section, and who works his way forward, accompanied by Adeline, a woman who has been protesting for a better treatment of the 'tail-sectioners'. Through encounters with one of the leaders of the train's military apparatus, colonel Krimson, and with the train's archivist and historian Al, Proloff and Adeline find out that the train is slowly losing speed because the engine has to pull too much weight. The plan of those who govern the train is to get rid of the tail-section, including the people who live there, in an attempt to save the train and to get rid of those who are most likely to start an insurgency and disrupt the 'harmonious' train system. Finding

[66] Lob & Rochette, 2014

out about this plan, Adeline and Proloff work their way further through the train in order to stop it from happening. However, chaos ensues when a deadly disease spreads quickly among the passengers. The graphic novel ends with Proloff reaching the engine and meeting the caretaker of the engine, who asks him to take over his task. Proloff ends up being the sole survivor in the whole train, spending the rest of his life trying to keep the train running.

Eight years after the graphic novel was published, Jacques Lob died. However, writer Benjamin Legrand teamed up with Jean-Marc Rochette to continue the *Snowpiercer* narrative in two new graphic novels, released in 1999 and 2000.[67] In these two volumes, named *The Explorers* and *The Crossing*, the 'Icebreaker' train is introduced, a train of the same type and with a similar social organization as the 'Snowpiercer.' The protagonists in these two volumes is Puig, a man living in the middle section of the train who works as an explorer. The 'Icebreaker' is brought to a halt regularly in order to avoid collusion with the original 'Snowpiercer' train, which is riding on the same railway system. During these periods, explorers are send out of the train to scavenge in the frozen, desolated urban landscapes, collecting art and archives from 'the old world' for the train's elite. Puig, convinced that the leaders of the train lie about something, ignores orders during one of the scavenging trips. In a legal trial, he is sentenced to work as a pilot on one of the small airplanes that are used to explore if there are any problems with the railway system. However, because of the extreme weather, these explorations are almost always suicide missions. Puig manages to survive, which prompts the leaders in the train to turn him into a hero figure for the train society, and to give him a position of power. Thanks to his new position of power, he finds out that the threat of the 'Icebreaker' crashing into the 'Snowpiercer' is a lie that the leaders use to maintain fear among the passengers, as this would be the best method to make people accept the idea that keeping the current order is the safest bet for survival. However, in the third volume *The Crossing*, conflict over power arises between different institutions (military, religion, and government) in the train. During the political chaos, Puig takes control of the train, and devises a plan to use the tyre chains of the train (which is now heavily damaged by the conflict) in order to move towards the source of a signal picked up by the train's radar. Arriving at the source of the signal, however, it turns out to be an abandoned automated broadcasting station.

The three *Snowpiercer* graphic novels remained relatively obscure, until the South-Korean director Bong Joon-Ho, in collaboration with Rochette, released the high-budget film *Snowpiercer* in 2013.[68] The film is not so much an adaptation of the graphic novels, but a follow-up story set in the same narrative universe. The film is set in a third 'Snowpiercer' train. Like the first graphic novel, the film focuses mainly on a class struggle between the tail-section and those who own the means of

[67] Legrand & Rochette, 2014
[68] Bong, 2013

production and means of violence on the train. The tail-sectioner Curtis starts an insurgency in order to reach and take over the locomotive, which he sees as the only option to change the social organization of the train and create a more equal and free society. He is helped by Namgoong, a Korean security expert who worked on the security system of the train. After a bloody war, Curtis reaches the engine, only to find out that his attempted revolution was planned by the train's government as a way to maintain the right population number in order to keep the train's ecosystem self-sustainable. However, it turns out that Namgoong also had revolutionary intentions: believing that live outside the train is not impossible any longer, he chooses a more radical revolutionary solution, namely breaching the train's door to the outside world. Namgoong blows up the front of the train, which leads to the train being destroyed by an avalanche, after which Namgoong's daughter Yona and a boy from the tail-section named Tim remain as the sole survivors in an unknown frozen world.

Two years after Ho released his film, Rochette teamed up with another writer, Olivier Bocquet, to create another graphic novel that could conclude the *Snowpiercer* series. This fourth volume of the graphic novel series, named *Terminus*, is the first one in the series that does not take place on a train.[69] It continues the story of Puig and his crew, and of Yona and Tim, who all end up in a self-sustainable subterranean city. Before the eco-catastrophe, this city was an industrial area for high technology research, consisting of labs for space travel research and transhumanist experimentation, a nuclear power plant, and a mouse themed amusement park that was used to make the public familiar with the newest technological and scientific developments and to attract public funding. The community from the 'Icebreaker' train is accepted into the subterranean urban society, under the condition that they are tested for diseases and registered. Once inside, they discover a world of apparent affluence and freedom, containing a zoo, sporting facilities, a museum, and entertainment venues. The underground society has its own currency, which the citizens can earn by taking up a job. Although the city seems like a perfect place, Puig and a few other people of his community discover that radioactive pollution from the nuclear power plant have made the original inhabitants sick and have left them unable to get healthy offspring. They find out that two scientists who worked at the research facility in the past are experimenting with drugs to cure radiation illnesses, and with genetic engineering, using stem cells from fetuses taken from uncontaminated women to create genetically modified human beings free from any genetic defects and immune to diseases, so that 'humanity' can be restored within the new circumstances of the subterranean society. Puig and his girlfriend Val reject this 'solution', and convince others to join

[69] Bocquet & Rochette, 2016

them to move back to the surface of the Earth in order to accept and learn to live in the new natural climate and ecosystem.

Mapping the Anthropocene

What makes the *Snowpiercer* series particularly relevant for understanding the Anthropocene is that it explores and tries to grasp the relations between hierarchy and domination, industrial social organization (whether in the form of authoritarian socialism such as in the first graphic novel, or in the form of a capitalist consumer society such as in the fourth graphic novel), ecological environments, and ideas of emancipation. It is my contention that the *Snowpiercer* series is therefore very useful as a cognitive map for the Anthropocene. The idea of cognitive mapping was introduced by the Marxist literary theorist Fredric Jameson, as a possible method for regaining an image of a social totality that, due to its alienating effects and its immensity, can no longer be (fully) comprehended by its subjects. Before explaining how Jameson envisions this method of cognitive mapping, I will shortly discuss how certain developments under industrial capitalism that made social totality unrepresentable are also related to our inability to live in accordance with the ecological rhythms in which we and other life forms are able to live. The inability to see how we as subject relate to and are bound up with the whole that is our (social and ecological) world, is also an inability to organically live in that world.

The emergence of the Anthropocene occurred specifically because of a fossil fuel powered assemblage of local and global systems of production, infrastructure, and governance, which could only emerge in a specific stage within the development of civic societies, namely after technological and scientific methods developed that could provide the accumulation techniques of market capitalism, mercantilism, and empire with a heightened level of efficiency and scale.[70] The drive to increase efficiency of the accumulation of material gains for power and wealth led West-European societies in the 18th and 19th century to invent new machines for the generation and channeling of surplus energy, such as combustion engines and water turbines. That period, now known as the period of industrial revolutions, marked the beginning of the system of production that has up till this moment proved to be the most efficient in increasing accumulation and productivity, namely industrial capitalism. The new possibilities to release energy 'entrapped' in the Earth through combustion engines and turbines made possible a whole range of new machine tools, making the factory mode of production possible. Engines could not only accelerate the movements needed for manufacturing commodities, thus making mass production possible, but could also increase the

[70] "The dynamic of capital accumulation gave rise to a 'second nature' made up of roads, plantations, railways, mines, pipelines, wells, power stations, futures markets and container ships, financial positions and banks that structure flows of matter, energy, goods and capital on a world scale. It is this profit-oriented technostructure that swung the Earth system into the Anthropocene." Bonneuil & Fressoz, 2015, ch. 10

speed of transportation of people, goods, information, energy, etc. This period is marked by the emergence of not only factories – large-scale sites of mass production – as the new model for production, but also increasingly extensive infrastructures for transportation, which lay the basis for Europe's global imperial systems of labor, production, trade and governance networks. From the 19th century onwards, societies became increasingly interconnected and streamlined after being incorporated in this imperial system. However, this 'interconnectedness' is in service of a global infrastructure for ever-increasing production and consumption.[71]

While deeply compressed and connected on one level, urban industrial societies were deeply disconnected on other levels. In the overcrowded urban cities that the factory systems created through its high demand for available labor force, social connections that had already become porous and stratified in earlier civil societies (a situation that made possible the emergence of institutional hierarchy and domination, as explained in the previous chapter) further dissolved.[72] These societal structures produce atomized individual subjects which are encouraged to develop competitiveness, egotism, and servitude, since within the capitalist system these traits will offer the highest chance of securing the material goods necessary for their own survival. The desire for communal-being that is part of our being a social animal is 'reterritorialized' in the impoverished form of a commitment to the nuclear family, necessary for the reproduction of the social system, or of new ideological phantasms like the idea of 'nationhood', which mainly serves to secure and strengthen subjugation to states and empires (which are presented as the political manifestation of the nation) and to capitalist accumulation (which is now presented as a necessity for the safety and prosperity of the nation).[73] This carbon fuelled capitalism arising in the nineteenth century marked a new stage in the histories of the stratification and hierarchization of societies, as it proved able to increase efficiency in aligning increasingly large spheres of human and non-human activity with the

[71] "Imperialism is capitalism at that stage of development at which the dominance of monopolies and finance capital is established; in which the export of capital has acquired pronounced importance; in which the division of the world among the international trusts has begun, in which the division of all territories of the globe among the biggest capitalist powers has been completed." Lenin, 1999, p. 92

[72] Karl Marx and Friedrich Engels were both deeply familiar with the miserable aspects of urban industrial life and with the workings of the factory systems. Marx's *Capital* is, before anything else, an attempt to map a widespread condition of alienation specific to industrial capitalist societies, which resulted in feelings of disconnection from nature, from a world or territory, from fellow beings and the socius, and from people's own actions and creative desires.

