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Distorted imaginaries in a world of crisis - A world-ecological analysis of the imaginaries at the root of United Nations' climate responses

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The earth and all of its inhabitants are currently on a trajectory of multiple cascading global crises, which threaten the existence of all beings and the complex relations, which enable the functioning of all societies. In addition to posing a physical threat to human and non-human existence, the climate emergency also poses a conceptual and an ontological challenge. Therefore, this thesis focuses on the institutionalized and globalized ontological assumptions (or imaginaries) at the core of the current world-system (/ecology) characterized by capitalism. One of the main arguments in this thesis is that the perpetuation of the core imaginaries (namely those of Society and Nature's dualism, mechanistic image of the world and hierarchical existence) at the root of current global structures, as well as the international climate responses, has led to inadequate and misinformed responses to the emergency.

The methodological approach of this thesis is an incorporated synchronic and diachronic analysis which combines the world-ecological theory with the analytical tool of social imaginaries (referring to representations of individual and social existence; the 'truths' according to which people live and the shared understandings of 'what is' and 'how it is'). The data consists of United Nations' policy documents, which include the Paris climate agreement, the Katowice Climate package and reports from related Conference of the Parties (COP –meetings). This thesis shows how the dominant climate responses of the UN (as the main international climate actor), are built on and framed by the imaginaries at the root of capitalism as a world-system, thus continuing the global and institutional enactment of the distorted imaginaries powering the extractive, othering and exploitative practices which constitute the foundation of the capitalist world-ecology.

By examining the current responses to the climate emergency within the wider world-ecological context, this thesis takes part in the increasing critical scholarly work tackling concurrent global crises from radical, alternative and multidisciplinary perspectives. It also offers a new contribution for developing the world-ecological theory further, by incorporating a new analytical tool of social imaginaries, which equips the theory better in studying complex agency within the existing conversation. This thesis is thus a new contribution to the world-ecological conversation, which with the notion of all beings being part of the same co-constitutive existence, can be extremely useful in mapping out the currently dominant global practices and structures, and the (onto)logics at the foundation of these, while simultaneously addressing the a-symmetrical psycho-social aspects of life and environment-making.

Avainsanat – Nyckelord – Keywords **World-Ecology; Climate Emergency; Imaginary; Imaginary Institution of Society; United Nations; Climate Change; Climate Crisis; Climate Policy; political ontology; political ecology**
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Chapter 1. Introduction

1.0. Introduction

The earth and all of its inhabitants are currently on a trajectory of multiple cascading global crises, which threaten the very existence of all beings and the complex relations which enable the functioning of all societies and other eco-social systems (Steffen et al. 2018). Along with the global species extinction wave, global soil erosion, ocean acidification, and rising inequalities (Steffen et al. 2018), the climate emergency presents an all-encompassing need for profound and systemic change in the ways how human societies are currently organized (Gills and Morgan, 2019). The Covid-19 pandemic experienced all over the world during the year of writing this thesis is also a representation of a broken relationship between human societies and the rest of nature. Following an argument by Gills and Morgan (2019), this thesis is founded on the premise that although all of humanity is currently living in a time of emergency, no sufficient action is being taken to address that urgency. In this thesis I argue that one of the main reasons for this startling lack of action is the shortfall of psycho-social and ontological reflexivity in examining the ecosocial imaginaries framing people's experience of existence (thus drawing from scholars such as Yusoff and Gabrys, 2011; Wright et al. 2013).

Therefore, the starting point for this thesis is the idea that the climate emergency not only presents a physical and material threat to human and non-human existence, but also a conceptual and an ontological one. This proposition challenges the way most modern humans predominantly imagine their place in the world and according to which societies have been structured for centuries. Though the current socio-ecological crises such as the climate emergency are unique in their speed, scale, scope, and structural complexity, such crises stand on the shoulders of structures and ontologies which predate modern industrialised societies and are driven by social assumptions and truth systems which encourage and necessitate unequal and unsustainable treatment of non-human nature and most of humans as well (see e.g. Moore, 2015; Gudynas 2016; Dunlap 2020;

There is an increasing amount of scholarly work done to develop theoretical and conceptual frameworks for comprehending the current crises in conjunction with the formations of current global structures and world-historical processes. As an emerging field of inquiry, the world-ecological conversation is a prominent example of such work. Part of this thesis is an attempt to contribute to the critical theory of world-ecology in trying to map out the foundations and structures of the current climate emergency through an analysis which addresses the coproductive relations between humans and non-human nature in interconnected configurations of production, power and environment-making. While my primary aim is to shed light onto the ontological foundations framing the policies and actions currently in place to curb the climate emergency, I also hope to provide a novel perspective on the world-ecological conversation by incorporating the analytical tool of imaginaries (Castoriadis, 1987) to sharpen the theory further.