[73] In his book *Imagined Communities*, Benedict Anderson traces how and why nationalism as an 'imagined community' could emerge. He argues that nationalism served to provide a new foundation for the sovereignty of states, as the old foundation based on the idea of divine rights was challenged by the Enlightenment and the French Revolution. Anderson shows how the rise of mass media (books, pamphlets, newspapers) played an important role in both the emergence of those two events, and in the subsequent emergence of the idea of nationhood as a foundation of sovereignty and legitimacy of states and empires. See Anderson, 1991

imperative of accumulation and production, and with the technique of governance, incomparable in scale to earlier social organizations.[74]

People living in societies colonized by European empires have experienced similar, but often also more extreme, forms of displacement and alienation, as well as the dissolution of different forms of social and ecological relations and practices. During the period of the mercantilist colonial empires, European colonizers destroyed a myriad of different social worlds and different ecological practices and relations with nature, either by genocide and accidental spreading of diseases, or by forcefully uprooting people from their worlds in order to serve as slaves or as wage laborer. The disregard of local ways of being and ecological relations is exemplified by the plantation system, which in its effort to force human and non-human beings into becoming aligned with a specific mode of production can be seen as a precursor to the factory system.[75] In her book *The Mushroom at the end of the World*, the anthropologist Anna Tsing relates both the plantation and the factory system to an underlying project or technique of 'scalability,' which entails the enclosing of more and more spaces in order to make them incorporable in the project of subjugation and accumulation that reigns in stratified, hierarchical societies. She states: "Scalability requires that project elements be oblivious to the indeterminacies of encounter; that's how they allow smooth expansion. Thus, too, scalability banishes meaningful diversity, that is, diversity that might change things."[76]

The technique of scalability is a fundamental cause for the emergence of ecological disturbances. Making natural spaces, including its human inhabitants, compatible with the rhythm and logic of production and accumulation in many cases entailed doing violence to the unique and intricate webs of living and non-living entities which form the basis of ecological fecundity. Such ecological violence (and consequential disturbances) was already part of the earliest forms of intensive agriculture.[77] Yet, the technological possibilities in the period of industrial capitalism has set a new scale and speed for this process. On this new scale and speed, the continuation of production and accumulation that drives 'Civilization' turns most of the land on this planet in deserts of controlled monoculture, often artificially enhanced by means of chemicals and machines, resulting in the loss of biodiversity and a deterioration of ecological and biological resilience. It also meant the further alienation of the human beings from nature, as situated practices of a relational living-with-nature were overtaken by a standardized view of nature as a resource, there to be conquered and turned into a site of production.

[74] See, for example: Lenin, 1999. For a more recent examination of the specific relations between capitalism, industry, fossil fuels, and global political power, see: Di Muzio, 2015
[75] Tsing, 2015
[76] Ibid., p. 38
[77] In his thermodynamic analysis of climate change, Alan J. Sangster states: "Prior to the industrial revolution and agri-business, agriculture with its limited crop range created a diminished ecosystem relative to the natural ecosystem which it replaced." Sangster, 2011, p. 115

Thus, the subject of industrial civilization experiences a deep alienation both from the socius and from nature. In turn, they are also alienated from themselves, since many of their actions and desires are structured by and oriented towards a world that is no longer experienced as their own. This world is the world produced by Capital, State, and Technique, of which its subjects' possibilities of agency in how this world takes form is reduced to the controlled agency of consumer choice and (in some cases) democratic elections. In his essay *Capitalist Realism*, Mark Fisher argues that we must find ways to come to terms with two seemingly contradictory facts: namely that capitalist societies are organized by impersonal structures, and the fact that, in the end, these structures are nothing without our personal complicity, since their basis is not some transcendental foundation but a set of social and material relations.[78] In order to experience that alternatives to our current situation are possible, what is needed is a set of strategies that can undo the industrial capitalist system from its metaphysical aura, and to regain a sense of the totality of this system as a set of social relations, including our own position in this totality. Imagining an alternative world free from exploitation and domination, with a more sustainable and more fecund relation with nature, starts precisely at becoming conscious of the totality of structures that alienate us from the world that we uphold.[79] As Mark Fisher states, "emancipatory politics must always destroy the appearance of a 'natural order', must reveal what is presented as necessary and inevitable to be a mere contingency, just as it makes what was previously deemed to be impossible seem attainable."[80] In other words, we must reveal the totality of social relations of global industrial capitalism, both to see its contingency, and to understand what strategies and tactics of resistance could work against it, including resistance against the numbing of imaginative, Utopian thought that harbors the potentiality to construct a basis for other worlds.

The Marxist literary critic Fredric Jameson has made an effort to construct and explore an aesthetic theory that focuses exactly on how art can take up that function of emancipatory politics described by Mark Fisher. In his influential paper *Cognitive Mapping*, Jameson outlines the

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[78] Fisher, 2009

[79] The only political system that in theory aspired to such a world and that was also able to become a serious contender to the capitalist system, was Marx' and Engels' socialist theory. A central part of this program was exactly to free workers from their alienation from society, their own labor, and the lands on which they live and work. However, Marx and Engels, as well as socialist revolutionaries like Lenin and Mao, believed that the masses would not reach this freedom as long as capitalism was still in place. What was supposedly needed was a period of transition in which a communist party took over the state, replacing capitalism with socialism, until a free communist society would arise where the state would wither away. Many anarchist theorists and poststructuralist theorists have directly or indirectly criticized Marxism-Leninism-Maoism for being blind to how structures of hierarchy, domination and exploitation not only reside in the capitalist class system, but also in State, gender, race, technique, language, etc. Moreover, Marxism has been criticized for its determinist view of historical progress, in which a communist future is seen as scientifically inevitable, as this view could permit a justification of every kind of historical event, no matter how horrible, as being a necessary stage in the dialectical movement towards the communist horizon (see for example Benjamin, 2007)

[80] Fisher, 2009, p. 17

characteristics of this kind of aesthetic that he has named 'cognitive mapping'.[81] He argues that art, specifically narrative art forms, can play an important part both in the mapping of the totality of social relations of our contemporary capitalist system, and in providing Utopian moments or sparks that can move us to thinking alternatives to this social system. Jameson describes his theory of an aesthetic of cognitive mapping as "something of a synthesis between [Louis] Althusser and Kevin Lynch."[82] In his book, *The Image of the City*, Lynch proposes that the extent of alienation of urban subjects from the space they inhabit is directly related to the extent of their incapacity to create in their heads a total image of the city and to relate their immediate experience of their own position in the city to this total image. Jameson relates this to Althusser's "positive conception of ideology," whereby ideology is seen as a set of imaginary representations through which the subject can determine its position in relation to social reality.[83] Jameson argues that, much like the subject living in urban spaces who becomes alienated from these spaces as soon as they can no longer map them (due to its size or due to a lack of for the subject meaningful cultural, historical, and natural landmarks), the subject of capitalist system becomes increasingly alienated from the social and the political sphere as their incapacity to map the totality of social relations of this system increases. This latter phenomenon, according to Jameson, has become more thorough as the capitalist mode of production manifested itself in ever-widening circles, from commodity trade, to imperialism, to the "multinational network" and cybertechnological capitalism that we are experiencing now.[84] In this process, local spaces and social relations have become penetrated by and dependent on a global network of labor, commodities, and capital that is no longer graspable by the individual mind. To Jameson's stages or layers of capitalism I would add another one of which the Antropocene event has made us aware, namely that of the Capitalocene. Since under the capitalist system certain techniques for the exploitation and subjugation of human and of non-human nature were able to develop that have critically disturbed local and global ecological and geological processes, we now also have to understand capitalist social organization as a geological force, which, as Dipesh Chakrabarty has argued, disrupts the pervasive humanist distinction between social and natural history, between society and geology.[85]

Jameson's theory of an aesthetic of cognitive mapping proposes that art can offer a starting point for bridging "the gap between the local positioning of the individual subject and the totality of [social and ecological relations] in which he or she is situated, a gap between phenomenological

[81] Jameson, 1988
[82] Ibid., p. 353
[83] Ibid.
[84] Ibid., 349-50
[85] Chakrabarty, 2009

perception and a reality that transcends all individual thinking or experience."[86] He argues that artists try to relate their alienated and partial individual experience of social reality to the unrepresentable truth of social totality. What comes out of this struggle is a "play of figuration," a symbolic force field in which the totality of social reality is captured in distorted ways through aesthetic figures. By uncovering such figures, we are able to construct a cognitive map of the totality of social relations. We can thus use art works as a way to counter our alienation from the world and to regain political agency. To what kind of art works do we have to turn to achieve this, and what kind of politics will we derive from them? These question do not and should not have a fixed answer. The anarchist collective Invisible Committee reminds us that "[o]ne never maps a territory that one doesn't contemplate appropriating."[87] In order to avoid the logic of total unification that drives Empire, Enlightenment, and Capital, we must avoid seeing our cognitive maps as absolute and the territory we map as all-encompassing. It is better to see cognitive maps as temporary, inconclusive, perspectivist conceptual spaces through which we can create tools for resistance and for new forms of living together (of both humans and non-humans) that are perhaps only useful for a specific space and time.[88] As Paul Kingsnorth and Dougald Hine put it: "Our maps must be the kind sketched in the dust with a stick, washed away by the next rain."[89]

In the next sections, I will discuss the science-fiction series *Snowpiercer* as an example of an art work that can be of use in creating a cognitive map for the Anthropocene. We will see that cognitive mapping in the Anthropocene creates new challenges for Utopian thinking and emancipatory politics that Jameson did not foresee.

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[86] Jameson, 1988, p. 353. In this quote, I have replaced "class structures" with "social and ecological relations." As Jameson is working from the tradition of Western Marxism, it is not surprising that he sees 'class structures' as the basis of social reality. This might certainly be true if focusing on relations proper to capitalism as a system of production in isolation, but our social totality cannot be reduced to the capitalist mode of production alone. For example, we must also take into account the complex dynamic between State and Capital, as the power structures through which these two forces work do not always align. Non-capitalist modes of hierarchy, domination, and exploitation exist alongside capitalism, for example stratification based on gender, sex, race, and age. Sometimes capitalist development abolishes such power relations in order to reterritorialize them in the form of class relations, other times they remain in existence alongside capitalist class relations. Moreover, as the Anthropocene has made us aware of, we also need to understand how social totality is bound up with ecological and geological processes.

[87] The Invisible Committee, 2014, p. 36

[88] As a middle-class, young, white, male West-European living in a relatively big city in the Netherlands, writing from within the confines of the academic system, my relation to and experience of Capital, State, and Technique will be very different from that of – to name two examples – a Bangladeshi girl working in a sweatshop, or an old farmer couple in the Niger delta that has to struggle against ecological destruction by big oil companies. Different situations necessitate different forms of resistance, as well as different forms of recreating bonds with the socius and with the land, free from structures of hierarchy and domination. The aim is not the win one world, but many worlds.

[89] Kingsnorth & Hine, 2009. The mapping aesthetic proposed in their *Dark Mountain Manifesto* can be useful as a companion piece to Jameson's paper on cognitive mapping as it brings to the attention other factors relating to social organization, such as geology and the 'myth of progress', which are certainly useful to take into account in our cognitive maps for the Anthropocene.

The future as affair of the present, the Present as affair of the future

What makes the *Snowpiercer* series particularly relevant for cognitive cartography in the Anthropocene? First of all, we should take into consideration its form and genre. In the 1982 article *Progress Versus Utopia*, Jameson discusses the relation between the social organization of a specific period and the cultural presence of certain genres and forms of narrative art in that same period.[90] According to Jameson, every historical period of a society or group of societies has a specific Symbolic, a set of 'master-narratives' that its subjects unconsciously share and that establish a certain base understanding of themselves, and their position in and relation to their social reality. Building on the work of Hungarian philosopher György Lukács, Jameson argues that this set of master-narratives, the 'political unconscious' of a period, is articulated in mediated form in certain narrative forms and genres. Lukács wrote extensively about the historical novel as a genre and form that emerged during the bourgeois revolution and the beginning of the industrial age, as a mediation of the political unconscious proper to that period.[91] The historical novel is a narrative exploration of a new understanding of temporality demanded by industrial capitalist's restructuring of social organization on the basis of nationhood instead of feudalism: "it demands a memory of qualitative social change, a concrete vision of the past which we may expect to find completed by that far more abstract and empty conception of some future terminus which we sometimes call 'progress.'"[92] Lukács shows how this genre is only able to work as an expression of its own time until the capital-state dynamics developed into a new stage far less dependent on the myth of a national past of social progression.[93]

As discussed before, Jameson argues in his paper on cognitive mapping that social reality has become increasingly abstract, unrepresentable, and elusive in the last two centuries. To what kind of forms and genres should we turn to be able to better understand, in the form of cognitive map, our current political and social situation? In *Progress Versus Utopia,* he suggests that science-fiction narratives might be where we can now find a mediation of experience of space and time related to our current historical period and political unconscious. It is my contention that this is still the case, albeit in a different way in the Anthropocene than in the Cold War period in which Jameson wrote his article. Jameson states that science-fiction – the opposite of the historical novel in the sense that it tries to construct an image of the future of our present world instead of the past of our present world – is often understood as a narrative form with the ideological function of making people accustomed to rapid capitalist technological innovation. However, Jameson offers a different reading, namely one in which the function of science-fiction is not "to give us 'images' of the future

[90] Jameson, 1982
[91] Ibid.; Lukács, 1989
[92] Jameson, 1982, p. 149
[93] Lukács, 1989

[...] but rather to defamiliarize and restructure our experience of our own *present*," through which we can overcome the alienation from our present caused by the baffling speed of technological innovation and the constant oversaturation of our mind by the ever-present consumer spectacle.[94]

This is also the case with the *Snowpiercer* series, although the play with temporality is more complex here, which is the result of the Anthropocene event. According to Jameson, science-fiction offers a 'mock future' in order to say something about the present, but the future of eco-catastrophe in *Snowpiercer* is not so much a 'mock future' as a future that is now presented to us as a scientifically given in case we uphold our current social organization. This was not so much the case yet when the first three volumes of the graphic novel series were published. The first volume is very much a product of the Cold War, and indeed creates a 'mock future' in which it is implied that a nuclear war was the cause of radical climate change. The story of this volume can indeed be read as an image of Cold War society from the viewpoint of the dominated classes, marked by a kind of nihilist pessimism about the possibilities of struggle for freedom against the immensely powerful military-industrial-technological complex in hands of states and corporations. The uniforms of the military personnel on the train allude to the uniforms of Soviet soldiers, and the images of people packed in train carriages like cattle provide a striking image of how subordinated people in the twentieth century mass society of authoritarian industrial states could be treated by those in power.[95] In the second and third volume of the graphic novels, released around the turn of the millennium, the story continues with this 'mock future' as defamiliarized present, now presenting an image of 'postmodern society', captivated by an all-pervading cybertechnological entertainment industry that keeps people occupied and that produces and satisfies desires to replace the more fundamental desires for freedom and sociality that cannot be fulfilled in hierarchical, authoritarian societies.[96] It also deals with the rise of religious fanaticism becoming a dominant reactionary force against State violence: In the graphic novel, a religious sect believes the train only provides false images of the world (which is true in the sense that it revolves around mass media spectacle and simulation) and must therefore be destroyed.[97]

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[94] Jameson, 1982, p. 151

[95] At one point, Proloff and Adeline are being held prisoner and get their heads shaved. The combination of trains in which humans are treated as objects, and the shaving of the head as a form of punishment, will immediately remind us of the Shoah, but it could also refer to the Soviet Gulags, or even remind us of the events in which allied forces, after the liberation of Nazi-occupied Europe, paraded head-shaven women through the streets who were suspected of 'sleeping with the enemy'. The image of head-shaving became a potent figure for invoking the inhuman treatment of people in industrial mass societies. For example, it also plays a prominent role in another political graphic novel from the 1980s, *V for Vendetta*.

[96] We can draw connections here with films from this same period, like *Trainspotting* (1996), *Fight Club* (1999), and *The Matrix* (1999), which also explore the emptiness and artificiality of postmodern consumer society. In the same period, philosophers like Jean Baudrillard and Jean-François Lyotard became increasingly prominent for their philosophical exploration of this societal and cultural shift.

[97] It was in the 1990s, that Islamic terrorist group Al-Qaeda began its war against the capitalist order.

It is especially the film by Bong Joon-Ho and the last volume of the graphic novel series that are of interest for the Anthropocene era. In the opening of Bong's film *Snowpiercer*, it is made explicit that the ice age occurred because of anthropogenic climate change and the failure to respond adequately to this, as the solution is sought in capitalist innovation. The change that occurs here in relation to time, to the graphic novel's portrayal of the future, it that the future that is sketched here, that of a dystopian geological situation, can not exactly be called a 'mock future': the desolated, snow-covered world of *Snowpiercer* actually makes visible a very plausible future of the Anthropocene, namely one in which our world is characterized by extreme climates unsuitable for human life. At the same time, the film does offer a 'defamiliarized' image of the present. The revolution led by Curtis, central in most part of the film, reflects the familiar Marxist understanding of social struggle and revolution, where the subjugated class revolts in order to 'takes over the engine', the means of production and violence. As discussed earlier, this Marxist idea of emancipatory politics is very much rooted in an idea of progress that is a product of a specific understanding of history resulting from the Enlightenment and industrial capitalism. However, in the film, this idea of progress is doomed. First of all because the revolution turned out to be an inherent part of the logic of the train system itself, as a necessary means for maintaining order on the long term.[98] We have to recognize that this occurs in a capitalist social organization as well, as its need for continuous accumulation and production has led both to the violent 'opening up' of new markets by means of revolution[99], and to certain emancipatory revolutions (for example, free trade of and competition between labor power being more in accordance with capitalist logic than chattel slavery played an important role in the abolishment of the latter[100]). But Curtis' revolution is doomed in another, more fundamental sense. Even if he were to succeed in having the tail section, the subjugated class, take over the engine, what would have been taken over is an infrastructure that is fundamentally flawed: The train society can only exist as long as the train keeps going forward and it offers no way out. Human life is dependent both on the continued progression of the train and on the production system within the train. The dark side of this dependence shows itself in the end of the film, when Curtis finds out that several mechanic functions of the train start to malfunction and have to be supported by manual child labor, and that train's production system warrants die-offs and strict control over people in order to keep society aligned with the capacities of the self-sustainable production system. In other words, Curtis finds out that a free and equal train society is an impossibility, since its infrastructure depends on exploitation and domination. Curtis represents an

[98] In the film, the locomotive is referred to as the Holy Engine and spoken of as a kind of metaphysical entity that drives society forward, much like the ideas of Progress and Market in our society.
[99] The United States have a long history of backing revolutionary forces and coups in other regions of the world in order to increase both the influence of the American state and the reach of capitalism.
[100] For example, see: Williams, 1944

impasse that we are dealing with in the Anthropocene: like Curtis and the other inhabitants of the train being imprisoned by a social and technological organization that will increasingly worsen living conditions until it collapses and takes its subjects with it, we are stuck in an industrial society that destroys living spaces and drastically disrupts ecological and geological processes to the extent that Earth will become increasingly unsuitable for the flourishing of life forms, but that is bound to push forward regardless. And when it does push forward, technology, industry, and governance will increase their grasp over society, in an attempt to counter the 'intrusion of Gaia'. The issue that arises here – and that disrupts Jameson's Utopian idea of a revolution that could restructure this global social totality in a free, hierarchy-less society – is that highly industrialized, technological civilization has become so dependent on the technical infrastructure of industrial capitalism, that there is no possibility of taking it over without that fundamentally ecocidal and stratifying infastructure.

Snowpiecer thus disrupts the idea that the global industrial infrastructure that currently structures our social reality can provide us a desirable future, despite the extreme changes in climate that we will be facing. However, this idea still takes hold over the political imagination of both those who support the current social organization and many of those who have proposed attempts to envision an alternative way of organizing society without getting rid of our technoindustrial infastructure. For example, many environmentalist organizations and parties put their hopes in a 'green enlightenment' that will endow the assemblages of State, Capital, and Technique with a kind of environmental consciousness, so that they will work to overcome the environmental problems that they themselves created.[101] This 'ecomodernist' idea is explored specifically in *Terminus*, the last volume of the graphic novel series. The subterranean city is presented as a capitalist society with high technology and science that works on the basis of 'cruel optimism', promising that the solution to the problems that are itself a product of this social and technical organization can only and will only be overcome by this organization itself.[102] For example, by necessity the worker of capitalism is unfree, but is promised that it is through work that freedom is earned: "After years of imprisonment, you are free at last. Free to have dreams and make them come true. Because work is freedom."[103] Another example is the illnesses and pollution that come with industrial societies, which can supposedly only be fixed by technological and scientific progress made possible by these societies. In

[101] The environmentalist Alex Steffen calls this 'light green' and 'bright green' environmentalism. The first strain focuses on 'responsible and ethical' consumerism, while the second strain focuses on capitalist technological innovation as the answer to the challenges of climate change. See Steffen, 2009.

[102] I borrow the term 'cruel optimism' from the philosopher Lauren Berlant, who uses it to describe how under contemporary capitalism people are made to desire things that work against their own flourishing and well-being, believing that it is the (only) path to the good life.

[103] Bocquet & Rochette, 2015, p. 119. 'Work is freedom' is of course also a reference to 'Arbeit macht frei', the infamous slogan of the Auschwitz extermination camp.

a commentary on the graphic novel, Rochette puts it as follows: "Is your environment making you sick? Cancers multiplying? That's progress! But there's no reason to leave, we'll find a way to heal you."[104]

Even more revolutionary and radical political movements seem stuck in the idea that it is specifically capitalism, and not the whole technological, industrial infrastructure that is incompatible with the well-being, freedom, and fecundity of life processes. For example, the growingly popular idea of a post-capitalist world of global cyberindustrial production, explored by contemporary leftist theorists such as Antonio Negri and Michael Hardt or Paul Mason, as well as by the 'left accelerationists', is presented as a desirable alternative to capitalism and as truly achievable communism, but it glosses over the drastic effects of industrial society on ecological and geological processes, as well as the appearance of new classes of coders and machine maintenance experts.[105] What *Snowpiercer* makes visible is that in the Anthropocene, social and political struggle must be grounded in the idea that nature and climate can no longer be seen as backgrounds against which human life takes place, and that besides Capital, structures of State, Technique, Progress, and Civilization are complicit in destructive and exploitative relations between human and non-human nature.