This thesis stands upon three main pillars, which are 1. The world-ecological theory 2. The analytical concept of imaginaries and 3. The case study of international climate responses, studied through the Paris Climate Agreement, the Katowice Climate Package and the related Conference of the Parties (COP) in Paris, Katowice and Madrid. By examining the current responses to the climate emergency within the wider world-ecological context I aim to contribute to the increasing critical scholarly work tackling concurrent global crises from radical, alternative and multidisciplinary perspectives. The main focus of this thesis is therefore on navigating and mapping out the theoretical issues related to this topic. The case study of the international climate responses functions primarily as an empirical example, within which both the grand world-historical processes (world-ecology[1]) and the psychosocial aspects of life (social imaginaries) can be studied as an incorporated whole.

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[1] Though the theory can also be used to examine regionally situated world-ecologies, not just global processes, dynamics and structures (for a great example of such examinations see e.g. Toivanen & Kröger, 2019).

The **main hypothesis** in this thesis is that **the currently dominant international responses to the climate emergency continue to be inadequate because they lean on the same distorted human-centered imaginaries, which are at the root of capitalism as a way of organising nature**. This hypothesis also translates into my main research question, which is to find out whether the same social imaginaries at the foundation of the capitalist world-ecology (presented in the second chapter) are present and framing the current international responses to the climate emergency (as reflected by the Paris agreement and related policy documents), and thus resulting in inadequate or misinformed interpretations of the emergency and the needed action. **Furthermore**, **this thesis presents a case for incorporating the concept of social imaginary into the world-ecological conversation, as I argue that this conceptualization has the potential to update and develop the theory further** to equip it better in examining the current crises. I argue that the world-ecological analysis together with an expanded understanding of individual and social subjectivity can provide new understandings of the unequal and unsustainable global structures, thus providing pathways towards more sustainable coexistence with the rest of nature.

The structure of this thesis is as follows: After this introduction in the **first chapter** I will shortly discuss the purpose of this thesis and introduce my research approach, analytical tools and methodology. **Chapter two** presents and discusses the theoretical framework - the world-ecological analysis - together with a deeper dive into the imaginaries and the imaginary foundation of currently dominant social realities. In the second chapter I will also discuss the need for and possibilities of cross-fertilization between the world-ecological theory and social imaginaries, thus offering a proposal of how the concept of imaginaries may help to fill (but not close) some of the challenges and gaps in current world-ecological conversation. I will also offer some analysis on how the imaginaries behind capitalist world-ecology relate to and take part in producing the current climate emergency.

In the **third chapter,** I will present the background and the context for the global climate emergency as well as the current international responses to it. I will further discuss how the current international responses have remained extremely lacking in trying to stop or curb the effects of the emergency. In the third chapter I will also present and give an overview of the materials which represent the currently dominant responses to the climate emergency, those of the Paris Climate agreement, the Katowice Climate Package and the related reports from the Conference of the Parties (COP) in Paris, Katowice and Madrid.

In **chapter four**, I will examine these materials through a world-ecological lens, with the focus on whether and how the central imaginaries of capitalist world-ecology are present in the materials. In this chapter I will also discuss how the imaginary foundation of international climate politics affect and limit the potential of those responses. **Chapter five** ends the thesis with conclusions and provides a short summary of the main issues in this thesis.

1.2. Research approach

According to a sustainability scientist Risto Willamo et al. (2018), in order to deal with the current socio-ecological challenges one must employ comprehensive approaches, which integrate knowledge from multiple disciplines, emphasize interconnections and provide fresh perspectives to human-nonhuman relations. Such literature and research contributions are employed from various fields such as development studies, anthropology, critical global studies, political ecology and political economy. In particular, I focus on contributions from the world-ecological conversation, which offers a wide range of alternative, non-dominant ways of understanding human-nonhuman relations. First and foremost, this thesis is an exploration of the crevices and cracks in the currently dominant realities of the capitalist world-ecology, which have resulted in the existential threats, best manifested in the form of the global climate emergency.