The series gives us an image of how structures of domination and authority might develop if we do not find alternatives to our ecocidal social organizations. It points towards the emergence of a new mode of governance and power that might very well become more pervasive in a post-Holocene industrial society dealing with increasing climate chaos and eco-catastrophes. This mode of governance is based on 'cybernetics,' a scientific paradigm that arose during the Second World War, partly out of military research.[106] Cybernetics proposes a new understanding of causality that is able to explain the workings of both machines and organisms. Norbert Wiener, the coiner of the term 'cybernetics', describes this in depth in his book *Cybernetics: Or Control and Communication in the Animal and the Machine*. Simply put, cybernetics replaces the dominant scientific view of causality as a horizontal chain of cause and effect with a circular idea of causality. According to Wiener, machines and organisms can be understood as systems that produce information (on the basis of internal and external stimuli) which not only becomes an external effect but which also feeds back into these

[104] Bocquet & Rochette, 2015, p. 231
[105] 'Left accelerationism' refers to a relatively recent strain of political thought that revolves around the idea that capitalist innovations in the fields of technique and technology must be accelerated, as these innovations will eventually make capitalism itself obsolete. For an introduction to 'accelerationism', see Mackay & Avanessian, 2014. For a concise critique of this idea, see: Galloway, 2017
[106] Wiener, 2013

systems. On the basis of this feedback, the system knows what new information to produce to control the stability or order of the system.[107]

The cybernetic paradigm has played in important role in the development of climate science, and the discovery of the Anthropocene. James Lovelock, one of the most important and influential environmental scientists, argued that the Earth must be understood as a cybernetic system. He worked this idea out as the 'Gaia hypothesis', the hypothesis that "the entire surface of the Earth including life is a self-regulating entity" that regulates itself through feedback loops.[108] Lovelock's contention was that industrial societies create such a radical change in the information loop of this system in such a relatively short amount of time, that the Earth system will soon no longer be able to regulate its processes in order to uphold the stable order of the Holocene. Lovelock hoped that by having a better understanding of the information flows of different ecosystems and the workings of the regulatory function of the Earth system, we could discover how to keep this system stable by means of our own input of 'information' into this system. In many environmental and ecological theories, this idea that we must carefully manage the information production of our own societies plays a central role. For example, Paul J. Crutzen states that the Anthropocene necessitates 'sustainable management', which "require[s] appropriate human behaviour at all scales, and may well involve internationally accepted, large-scale geo-engineering projects, for instance to ‘optimize’ climate."[109] Similarly, the philosopher Michel Serres argues that, now that "what everyone does gives rise to harm inflicted on the world, and this damage, through an immediate or foreseeably deferred feedback loop, becomes the givens of everyone's work," the whole of human societies must be understood and managed as a cybernetic system.[110]

However, the anarchist collective Tiqqun argues that there is a dark side to this new role of cybernetics in the governance of human societies. In the essay *The Cybernetic Hypothesis*, Tiqqun traces the growing influence of cybernetics discourse in governance structures, and shows how it increases the power of states and corporations over its subjects.[111] By means of surveillance apparatuses and by means of the analysis of data and information distributed via digital information networks, states and corporations will have an increasingly more thorough overview of the information flows of a society. According to Tiqqun, this also means that any entropic tendency, any tendency that could threaten the status quo of the system (i.e. the current power structures and governance infrastructure), will be foreseen and eliminated or encountered before it does damage. In that way, cybernetics is laying the foundation for totalitarian authoritarianism. The French

[107] Wiener, 2013
[108] Lovelock, 2000, p. ix
[109] Crutzen, 2002, p. 23
[110] Serres, 1995, p. 43
[111] Tiqqun, 2010

theorists René Riesel and Jaime Semprun argue in their essay *Catastrophism, Disaster Management and Sustainable Submission* that the threat of climate change and catastrophes is used to warrant these new structures of control and authority: "The catastrophist representations that are so massively disseminated are certainly not conceived to induce a renunciation of such an enviably way of life, but to induce acceptance of the restrictions and regulations that will allow it, so it is hoped, to last forever."[112]

This relation between cybernetics and authoritarian control becomes an increasingly important topic throughout the *Snowpiercer* series. In the first graphic novel, those in power of the train maintain order and control by means of coercive authoritarianism, suppressing disobedience and rebellion caused by the miserable living conditions in the train, with military violence. In the train society depicted in the second and third graphic novel, coercive power manifests itself less directly, complemented by a new kind of strategy of power where a thorough regulation of the daily lives and the desires of its subjects is used to prevent social and political instability. This is done by means of a 'daily program' of entertainment (e.g. gambling, virtual reality, and television), political speeches (to reassure citizens and give them the idea that they are being involved in politics), as well as through the prescription of drugs (anti-depressants) and a regulation of sex and reproduction. Moreover, the threat of a coming catastrophe that could only be averted by those in power is used to create a willful obedience and belief that there is no alternative. In the film *Snowpiercer*, this new mode of power based on control, regulation, and 'sustainable submission' is expressed through the language used by those who represent the state of the train. For example, 'Deputy-Minister' Mason stresses the importance of everything remaining in its 'preordained' position in order to secure the stability of the train system, and therefore the survival of those on board. In a scene set in a carriage with a large aquarium, Mason explains to Curtis that this aquarium is a delicate ecosystem that must be carefully regulated so that it can maintain its preordained role in the larger ecosystem of the train, namely the production of food for humans. Wilford, the owner of the train and the one in control of the engine, mirrors this conversation by talking about the train as an ecosystem of which its different elements, including human life, must be regulated to keep the order necessary for survival. The idea of the train as a closed system where everything is controlled is stressed by the revelation that there is a communication line between the locomotive carriage and the tail-section, through which Wilson could orchestrate the tail-section rebellion. In *Snowpiercer*, the price for the survival of 'civilization' is a total cybernetic control over life.

Does this mean that *Snowpiercer* tells us is that every attempt to revolt against our ecocidal industrial societies and against structures of domination and hierarchy is a hopeless or even

[112] Riesel & Semprun, 2014, p. 32

dangerous endeavor, because the coming climate catastrophes necessitates the technological power of these societies as well as an increasingly pervasive regulation of and control over the 'information flows' of society? Was Mark Fisher right when he argued that dystopian science-fiction is no longer able to imagine alternatives to our authoritarian and exploitative economical and political systems.[113] Looking at Bong's film and at the final graphic novel *Terminus*, these questions can be answered with a 'no.' Both these installments of the *Snowpiercer* end with a Utopian moment. In the film, it is Namgoong's decision to destroy the train and the aftermath of this event, in which Yona and Tim find themselves in a new world, the world outside of the train, encountering for the first time a wild animal.[114] In *Terminus*, it is Puig's refusal of the false promise of progress and his decision to bring a group of people back to the surface and to learn to live with and in the new climate and ecosystem. Both are extreme cases of a complete rejection of industrial civilization and a return to 'primitivism,' to hunter-gatherer communities. Our choice for freedom and for a new, more fecund relation with nature does not have to be this radical, since unlike the people in *Snowpiercer*, we still have time before eco-catastrophism and climate change truly begins to challenge and disrupt our current ways of life at a regular interval. This time should not be passively waited out in the hope that institutional politics and technological innovation will bring the solution to the challenges of the Anthropocene. Instead, we must start now to find ways to become 'uncivilized,' to discover new ways of relating to and encountering nature, to create spaces where ways of thinking and being outside of the logic of Progress, Civilization, State, Capital, Technique, et cetera, can flourish. By doing that, we might be able to avert some of the damage we are doing to our ecosystems, and more importantly, we might learn again how to live in and with less stable and more extreme ecological and geological circumstances. In other words, what the *Snowpiecer* series as a cognitive map can show us is that we need to find new ways of Utopian thinking and different ideas of emancipatory politics, outside of ideals of Enlightenment and Humanism that are still prevalent in the traditional Marxist framework in which Jameson grounds his idea of Utopianism. In the next chapter, I will explore a different kind of Utopian experience, namely as a kind of 'uncivilized' encounter, through the ecosophic theory of the philosopher Félix Guattari and the cinematic work of Werner Herzog.

[113] Fisher, 2009

[114] It is interesting that Yona and Tim, the sole survivors of the 'Snowpiercer', who represent the emergence of something new, the beginning of an alternative, are both people of color, while the great majority of the population on the train was white. The ending of the film thus seem to suggest that the new beginning will be a refusal of, and alternative to, European civilization.

Chapter 3

Inhuman dreams in the cinema of Werner Herzorg

"I have said this before and will repeat it again as long as I am able to talk: if we do not develop adequate images we will die out like dinosaurs."
– Werner Herzog, *Herzog on Herzog*[115]

How to wage war with nature

In the previous chapter, I have used the *Snowpiercer* series to map out a political impasse that we are facing in the Anthropocene era, related to the complex relations between social and political structures and ecological and geological processes. The awareness of the Anthropocene – of the idea that for at least two centuries a growing number of people on this planet were brought under a social and technological organization that disrupts the ecological and geological conditions which provide the Earth with livable spaces for a multitude of life forms (including the human being themselves) – have made ecology a primary political concern, at least for those who believe the flourishing of life to be an important matter. Radical politics and theory can no longer focus solely on the question of how to work towards societies in which people can be the creators of their own lives, free from domination and exploitation; it must also take into account that the human being is bound up in an ecological meshwork, that the human being is a being only through the intricate interactions between different living and non-living assemblages of matter. The question of human freedom is also a question of ecological fecundity. As I have argued in the first chapter, there is a deeper foundation of domination, hierarchy, and exploitation, which throughout history has manifested and still manifests itself in all sorts of ideological and institutional power structures, such as State, Enlightenment, Religion, Technique, Humanism, Progress and Civilization. These "epistemologies of rule," as Murray Bookchin calls them, do not only structure the relations between humans, but are also transposed to the relations between the human and the non-human: "the very notion of the domination of nature by man stems from the very real domination of human by human."[116] I have argued earlier that both reformism, as well as dominant discourses of radical politics, revolution, and emancipation, do not adequately deal with this problem of "epistemologies of rule," and are unable

[115] Herzog & Cronin, 2002, p. 66
[116] Bookchin, 1982, p. 1

to envision and bring into existence social organizations that eradicate domination and hierarchy both within human relations and within the relations between humans and nature.

In the previous chapter I concluded with the idea that we have to find ways to think, experience, and be in 'uncivilized' ways. What I mean with this is that, in order to escape our destructive behavior towards the biosphere, we have to find ways of being in and with the world, ways of creating worlds, that are fundamentally different in kind from those of Civilization. I use the term 'Civilization' here as an umbrella term for social organizations based on structures of 'governance' and power that seek to contain, rule, and manage originally organic communities and ecospheres in increasingly large spaces of enforced order. To be specific, it was 'Western civilization' that, like a weed, invaded the rest of the planet and smothered other forms of community-being, including the situated, more organic, relations and rhythms regulating the interactions between humans and non-humans arising from those communities.[117] What came in the place was a unification and integration of everything into the logic of governance, domination, exploitation, production, and accumulation. The development of technical and scientific methods have made these structures so efficient that the whole planet will have to deal with the consequences of its disastrous relation with ecological and geological spheres, for a considerable time to come. We have to recognize that the episteme of Civilization is the enemy of life on this planet, and that for those who still believe we can stop the worst climate scenarios from becoming actual, and even to reverse some of the damage that has already been done to life on Earth, it is of importance to create spaces to think and act outside of this episteme.[118]

In his essay *The Natural Contract*, the philosopher Michel Serres argues that in the Anthropocene era, mankind has realized that nature is not the stable background and inexhaustible wellspring of resources on the basis of which the human being develops its own social evolution.[119] Instead, it starts to push back more and more, it intrudes in the world of the human being, and it begins to undo the human being's 'achievements'.[120] Serres – basing himself on the Enlightenment theory of the social contract, which states that a society needs some kind of contract, some underlying Law enforced by a ruler, that makes living together without eruptions of conflict and war possible – argues that what societies now need is a contract or Law that regulates our living together with nature, a 'natural contract' that ends the mutual destructive struggle between human societies

[117] Perlman, 1983

[118] I borrow the term 'episteme' from Michel Foucault, who uses it to refer to "the epistemological field [...] in which knowledge, envisaged apart from all criteria having reference to its rational value or to its objective forms, grounds its positivity and thereby manifests a history which is not that of its growing perfection, but rather that of its conditions of possibility" (Foucault, 1989, p. xxiii-xxiv)

[119] Serres, 1995

[120] The philosopher Isabelle Stengers uses the concept 'the intrusion of Gaia' to refer to this disruption of our believe in a passive nature that can be subjugated in order to serve our will and desire. See Stengers, 2015.

and nature. There are two problems with this idea. First of all, making ecological relations purely a matter of governance leads us on a path toward a kind of eco-authoritarianism, where both humans and nature are to be managed and regulated by a ruler (Serres implies that what is needed in this regard is a ruling class of Scientists and Law makers, and the Philosopher as a type of mediator). Second of all, war between humans and nature is not a situation specific to the Anthropocene, but has always been the ecological relation pur sang. The fatal mistake of Civilization was to reduce the 'art of war' to unilateral warfare intended on subjugation and domination, both in its confrontation with social communities that were incompatible with its own ways, and in its confrontation with wild (unruled) nature. To understand this, we need to rethink concepts like 'war' and 'nature', outside of Civilization's frame of knowledge and being.

As the anarchist collective The Invisible Committee argues in their essay *To Our Friends*, warfare is a state that forms the basis of every human community, and more broadly of every coming into being of territories or worlds in which different form of life live together. They state: "War is not carnage, but the logic that regulates the contact of heterogeneous powers. It is waged everywhere, in countless forms, and more often than not by peaceful means. If there's multiplicity of worlds, if there's an irreducible plurality of forms of life, then war is the law of their co-existence on this earth."[121] As Timothy Morton argues in his book *The Ecological Thought*, biological and geological research from the 19th century onwards have discovered that what appears to us as a relatively stable world made up of a set of self-contained living and non-living objects, is in fact a complex 'meshwork' of things that are in the constant process of being bound up with, merging with and interchanging with other objects.[122] Nature is a force field in constant flux, in which the chaotic interaction of different forces causes a process of creation and destruction, until there emerges something like a temporary state of relative equilibrium, in which things 'claim' themselves, constitute themselves as things in themselves while at the same time remaining the manifestation of a greater meshwork of forces. The human species is one of the forces (or assemblages of forces) emanating from nature that has warred itself into being. Yet, we seem stuck in a way of thinking about and approaching nature that presupposes a bifurcation of human being and nature instead of seeing the human being as part of nature, as an assemblage of natural forces manifesting itself as a relatively stable body that itself produces new forces that create and destroy. Moreover, the modern episteme of western Civilization makes us inclined to understand nature as something that can be scientifically classified by dividing it into a finite number of fixed, self-contained objects or entities, which can be further divided into sets of different particles. As Max Horkheimer and Theodor W. Adorno explain in *Dialectic of Enlightenment*, the scientific attitude towards nature that fully

[121] The Invisible Committee, 2014, p. 47
[122] Morton, 2010

developed during the Enlightenment, is rooted in a desire to extend the power to dominate: "What human beings seek to learn from nature is how to use it to dominate wholly both it and human beings."[123] The Enlightenment program of "the disenchantment of the world" transformed a world where each thing could be regarded as a difference, as an "in-itself", into a world of sameness, where each thing is in essence the same manipulable matter that is to be dominated by a (human) master.[124] Instead of this conception of nature as essence and substance that can be manipulated, we have to come to understand nature neither as essence, nor as substance, but as process.[125] Language, which imposes a stable identity on things that are always in flux, will in this regard always be inadequate and should be seen as a speculative tool instead of a representation. The philosopher Alfred North Whitehead states: "Nature is a process. As in the case of everything directly exhibited in sense-awareness, there can be no explanation of this characteristic of nature. All that can be done is to use language which may speculatively demonstrate it, and also to express the relation of this factor in nature to other factors."[126]

Anthropologist Anna Lowenhaupt Tsing has remarked: "Grasping the atom was the culmination of human dreams of controlling nature. It was also the beginning of those dreams' undoing."[127] Indeed, the development and use of nuclear weapons was the cause of one of the first experiences of a feeling that has now become general, namely that techniques of domination have become so efficient, have garnered such an amount of power, that it will at some point in the future cause complete regions on Earth to be destroyed and made uninhabitable for aeons. In the face of an enemy of life and difference that is so powerful, it is hard to remain optimistic about (the interrelated) struggles for free societies and non-ecocidal, fecund relations with nature as whole. Tsing attempts to counter this crippling pessimism by turning to 'unruly edges', spaces that have been abandoned or have been deemed useless for industrial capitalist production. In and through these edges, these small spaces that are hidden everywhere, Tsing discovers nature as a precarious process of encounters, a flow of myriad rhythms that are fundamentally different from the rhythms of History and Progress. My contention is that (re)discovering such 'unruly edges' can produce new mentalities and new relations, outside of the logic of industrial civilization. These new mentalities

[123] Horkheimer & Adorno, 2002, p. 2
[124] Ibid., 2002, p. 6
[125] Philosopher Timothy Morton argues that we should do away with the concept of 'nature' altogether, because its conceptual history has been so thoroughly interlinked with the history of the human beings effort to bring all ecological forces under its control. Morton suggests that we use the concept of ecology as starting point, instead of nature. See: Morton, 2007. However, I believe that the concept of 'ecology' can take on equally problematic meanings and uses. When we talk about ecology, whose *oikos* are we talking about, and what kind of *logos* are we referring to? It is not difficult to see how ecology can quickly turn into an anthropocentric view and knowledge.
[126] Whitehead, 2015, p. 36
[127] Tsing, 2015, p. 3

and relations move between mental, social, and environmental spheres, potentially transforming each in the process. Whereas Tsing connects with unruly edges by exploring the hidden world of Matsutake mushrooms, I will try to show that 'unruly edges' can also be discovered in and through art (in the broadest sense of the word). For that, I will engage with psychotherapists and philosopher Félix Guattari's theory of 'ecosophy' and 'three ecologies', and look at several works of the filmmaker Werner Herzog as examples of art works that that produce new rhythms and relations.

Ecosophy at the end of the world

Félix Guattari, mostly known for his collaborations with Gilles Deleuze, worked in the last few years before he died in 1992 on constructing a new field of theory and praxis which he called 'ecosophy'. Although he was not able to develop this into a fully coherent and well thought out field or approach, it is nonetheless useful because of its attempt to place the issue of ecology in the center of critical theory as well as political praxis, while at the same time providing an alternative to dominant environmentalist discourses that lacked any socially emancipatory, revolutionary content. It is especially in the essays *Three Ecologies* and *The Ecosophic Object* that he engages with 'ecosophy'.[128] As the title of the former already suggests, one of the central ideas within Guattari's ecosophy is that it is concerned with not one, but three ecologies, namely a mental, social, and environmental ecology. Guattari saw the problem of the pollution and disturbance of 'environmental ecology' as also being a problem of social organization, which causes this particular detrimental relations with nature, and of the mentalities and subjectivities produced within these structures that keeps the cycle of reproduction of these assemblage of social and environmental relations running via the bodies of its subjects. Influenced by Gregory Bateson's cyberneticist approach to anthropology, he understands these three different domains as interrelated systems that feed into each other. For example, a bad mental ecology which causes a subject to be stuck in a 'deadly repetition' – meaning that it is no longer open to the emergence of new possibilities and multiplicities, and can therefore not flourish – influences and is influenced by the other ecologies. Important is that the distinction between the three ecologies is not a hierarchical distinction, nor is it a real distinction at all. It is not a case of beginning to 'fix' this or that ecology, after which the other two will follow. Guattari argues that the three ecologies are three interchangeable lenses which make it possible to approach the intricate web of relations between relations and convergences of bodies, the socius, and nature. What is needed in effect is a 'transversal' politics that affects or runs through this whole web of relations, instead of one that singles out one of these ecologies.

[128] Guattari, 1995; Guattari, 2000

Writing in a period in which the Soviet Union was withering away, and in which the enormous destructive power of Civilization, regardless of the formal political ideology under which it manifested itself, had caused genocidal and ecocidal havoc throughout the world, Guattari understood that the question of how mentalities, social relations, and environmental relations can be changed in order to free ourselves from domination had become both more acute and at the same time more complicated than ever. In similar vein to philosopher Jean-François Lyotard, Guattari argues that grand narratives and collective subjectivities (e.g. 'Communism' and 'the Worker') have lost their power to mobilize large groups of people that can affect radical social change. Besides the ideological and geopolitical downfall of the Soviet-Union, Guattari sees this as an effect of new forms of alienation, the atomization of subjectivities, and the restructuring of desire occurring in post-war consumer societies. Instead of lamenting this change, he explores how the new situation also creates new possibilities for resistance and emancipation. One of the forms of resistances made possible by consumer society is the 'singularization' of subjectivities (for example, subcultures or minority identities) that form an opposition to the collective 'mass-media subjectivity' of States and Capital in the sense that they provide a (temporary) way out of these deadly repetitions by opening up a new Territory, the expression of a new way of being in the world. Related to this, Guattari uses the concept 'existential refrain' to indicate the play of repetition and difference, where the repetition affirms a sort of pre-discursive and incorporeal set of rules, a 'Universe of reference and value' which consist of all virtual potentialities that can become actualities in a given Territory.[129] These Universes make meaningful interactions between different bodies and things possible. At the same time, they produce their own possibilities for difference, for ways out, for deterritorialization.

What makes the proliferation of existential refrains and singularization of subjectivities promising for Guattari is that it is in first instance the expression of dissent, a 'line of flight' out of the homogeneity and political sedation of the refrains of Civilization. Constantly, there is the potential that new Universes of reference and value arise with subjectivities, social relations, and relations with the environment or with space that are more free and more fecund and can affect other Territories. The purpose of ecosophy is precisely to offer a transversal analysis of the possibilities of new existential refrains, the new ecological relations they open up, and to explore how to accelerate

[129] The concept of 'Refrain' (Ritournelle) and Territory also have a prominent place in Deleuze's and Guattari's joint work *A Thousand Plateaus.* As is typical in the work of Deleuze and Guattari, the concepts work in different ways in different instances. In making use of the same concepts in different (con)texts, they also open them up to change, they deterritorialize them to see what possibilities they open in other places, what kind of multiplicities they contain. In the chapter '1837: Of the Refrain', Deleuze and Guattari use the concept Refrain to describe how animals (including humans) produce expressive rhythms (which they also refer to as 'art') in order to create a territory out of chaos: the refrain pulls different 'rhythms' and 'milieus', different forces and assemblages of forces of nature, into a more or less stable territorial space (which can be geographical, but also mental) that constitutes a specific way of being and living in and with the world. See: Deleuze & Guattari, 2005

the emergence of dissenting existential refrains, thereby increasing potentialities for the appearance of revolutionary becomings and letting difference flourish.