A starting point for this thesis are three incontrovertible facts borrowed and adapted from Gills and Morgan (2019). These three assertions are the analytical minimums for anyone hoping to provide useful contributions for transformative and critical knowledge-production around the pressing crises, of which climate emergency is just one. These facts are:

1. Human-induced climate change is real;
2. The need for change is extremely urgent;
3. There is currently not enough being done to prevent irreversible changes.

The scope and perspective of this thesis is fundamentally critical in the way that it aims to deconstruct, de-normalize and open spaces for alternatives beyond the current, dominant ways of being within the web-of-life. Following the sentiments of many convivial and often indigenous cosmologies, as well as scholarly contributions (see e.g. La Cadena & Blaser, 2018; Ingold, 2008; De Castro & Danowski, 2018; Moore, 2015), I approach the subject of my thesis with the premise that all humans are part of nature and that they are nature. Many indigenous worldviews are centered around this sentiment of all life being one (Williams,

2013), in which humans are irrevocably implicated in, part and within the environment — never separate. This notion is also widely accepted in some academic conversations among critical scholars, ecofeminists, deep ecologists and many more (see e.g. Bookchin, 1991; Sale, 1991; Naess, 1973; Merchant, 1982; Mies and Shiva, 1993) whose research hosts a great awareness of the scale of destruction in the web-of-life. Similarly to these, world-ecologist Jason W. Moore (2015) argues that this aforementioned destruction, the current global crises - debt, poverty, biodiversity loss, climate change, to name a few - can all be traced back to the same roots of capitalism as a way of organising nature, which in itself is premised on certain knowledge structures, dominant relations of power, and capitalist patterns of environment-making (Moore, 2015: 3). I will discuss these arguments further in chapter 2.

Ecologist and theologian Thomas Berry argues that "the deepest cause of the present devastation is found in a mode of consciousness that has established a radical discontinuity between the human and other modes of being and the bestowal of all rights on the humans" (1999: 4). Due to the predominance of modern epistemologies and science, premised on a mechanistic, Cartesian, and materialist worldview most people in modern societies, predominantly inhabit a world that is a contracted experience of reality, in which only the things which are physically apprehendable define the limits of experiencing life (Williams, 2013). One of the key problematics of transformations towards sustainable existence is therefore whether human consciousness can collectively comprehend the distortions of the dominant ways of perceiving the world and realize the interconnected relations within the world. And then act accordingly. (Borden, 2017)

My aim in focusing on the intangible, imaginary foundation of reality, does not mean overlooking the significance of the physical and tangible things, or the concrete structures people are living in. Rather, my aim is to understand reality and realities in ways that take *fuller* account of the interdependencies which constitute the web-of-life both in tangible and intangible ways. I will do this by examining the imaginary foundations of the current responses to the climate emergency, while using the world-ecological theory as my main framework and lense for analysing those responses. I argue that the world-ecological theory can systematically elaborate on the historical and capitalogenic[2] foundations of the multiple crises the world is facing, with climate emergency perhaps being the most prominent and urgent one. To add, I hope to prove how the world-ecological theory together with imaginaries can help to uncover the importance of examining the material and

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[2] resulting from capitalist practises or capitalism as opposed to for example "anthropogenic" as resulting from human practise or humanness.

onto-epistemological relations of humans with the rest of nature without which examinations of global crisis such as the climate emergency remain lacking. This thesis is thus a contribution to the current world-ecological conversation, which unlike many other theories examining the origins of capitalism (see e.g. Malm, 2016), calls for more attention to the onto-epistemological and ideological factors in explaining world-historical processes, primarily the rise of capitalism and following global crises.

1.2.1. Positionality as a researcher

Any onto-epistemological inquiry and deepening of such is also always a process of individuation which according to Kovan and Dirkx (2003 p. 102) involves "a recognition of the self in relation to the world". This process must therefore include reflexivity of the patterns, privileges, assumptions and frames one inhabits and which affect any inquiries and examinations one aims to do of the world (these also translate into the ethics and moral justification of the research) (Williams, 2013). The work of every researcher, scientist and student is shaped by their ontological and epistemological position. As Furlong and Marsh (2007) rightly state, these positions often remain implicit rather than explicit. Ontological and epistemological position is a skin, not a sweater, which one cannot take off (Furlong and Marsh, 2007).