Such ecosophic explorations are central to most works of the filmmaker Werner Herzog. In his feature films and documentaries, Herzog often focuses on outsider individuals and communities of outsiders who have a troubled relation with society and with nature. A good example of this, in which ecosophic analysis is put into practice, is the documentary *Encounters at the End of the World*, which was released in 2007.[130] The documentary was made possible by the 'Antarctic Artists & Writers Program' of the National Science Foundation, which has the intention to give artists the opportunity to make works "that increase understanding of the Antarctic and help document America's Antarctic heritage."[131] On a superficial level, *Encounters at the End of the World* indeed does that, but in the same movement it negates both these goals. At the beginning of the documentary, Werner Herzog states that he is not interested in making another 'movie about penguins,' alluding to famous nature documentaries in which the polar regions are featured, such as *March of the Penguins* and *Planet Earth*. What interests him when it comes to nature, he says, are questions such as why humans use feathers as garments, why they use horses to 'chase bad guys' while apes have never 'utilized' a goat to travel, or why some types of ants force plant lice to produce sugar droplets for them. While the documentary does not deal with any of these questions directly, there is a specific issue underlying all these questions that is of central importance in *Encounters*, namely the kind of relations that arise between different life forms, the way in which an animal 'uses' their world.

In the documentary, Herzog follows the researchers of the American research facility McMurdo. Through interviews, it becomes clear that these researchers, who come from all kinds of professional and national backgrounds, are atomized, and sometimes traumatized people. Unable to find a feeling of belonging in any society, they have fled to 'the end of the world', either as a form of nomadic escape, or out of a desire to discover and experience something truly new and different, something that has not been domesticated by the human will. Ironically enough, trying to escape from the 'civilized world' to the terra incognita of Antarctica, they now find themselves in a place that seems like a caricature of the worst aspects of modern society. Footage of the McMurdo base show us a lifeless wasteland, filled with heavy machinery and industrial warehouses, described by Herzog as an "ugly mining town."[132] At the same time, it offers the luxuries of a typical contemporary urban area, such as aerobic studios and yoga classes. What have brought the people in this camp together

[130] Herzog, 2007
[131] National Science Foundation, 2017
[132] Herzog, 2007

is the fact that they all share the "intention to jump of the margins of the map."[133] What becomes clear through the juxtaposition of images of the desolated, untouched, empty ice sheets (which might remind us of similar images of the vast frozen world in *Snowpiercer*), and of life in the McMurdo base, is that the base does not so much constitute a society, but could more accurately be described as an enforced living-together of alienated individuals in a climate that does not seem suitable for the ways of living and being of modern civilizations.[134] But the resulting shock, the encounter with something beyond their comprehension and beyond the Universes of reference and value of Civilization, is what seems to attract these researchers to this inhuman region, where human beings have not been able to, and perhaps never will be able to, truly settle, to transform it into a territory for human use.

As the documentary makes clear, there is a constant tension and slippage between two different kinds of desire. On the one hand, there is the desire to explore and discover for the sake of an encounter with alterity, with radically different kind of rhythms and milieus that disrupts the subjectivity of Civilization in which the human being is the master of nature, and thereby offers some kind of movement towards a different kind of ecological relation. On the other hand, there is the desire to appropriate and subjugate, to bring everything into a deadly territory of repressive sameness. It should be noted here that the Antarctic region is of particular interest to those who seek to continue the reign of Civilization, and thus of a destructive and exploitative Anthropocene. The ability to dominate the extreme climate of this region is not only desired because of the possible untapped oil reserves hidden beneath the ice, but also because it is the most extreme climate zone for humans on Earth. Antarctica can therefore serve as a test case to explore how humans can survive in extreme climates that will become more prevalent in the future of the Anthropocene.[135] What the documentary makes visible is a clash between this despotic Universes of value and reference of Civilization, and the emergence of new Universes through a deterritorializing movement that makes receptive to other rhythms and flows, and that are reterritorialized in the existential

[133] Herzog, 2007

[134] In the last couple of years, reports came out that alcoholism, infighting, and mental instability are a significant problem in the Antarctic research bases. See, for example: Khazan, 2013

[135] The research facilities in Antarctica are also used to test if and how human beings can survive for long periods of time in conditions similar to those that will be faced during space exploration missions, something that will without a doubt be contemplated as one of the possible options to save and expand Civilization when ecological instability on Earth starts to become too disruptive. See NASA, 2017

Territory, causing transversal change in the 'three ecologies'.[136] An example of how this tension is shown is the juxtaposition of a scene in which a group of scientists restrain Weddell seals and take milk from them to analyze it in a lab, with the purpose of increasing knowledge about how these animals are able to survive in the extreme climate of the Antarctic region, and a scene in which the researchers lay down on the ice sheet to listen to the calls of the seals underneath the ice. The latter can be understood as a desire for knowledge that contrasts with the instrumental knowledge typical to scientific techniques of the Enlightenment; it is a desire for a kind of knowledge that is not about classification and reduction but about opening up new existential refrains from different worlds. Interspersed by auditory and visual footage of the seals, two of the researchers explain to Herzog how the sound of the seals displaces them, disrupts their Territory and their Universe of reference – "It's really out of this world," and "you realize there is a whole world underneath you."[137] There are multiple instances in which Herzog reveals through juxtaposition the tension and struggle between a scientific effort to subdue the forces of unknown worlds by breaking it down into scientific classification systems, and the encounter with a world of radical alterity in which the human can no longer recognize themselves as the master of nature, or even as an essential and necessary part of nature. For example, in the scenes in which a group of divers submerge in the water underneath a vast Antarctic ice sheet. The purpose of these dives is to study the life forms hiding in the dark and ice-cold water world of the South Pole, to take samples to dissect in the lab so as to uncover the secrets of this region that has only very recently become accessible to human beings. Yet, there is something so overwhelming and ungraspable about this world that it throws the Universe of reference of the scientists, and of the viewers of the documentary, into confusion. Samual S. Bower, a cell biologists, tells Herzog how this world is so obscure and strange to us that it is actually more frightening than the things that we imagine in science-fiction horror. Philosopher Timothy Morton uses the concept 'strange strangers' to refer to such an encounter with the fundamental strangeness of other entities.[138] To discover the strange strangers is to discover that no matter how much we try

[136] It is interesting compare this to a tension that can be found in the work of Plato, in the emergence of philosophy as a technique of knowledge that played a fundamental role in the rise of western civilization. As the philosopher Peter Sloterdijk argues, philosophy was first of all a technique of governance, in the sense that its main purpose was to adapt people to life in the 'polis' and Empire. Moreover, the rise of philosophy was also the start of a proto-Enlightenment, as the philosophical endeavor was understood as an act of disenchantment of our lived worlds in order to reveal a higher universal World of Ideas, a stable essence behind the chaotic, ever-changing worlds as they appear to us. Sloterdijk notices that the competition in Plato's work between philosophy and poetry can be understood as a competition between two fundamentally different kinds of epistemologies, between an older "musical-rhapsodic" poetic knowledge that is precisely about rhythms and refrains, and a "prosaic-communicative" philosophical knowledge that demanded that the appearance of difference, of the play of forces and rhythms, makes way for a transcendental universal Truth. See: Sloterdijk, 2013.

[137] These quotes are uttered by physiologist Regina Eisert and nutritional ecologist Olav T. Oftedal. In Herzog, 2007.

[138] Morton, 2010

to capture the forces of nature into the epistemological frame works of the human world, there is always something that escapes. There are always other worlds moving below, above, in, and through the world of human beings, which we encounter and suddenly find ourselves enmeshed in when our epistemological frames falter.

It can be said that in encounters with these kind of 'strange strangers', there is a kind of rupture that displaces the Man-as-Master subjectivity produced by structures of domination and hierarchy, a rupture that opens a way out, a 'line of flight' as Deleuze and Guattari would call it.[139] This way out has the potential of being a movement towards possibilities of different ways of being in a world, of living (in) a world, towards a Territory consisting of rhythms outside of Civilization, which through the bodies of the researchers (and, in a different way, through the bodies of spectators of the documentary who perceive not only the other-worldly music and images, but also an assemblage of scientists and these worlds) might resonate and reterritorialize in other spaces. Related to this, Morton argues that we need a understanding theory of the sublime, one that is precisely about this kind of disruptive encounters with ungraspable entities.[140] He argues that a new kind of sublime is necessary because the Anthropocene confronts us with objects that are unimaginable, that go far beyond our Universes of reference, but that at the same time demand some kind of response because they enter and disrupt our lives. Morton uses the term 'hyperobjects' for this kind of objects, which includes for example climate change, plutonium and tectonic plates. Morton's theory of the sublime is a critique of both Edmund Burke's and Immanuel Kant's sublime. According to Morton, Burke's idea of the sublime comes down to an acceptance of some higher power, it is "an experience of terrifying authority to which you must submit."[141] Burke's sublime is only shock and submission, and does not move those who encounter it towards a speculative knowledge and new intimacy with something unknowable. Kant's idea of the sublime is more in line with the latter in the sense that Kant sees the sublime as a becoming intimate with something

[139] The concept of 'dream' has a similar meaning and is a recurrent notion throughout the work of Werner Herzog. It is not related to a sleeping state, nor does it refer to something like a reverie or goal. Instead, dreams are for Herzog the unique way in which an individual subject, a group, an entity, opens itself up to something beyond actuality, beyond a given world, to something like the forces and flows of the universe or cosmos. In *Encounters*, 'philosopher and forklift driver' Stefan Poshev describes the researchers of McMurdo as "professional dreamers," through whom "the great cosmic dreams come into fruition, because the universe dreams through our dreams" (in Herzog, 2007). For Herzog, each language has its own potentialities for the creation of dreams, including for example the language of science, opera, cinema, and, as he explores in *Cave of Forgotten Dreams* (2010), of cave painting. Herzog uses the cinematic language to create dialogues with other languages, to translate and share the dreams that exist in and between these languages. This explains why in one scene in *Encounters*, Herzog suddenly makes a connection between the disappearance of life forms and of languages, and laments the fact that many people are eager to defend endangered species, but do not "embrace the last speakers of a language" (Herzog, 2007). Ecological fecundity seems to be for Herzog as much a matter of a flourishing of difference in life forms as it is of a flourishing of difference in dreams. Herzog's oeuvre could be described as an exploration of an ecology of dreams.