In addition, regardless of the changes that social sciences have gone through towards a more realist, (post)structural or behavioristic approaches, positivism is still very present in today's research on societies (Furlong and Marsh, 2007). For example many of the principles and premises behind capitalism are often seen in research, but also in people's everyday lives, as expressions of reality and something that simply is "out there". The inadequacy of positivist research approaches is however exemplified by for example Willamo et al. (2018), according to whom the dominance of positivist, reductionist and differentiative thinking in the prevailing conceptions of the world is one of the reasons for the prolongation and escalation of the concurrent global crisis. This is because within positivist and reductionist research it is extremely difficult to perceive or understand connections and consequences within complex systems. This is also why the current global crises have only become visible to some researchers and policy-makers now that they have become too all-encompassing and wicked to be ignored (Willamo et al. 2018).

Thinking and making knowledge are acts of reality-making. To do research is to continue, disrupt, renew or open new spaces in the imaginaries and epistemologies that shape interaction among humans and with non-human natures. This thesis aims to be an addition to the kind of conversations which have the potential to aid in understanding the

structures, roots and imaginaries of the dominant and destructive processes and actions within capitalism and the resulting climate emergency. I am writing this thesis with the thought in mind that the most important thing is not to determine what is true or real (if that can be possible). What I am trying to show is that the currently dominant ways of being with the rest of nature and of imagining the world are *destructive* on multiple fronts.

1.3. Methodology and analytical tools

According to Linda Tuhiwai Smith, methodology is a "theory of research" which frames the questions and analytical tools of the research and structures the analysis throughout the process (1999 p. 143). In social sciences the researcher has a lot of power in their work. The same data and the same questions can be analysed and answered in a million different ways. However, by being open with one's methodology, analytical tools and the roads taken to reach an endpoint, researchers can offer the reader a possibility to criticize and discuss the study. In this section I will present and shortly discuss my methodology and the analytical tools used in this thesis.

To make visible things that are invisible, the methodologies need to be intersectional, cross existing borders and break free of the methodologies which tend to produce knowledge according to the "normal" and the established. As Val Plumwood (1993 p. 1) argues, it is usually at the edges of knowledges where "tectonic plates of liberation theory— those concerned with the oppressions of gender, race, class and nature— finally come together, and the resulting tremors shake the conceptual structures of oppression to their foundations." This is why I am conducting this research according to some strands of critical theory and critical analysis of world-systems, to which I include the world-ecological theory and Cornelius Castoriadis' theory (1987) on the imaginary foundation of reality.

The division between the imagined and the physical, tangible and "real" has dominated social sciences and produced knowledge which is segregated, lacking and missing crucial connections within the web-of-life. Talking about imaginaries, myths, norms or ideologies does not mean absence of the real or absence of the concrete; to talk about abstract intangible forces means examining the foundations and meanings of the real and the concrete. To think is to make reality. To think destructively is to enable destruction. As Donna Haraway has argued in her book *Staying with the trouble: Making kin in the Chthulucene* (2016) to be better in the world one must first think thoughts that will deconstruct and question the preconditions of destructive modes of being in and within the world.

These aims and guidelines in mind, my main goal is to reapply old theoretical contributions and offer new foci and clarification to pre-existing literature to interpret the onto-epistemological imaginaries at the root of current climate emergency and the responses to it. Such interpretations are vital if people are to continue to inhabit this world. The aim is not to provide a comparison of the two different theoretical contributions but rather assess opportunities of cross-fertilization between the two to provide a fuller understanding of the structures and processes behind current world-system(s), climate emergency being a case within. In addition to examining the shortcomings of the international climate responses, I aim to provide a small contribution on how world-ecology as a theory could be further developed by examining the historical processes and structures (or the environment-makings so central to it) as manifestations and perpetuations of certain social imaginaries.

To do this I am using *incorporated diachronic and synchronic analysis*, which combines the two logics of order (for the separate diachronic and synchronic logics of order see image 1.) originally introduced in linguistics, but now also used increasingly in social sciences (see e.g. Chrisomalis, 2006; Kröger & Nygren, 2020; McMichael, 1992). By incorporating both the synchronic and diachronic scales of analysis, research has better potential in revealing something of the cross-spatial and cross-temporal whole, which otherwise would remain invisible.

'Diachronic' and 'Synchronic'
- Logics of Order

	'Diachronic'	'Synchronic'
Focus	Processes, how matters develop	Structures, how matters stand
Analysis	Features of change over time, historical dynamics	State of the systems at a given point of time
Logic of order	Cause and effect chains	Systemic associations
Basic interest	"What comes after what" - historical understanding	"What associates with what" - systemic understanding
Comparison	Solitaries, unique features and processes	Similarities, contrasts, proximities, equalities

Image 1. The non-incorporated logics of order of diachronic and synchronic analyses (Hämäläinen 2014).

Incorporated diachronic and synchronic analysis enables one to conceptualize instances--in this case climate emergency and its responses--as parts of a general process (capitalist

world-ecology). Through such comparison, analyses construct a relational setting of part-whole interactions, in which neither is privileged nor reified, and in which 'cases' are not examined as neutral a-historical units[3], substituting historical procedures (McMichael, 1992). Understanding the double internality of diachronic and synchronic structurings of life-worlds is important as social existence is not structured only by processes or instances but both at the same time and across time.

I argue that without analysing the meshwork of historical co-productive processes, the physical entanglement and the ontological and axiological base of "the now" remain hidden. This invisibility of the foundational structures of social existence is also very characteristic to the dominant worldings[4] of modern capitalist societies, in which situations are approached through mechanistic, actor-centered 'scenes' of interest and hierarchy (Williams, 2013). The embeddedness of process in moment and moment in process (or e.g. history in a system and system in history) is also extremely central both in the world-ecological conversation and Cornelius Castoriadis' theory on the imaginary foundation of society, both of which build on Marx's dialectical structuring of history (Castoriadis, 1987; Marx and Engels, 1987; Marx, 2004)

This thesis is based on theoretical contributions and scholarly literature from various disciplines, through which I will examine the international climate responses led by the United Nations, represented through the Paris Climate Agreement, Katowice Climate Package (also called the Paris Climate Rulebook) and statements from related Conference of the Parties. The Paris Climate Agreement as well as the following policy documents and negotiations represent the currently dominant international responses to the climate emergency; the best attempt governments and international institutions have been able to offer in tackling the climate emergency.

1.4. Research gap

Though deep sustainability, climate emergency and systems-thinking have gained increasing interest in multiple fields of academia, holistic forms of inquiry combining both historical processes with current structures of power and oriented towards deep and decolonial sustainability remain rather marginal. According to Moore (2015), even dominant environmental research, or 'The Green Thought' as he calls it, does not adequately address the historically constructed rifts in the paradigms and imaginaries, nor the

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[3] This approach also relates well to the world-ecological theory, as for example Moore argues that many case study -based examinations often follow positivist tendencies.
[4] The term "worlding" refers to making, experiencing and producing worlds, existences and images of those worlds through onto-epistemological practises and terminology. (La Cadena & Blaser, 2018)

interconnectedness of all life. Indigneous human ecology scholar Lewis Williams (2013) argues that many recent contributions in the fields of sustainability science, decolonial studies and political ecology have aimed to integrate inquiries of deep shifts in human consciousness and behaviour with ecological well-being and structural inequalities. Williams (ibid.) however continues, that a need remains for more deliberate alignments of disciplines and research focusing on bridging individual and social consciousness with current socio-ecological crises. In addition to Williams' argument, these inquiries should also address the world-historical processes and their embeddedness in current social and physical structures.

There is therefore a need for more comprehensive analysis of the shared historical and structural roots of the climate emergency, global inequalities and the dominant economic practises, including the centralization of state power, colonialism, racism and patriarchy. I argue that the absence of systemic and holistic knowledge on the aforementioned crisis has led to a wide-scale misinterpretation of the processes and crises in question, bringing along with them inadequate, and in some cases even more destructive, responses. As Kothari et al. (2015) argue, without comprehensive diagnosis of the concurrent crises, it is inevitable that the prescriptions will not be transformative enough. There is therefore an urgent need for transformative knowledge-production and knowledge-care, which include the unearthing and support for already existing, convivial ways of being.