[140] Morton, 2011

[141] Ibid., p. 217

beyond human comprehension. However, for Kant this means that it is impossible for an observer to speculate about the reality of the sublime, since it beyond what we can know. Inspired by Cassius Longinues, Morton argues that we need an understanding of the sublime that has eye for the speculative dimension arising from the encounter with a sublime object. In an encounter with sublime objects such as climate change or the ecosystem of the Antarctic Ross Sea, we are not confronting something beyond ourselves, but something that was already part of our world and that remains part of our world – it is not something that exists on a different plane than us, but something that is in one way or another bound up with us, and that changes the understanding of ourselves and our relations with nature through a speculative intimacy. This sublime experience is what we see happening in *Encounters*. It is an experience that goes beyond scientific understandings of nature, towards intimacy with strange strangers and hyperobjects. "Under the ice, the divers find themselves in a separate reality, where space and time acquire a strange new dimension. Those few who have experienced the world under the frozen sky, often speak of it as going down into the cathedral."[142]

At several moments in the documentary, Herzog compares the researchers to the British explorers Scott, Shackleton and Amundsen, who set out to become the first explorers of the European empires to reach the South Pole and to cross the Antarctic region in the early decades of the twentieth century. Herzog remarks that "something about the early explorers does not feel right. The obsession to be the first one to set foot on the South Pole – it was for personal fame and the glory of the British Empire."[143] It was embedded in the imperial project of the spatial conquest of nature and the expansion of Civilization. The desire to fill in all the blanks on the imperial map of the Civilization, to claim even the most extreme environments (be it Mount Everest, Antarctica, or the moon), is part of the disenchantment of the world: it serves as a confirmation that there is nothing that cannot be brought under human control, that cannot be dominated. Anna Tsing argues that this approach to our world and to others, where everything must become fixed, controlled, known, closes us from an encounter with the messy and fluctuating forces of nature in which we are enmeshed. What is lost is a sensibility for precarity. "Precarity is the condition of being vulnerable to others. Unpredictable encounters transform us; we are not in control, even of ourselves. [...] precarious world is a world without teleology. Indeterminacy, the unplanned nature of time, is frightening, but thinking through precarity makes it evident that indeterminacy also makes life possible."[144] As stated earlier, the question that Herzog grapples with in *Encounters* is if the people he meets at the McMurdo base are driven towards their scientific research out of a desire to master nature, or out of

[142] Herzog, 2007
[143] Ibid.
[144] Tsing, 2015, p. 20

a desire to encounter precarity, 'strange strangers' and the ecological sublime.[145] At one point in *Encounters*, Herzog suggests that it is related to the first desire. He suggests that the imperial desire to expose and capture everything, to make everything known so that it can be mastered, has become total. At other moments, however, he accentuates that there is something fundamentally beyond our grasp in nature. One of the scientists describes his encounter with the vast ice bergs of Antarctica: "we scientists now are able to see the ice as a dynamic living entity [...] It looks big and looms above us. Even if we're on an aircraft flying above the iceberg, the iceberg is always above us. It's above us because it's a mystery that we don't understand."[146] The desire for mastery cowers in the encounter with the sublime of hyperobjects like geological processes and ice sheets. The spatial and temporal scales of Civilization are reduced to nothing in the face of the spatial and temporal scales of the Antarctic ecosystem. The answer to the question above might thus be that both desires and ways of relating to a world exist at the same time, being in a constant struggle. This tension, this contradiction, is precisely what we have to explore in order to learn to wage war with nature in the Anthropocene.

Inhuman times and forces

As discussed earlier, subjectivity, as well as social and ecological relations, in first instance come into existence through a kind of expression that constitutes an existential refrain which territorializes several rhythms and milieus, that gives them some kind of fixedness and order. In *The Ecosophic Subject*, Guattari also relates refrains to enunciation and narrativity. The existential Territory exists by means of meta-narratives that produce an image of a subject, a world, and of this subject's relation to and position in a world. Examples of such meta-narratives are Humanism, Liberalism, Capitalism and Communism. The purpose of ecosophy is not to produce an alternative meta-narrative, not to "signify and communicate" anything at all, but to "produce assemblages of enunciation capable of capturing the points of singularity of a situation" and to create a "rupture of sense, [or] dissensus."[147]

[145] At the same time, Herzog also asks the same question to his own practices. At the end of a scene in which Herzog reflects on the imperialist explorers of the Antarctic, there is a shot which shows an iron sphere which reflects the camera. Is capturing things on film also a tool for appropriation and control, or is it a form of dreaming, of opening up to other dreams, of establishing through the expression of cinematic language new existential Territories? This is a recurrent question in the documentaries of Herzog. In *Cave of Forgotten Dreams* (2010), for example, Herzog struggles with the question if filming the cave painting of the Chauvet Cave in France is merely an act of preservation and exhibition, or if cinema can pass on the experience of beholding, what Herzog calls, these proto-cinematic cave paintings. Herzog uses 3D footage to try to capture the interaction between the shapes and textures of the rock and the painting themselves, but what is implied in the documentary is that cinema lacks something that is present in these cave paintings. Whereas the paintings are dynamic, because beholding them is an interplay between surfaces, images, moving light, and moving shadows, cinema is static. Although cinema suggests movement, this movement is not an open *rhythm* like the movements in the cave paintings, but it is *meter*, a preordained rhythm of 24 images per second.

[146] Speaking here is the glaciologist Douglas MacAyeal. In Herzog, 2007.

[147] Guattari, 1995, p. 128

Guattari sees ecosophy as an "ethico-aesthetic" approach, since according to him it is mainly through aesthetic expression that this a-signifying rupture of sense can be achieved, and through which new subjectivities (which are also new ethical positions that shape our interactions with our surrounding world) may emerge[148] I have tried to show how Herzog's *Encounters at the End of the World* explores this process.

Art comes into existence in a social context, but can disrupt the socius and its subjects: "The work of art, for those who use it, is an activity of unframing, of rupturing sense, of baroque proliferation or extreme impoverishment, which leads to a recreation and a reinvention of the subject itself."[149] For Guattari, this reinvention should be a resingularization, where subjectivity opens itself up to the singular, to the unforeseen, to difference and alterity, to "Universes of virtuality".[150] In effect, we encounter something of nature, other beings, and our own body, in its precarity, in its non-fixed, processual state. The question that the Anthropocene confronts us with is if we are also able to open up to, to conceive or encounter, 'hyperobjects' such as deep time and climate change. In other words, is it possible to create a subjectivity through which we move towards a kind of becoming-inhuman? This is an issue that cultural theorist and philosopher Claire Colebrook explores in her work *Death of the PostHuman*.[151] According to Colebrook, we are not able to truly understand and react to the Anthropocene event, precisely because the Anthropocene relates the human being to forces and scales that are beyond the comprehension of human cognition. She remarks that our perception, that the way in which we perceive the world, is geared towards a reduction of difference and relationality, which seems to be an effect of both evolution and of social and cultural conventions. The purpose of this reduction is to be able to make sense of the world, to make it comprehensible and therefore manageable. In the Anthropocene, this tendency towards reduction has become particularly problematic. Even in the face of extreme climate change and ecological deterioration, we seem unable to take into account the world outside of ourselves and our epistemological frameworks; we constantly fall back on a managerial view of nature in which it is in first and last instance *our* environment, *our* ecosystem, *our* space of resources, *our* planet. Colebrook argues that we need a kind of post-Anthropocene view, through which "we [can] imagine the world without us, *not* as *our* environment or climate" and through which we can "look at the world and ourselves without assuming our unquestioned right to life."[152] She remarks that whereas these kind of images where the human is no longer in the center have become prevalent in cultural

[148] Guattari, 1995
[149] Ibid., p, 131
[150] Ibid., p. 126
[151] Colebrook, 2014
[152] Ibid., pp. 22-23

production through the rising popularity of the post-apocalyptic genre in film and literature, theory and philosophy have had much more difficulty going beyond an anthropocentric view of life.

I believe that art works that in some way or another try to explore and convey 'deep time' approached through the earlier discussed theories of Guattari, can be a valuable contribution to Colebrook's effort. Again, Werner Herzog's cinematic works can serve as relevant case studies, as deep time is often an important theme in these works. What exactly is deep time? It is "the immense arc of non-human history that shaped the world as we perceive it."[153] It is the time scale on which many ecological and geological processes have taken and are taking place, a time scale that reaches back far beyond the emergence of the human being and that has a future that will reach far beyond the historical existence of the human being. In the Anthropocene, humans have become a geological force that within two hundred years has caused changes to the ecosystems and geology of the Earth which would normally take up to millions of years to unfold. At the same time, these changes will affect the deep future of the Earth. How do we come to terms with the fact that we influence processes that take place on a time scale far beyond our human history, and far beyond what is graspable for the human mind. The literary theorist David Farrier states: "the need to imagine deep time in light of our present-day concerns is more vital than ever. Deep time is not an abstract, distant prospect, but a spectral presence in the everyday. The irony of the Anthropocene is that we are conjuring ourselves as ghosts that will haunt the very deep future."[154] We need to invoke these spectral presences, and we need to open ourselves up to the rhythms and forces of deep time. Werner Herzog aims to do this by creating encounters with volcanoes in his films. In the documentary *Into the Inferno,* Herzog explains to volcanologist Clive Oppenheimer his particular interest in volcanoes: "There is something of a crust that is somehow moving, and it makes me fond of the volcano to know that our life, human life, or animals, can only survive because the volcanoes created the atmosphere that we need."[155] What is invoked through this description is that the volcano is both related to life and creation, and to destruction. After all, volcanoes come into existence because of a crust, a tectonic plate, that is moving, which means that the land on which human beings have created all their worlds, will eventually, in the deep future, melt into lava and solidify as emptied out land. Herzog thus states in the same scene: "the soil we are walking upon is not permanent. There is no permanence to what we are doing, no permanence to the efforts of human beings, no permanence to art, no permanence to science."[156] For Herzog, the encounter with the volcano is an encounter with deep time, in which there is a constant process of creation and destruction of worlds, and in which human has no privileged place. This scene in *Into the Inferno*

[153] Farrier, 2016
[154] Ibid.
[155] Herzog, 2016
[156] Ibid.

mirrors a scene in *Encounters at the End of the World*, in which Herzog meets Oppenheimer for the first time, at the edge Mount Erebus, an Antarctic volcano. In that scene, Oppenheimer explains to the camera and to Herzog that geological records have revealed that in the deep time of the Earth's existence, eruptions have occurred that drastically changed the climate and the conditions of life of the whole Earth.[157] Whereas Oppenheimer figures in both *Encounters* and *Into the Inferno* as the techno-optimism who believes technology will be able to make us understand hyperobjects such as supervolcanoes and climate change, and can give us the ability to manage these, Herzog is the one who, through the encounter with the volcano, sees an image of the finitude of Civilization and of human beings: "our presence on this planet does not seem to be sustainable. Our technological civilization makes us particularly vulnerable [...] human life is part of an endless chain of catastrophes, the demise of the dinosaurs being just one of these events. We seem to be next."[158] In *Into the Inferno*, Herzog visits the Endu community in Australia, an indigenous tribe that has been able to live with this sense of finitude and with the idea that nature is not reducible to our environment, is not there for us. They have found a way to live together with an active volcano, and thus with catastrophe, not by seeing it as a negative kind of interruption by nature in human life that has to be managed or avoided at all costs, but by seeing it as an inevitable part of the rhythms and forces of nature, which includes human life. Catastrophe is understood in the original sense of the word; *katastrophē*, overturning. It is nothing more than the unforeseeable changes that are inherent in ecology and geology, and that have made and continue to make life in general possible. During his visit, Herzog notices that because of this other understanding of nature and catastrophe, the Endu community has an experience of time that is fundamentally different from that in technological civilizations: "Punctuated by catastrophes, time does not have found a grip on the community."[159] The Endu villagers have developed a myriad of traditions and myths through which they form an intimacy with the inhuman force of the volcano. They see the volcanic fire as being inhabited by human and non-human spirits, which for them makes it possible to form an intimacy with the volcano, to form a kinship with its powers of creation and destruction. It could be argued that it is a case of a becoming-volcanic of humans and a becoming-human of the volcano. It is an act of imagining the human being on the plane of the volcano and the volcano on the plane of the human being, which in effect produces the image or idea of an in-betweenness, an image of the relational and processual character of ecology and geology which forms the basis of our worlds and the worlds

[157] In *The Natural Contract* (2007), Michel Serres argues that in the Anthropocene, humanity has become a force similar to a 'tectonic plate'. It might be more apt to describe humanity as a supervolcanic force.
[158] Herzog, 2007
[159] Herzog, 2016

of every other life form.[160] As the village chief Mael Moses explains to Herzog, it is through these practices and myths that they are able to understand nature as something that extends far beyond the human being, and that will recreate the world anew again and again, with or without humans.

The ways of being in the world and of perceiving the world of the Endu tribe thus confronts us with a different relation to time and to forces of nature, a relation that we have to become familiar with in our own way if we want to understand and live with the future that the Anthropocene creates. How can we make visible the idea of deep time and finitude, with the possible effect of having them resonate in our existential refrains? One possible way is explored by Herzog in both *Into the Inferno* and in his earlier short film *La Soufrière.* In the first, he visits the town Heimaey in Iceland. In 1979, this town was suddenly confronted with a nearby volcanic eruption. In the documentary, footage is shown of the town some moments after the eruption, with its houses, utility poles, roads, and church almost completely covered in fine black ash and rubble. Herzog then shows a house in the same town forty years after the eruption, still covered by ash and earth which now has made possible the emergence of new life, as grass is seen growing on the soil in which the house is buried. He notes that the curtains are still hanging in the window. The image of the abandoned house, swallowed up by soil, showcases a ghostly remainder of human life that had to make way for other living and non-living entities. Similar images can be found in Herzog's documentary *La Soufrière* from 1977.[161] This short film was shot near a volcano of the same name in Guadeloupe, which showed signs of an impending eruption at that time. Herzog and his film crew filmed the town after all its inhabitants were evacuated. The resulting images show a ghost town, visited only by a few animals and by a few enigmatic people who have accepted that death and catastrophe are part of life. Beholding the desolated town has an uncanny effect. While completely structured as a space for human life, it has suddenly become a space that is not for us, that attributes no particular importance to our continuing existence. The human being has been chased away, has disappeared, and has left only the ghostly traces of its existence behind. In this way, it disrupts the sedative refrains of Capital, Empire, and Civilization, which due to their inherent logic need of solidifying their power over increasingly large areas of life, do not tolerate finitude. As Guattari puts it: "Capitalistic subjectivity seeks to gain power by controlling and neutralizing the maximum number of existential refrains. it is intoxicated with and anaesthetized by a collective feeling of pseude-eternity."[162] The images of the towns in Guadeloupe and Iceland, these spaces in which nothing of human civilization

[160] The concept of 'becoming' is often used by Félix Guattari and Gilles Deleuze. For them, the becoming-x of a body is not a matter of becoming like x or transforming into x, but of an opening up to the affects of x (and vice versa, an opening up of x to the affects of that body), and experiencing in these affects new potentialities for the affects of the own body. See: Deleuze & Guattari, 1987
[161] Herzog, 1977
[162] Guattari, 2000

remains except for spectral traces, precisely invokes a sense of finitude that can disrupt a futurology that is colonized by Civilization and that imposes on us an image of the future which is nothing more than a continuation of the present status quo.

How does this relate to a possible emergence of ecological social organizations and emancipatory politics? It is my contention that this kind of intrusion of finitude in the existential refrains of our subjectivities could have transversal effects (or affects), leading to new potentialities for social and ecological relations and praxes. To understand better how this could work, the essay *Theses on the Philosophy of History* by the philosopher Walter Benjamin might be of help here.[163] In this enigmatic and at times poetic essay, Benjamin offers a critique of a dialectical understanding of time and history that emerged in the nineteenth century, and that is centered around the idea of dialectical progress. In meta-narratives such as that of Marxism, Communism, Liberalism, and Enlightenment, history is evaluated on the basis of a reference point in the future that is seen as destined to happen (e.g. the emergence of a classless society, or an Enlightened world of free citizens that have become the master of their own nature and their environments). The danger of this, according to Benjamin, is that whatever event takes place, is always interpreted in hindsight as a necessary step towards the final point of history, the end of history. Benjamin introduces the figure of 'the angel of history' to counter this idea. The angel of history has "his face [...] turned towards the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed."[164] But he cannot do that, because he is dragged along with the winds of Progress. The salvation and redemption for all suffering that people are enduring now and have endured throughout the history of domination and exploitation, is postponed towards an indefinite moment in the future. As an alternative to this kind of Christian idea of the Messianic event (the second coming of the Christ), Benjamin proposes another Messianic event, in which its arrival has always already come too late, since the heap of catastrophes is constantly growing. Benjamin argues that each generation is "endowed with a weak Messianic power" by the previous generation.[165] Each time, hope is put in a next generation for the redemption of the suffering that the current generation of people has to endure. What Benjamin's theses suggest is that it is the duty of every generation to struggle against domination and unfreedom, instead of transposing this to a point in the future. In the Anthropocene, the *Theses on the Philosophy of History* take on a new meaning. The Invisible Committee notes that, if the angel of history would turn his face towards the future, he would only see catastrophes as well: "The time that's passing is no longer

[163] Benjamin, 2007
[164] Ibid., p. 257
[165] Ibid., p. 254

seen as anything but a slow progression towards an end that will likely be horrendous. Every coming decade looks like another step closer to the climate chaos."[166] The moment that we realize we might have no future anymore – that our present technological civilization will not bring us closer to a future in which we will find true freedom from hierarchy, domination and exploitation, but to a future of chaos – the 'pseudo-eternity' on the basis of which Capital, Progress, Civilization, etc. function will falter. Through the intrusion of a sense of finitude, we may realize that our future is not without limit, that we must oppose the destruction of human life and of nature by Civilization in the present, as every moment we wait longer will only increases the catastrophic rubble in the past and the future, because our situation is catastrophic in the present. As the philosopher Oxana Timofeeva puts it: "a messianic moment of hope, of believing in the future and in the idea that we are still full of life, puts us to sleep, lost in dreams. Only when already dead, and facing no future, do we really have nothing to lose."[167]

[166] The Invisible Committee, 2014, p. 32
[167] Timofeeva, 2014

Conclusion

The central idea of this thesis, which I hope to have made abundantly clear, is that the question of freedom (from domination, hierarchy, and exploitation) and the question of ecological relations between humans and nature as a whole, are deeply interlinked and should therefore be analyzed together. The reason why I have given this thesis the title *After the Anthropocene*, is because I believe that it is necessary that we find ways to be and think in and with nature, in and with ecological and geological forces, that are fundamentally different from those that have formed the basis for the emergence of the Anthropocene. Our politics need to move beyond the Anthropocene. We cannot erase or reverse the life-destroying effects the Anthropocene has and will have on the ecology and geology of the Earth for possibly millions of years to come, but we can organize our lives differently in order to ensure that the disruptive and destructive Anthropocene will make way for new, more ecologically fecund epochs. As I have argued, this means in the first place that we have to struggle against structures and epistemologies of hierarchical stratification, mastery, domination, and subjugation, both in the sphere of social relations and in the sphere of ecological relations.

The logic that drives assemblages such as Capital, Technique, State, Empire, and more generally Civilization, are inherently anti-ecological. To learn to live differently – in ways that reduce the negative impact of humans on their own habitats and on the lives and ecosystems of other life forms, and that leaves open the possibility of a flourishing of life and of potentialities for differentiation and new multiplicities – means to learn to think and imagine worlds, rhythms, times, and affects outside of aforementioned assemblages. My contention is that art can be a helpful tool in regard to that effort. Through my case studies (the *Snowpiercer* series and the cinematic work of Werner Herzog), I have given some examples of how this could work and what this could look like. I would like to explain here why I have chosen these particular case studies, which some might not even place under the category of 'art' at all. First of all, it was a personal preference. I chose these works because they did something to and for me, because they moved me towards thinking about the issues discussed in this thesis in different and new ways. Second of all, I find it interesting that these artists have chosen to address the issues of ecology, politics, and social organization through forms and genres that are considered to be 'popular' (namely, science fiction graphic novels, action movies, nature documentaries). What makes forms and genres popular at a given moment is the fact that for some reason, it is able to speak in a language that resonates with a lot of people at that moment. It reflects something of the collective and political unconscious that is at work in society.

While popular art might often reaffirm a society's ideological structures and meta-narratives (think for example of nature documentaries that show images of a pristine wilderness separated from the human world, and not in the least affected by it), they are also able to act as an agent of questioning and disruption, from within the popular narratives that a society tells itself to reaffirm these ideological structures. That is what, in my opinion, makes the case studies I have chosen particularly effective.

One last thing. If it is true that from the inhuman perspective of climate and geology that we need to take on in order to properly grasp the Anthropocene, the efforts and affairs of the human being have no particular value, and will only be an insignificantly small speck in the deep time of natural and cosmic forces, how do we keep retaining a belief in the worthiness of human life? One could well argue that human life has no value, and that on the grand scale, we have been nothing, are nothing, and will be nothing. But I believe that from the perspective of the human being, our life (and life in general) is worth fighting for, especially a life that can be lived in freedom. However, I am of opinion that there is no transcendental moral law that forms the foundation of this value of life and of freedom; it is in first instance a purely egoistic affair. I, as a creator of value, value the flourishing of life before everything else, precisely because life makes the creation of value possible. That is also why I believe in the necessity of freedom, because freedom is a prerequisite for a fecundity of life. The burgeoning of life means new potentialities for freedom, and the burgeoning of freedom means new potentialities for life. That is what I think an ecological emancipatory politics for the Anthropocene should fight for, a fertile ecology of life and a fertile ecology of freedom.

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