With this thesis I aim to contribute to the conversation which brings together the aforementioned aspects of the current crises in the context of specific world-historical processes, that of the capitalist world-ecology. The world-ecological conversation has become central in development studies as well as in fields such as political ecology, critical global studies, agrarian political economy, peasant studies and political economy. Given the centralization of the world-ecological conversation, there is a need to further develop and find transformative applications for it. By combining the world-ecological theory with the analytical tool of the imaginary I will provide a fresh take and a new way of utilising the theory, not only as a theoretical framework, but rather a method, a lens through which the climate emergency can be examined. My main addition to the world-ecological conversation is to better include actorship and subject by understanding the foundations of the grand world-ecological processes as imaginaries through which certain ontologies are enacted via complex power-laden structures of subjectivity.

World-ecological theory takes into consideration the dialectical relations between the social constructivist sphere of historical processes and the material foundation of our world (Moore, 2015). Yet, the psycho-social base on which capitalism as a world-ecology is

premised -- the separation of Human and Nature as the most prominent manifestation of -- should be analysed more thoroughly because, as I will argue in this thesis, those imaginaries and constructed truths, which thrusted nascent capitalism into a global system, are still alive and perpetuated in contemporary social practises.

The incorporation of imaginaries into the world-ecological theory can provide a fresh analytical framework which combines the ontological level of life (without falling into its analytical staticness) with social structures, while keeping subjectivity and actorship in the mix. I argue that this is a useful task to tackle as for example, according to Luigi Pellizzoni (2016) within political ecology there has been some confusion about agency (especially after the 'ontological turn' in social sciences). Many political ecologists either emphasize the context of societal realities or the actorship and subjectivity in those, without bridging these two in holistic ways (Bottici 2014). The same can be seen to apply to the world-ecological theory, which applications have thus far mostly focused on grand processes, large historical development and global trajectories, thus often overlooking agency (this does not however mean that the theory could not or has not also been applied to more specific instances: see e.g. Toivanen and Kröger 2019). Castoriadis' take on imaginaries can thus provide tools to see the development of capitalist world-ecology as a historical process with the inclusion of contentious and complex agency. Castoriadis (1987) asserts how certain imaginaries become enacted, institutionalised and embedded in global structures and physical environments, thus constituting the operational foundation of the current world-ecology. There is also a rather unwavering tendency of western philosophers approaching existence with an emphasis on rationality and reason, with little attention to the imaginary sphere of living, which in itself is a product of institutionalisation of certain imaginaries hailing the primacy of rationality and positivism (Bottici, 2014). The ongoing climate catastrophe forces researchers to reconsider how reality is built and what futures are possible, yet many lack the tools to imagine them.

Feminist philosopher Chiara Bottici also (2014) argues that by recovering and re-applying the theory of Cornelius Castoriadis' imaginaries, new scholarly work may be able to find new tools to come to terms with contemporary transformations. This is something which is also lacking in the contemporary world-ecological conversation, which remains primarily descriptive and explanatory of the world-historical processes. Regardless of its great potential, I would argue that the world-ecological theory partially lacks the analytical perspective to examine current responses and "the process in the now". For this reason there is a lot to gain from incorporating new tools of analysis and aspects of other theories

into the world-ecological conversation in order to better examine the current realities and ways out of them.

There is also an increasing amount of work done to connect the concept of the imaginary with current environmental crises (see e.g. Strauss, 2014; Whiteley et al., 2016; Wright et al., 2013). Most of these contributions however focus on very specific climate-imaginaries or idealized visions for the future. There is therefore a gap in examining imaginaries, which focus on the roots of the crises and those at play in upholding the destructive structures and practises of now. For this reason, with the combination of imaginaries and the world-ecological theory one is able to link current sets of actions and practises with larger world-historical and world-systemic processes and structures. Through avoiding limitation of the analysis merely to describing those processes, one can understand them as synchronic and diachronic entanglements, while also deconstructing the very elements which they are made of.

1.5. Climate emergency as a capitalogenic crisis

Some scholars have argued (see e.g. McNeill & Engelke, 2014) that environmental degradation, social marginalisation and poverty are only side effects of capitalist production (or even largely of societies). However, many political economists have shown that harmful environmental impacts and social marginalisation are actually intrinsic and crucial components which make the capitalist mode of production possible. Research from scholars such as Daly (2013), Moore (2015) and Harvey (2014) show that some of the central (onto)logics of capitalism lie at the root of many of the current ecological crises: the necessity of growth and expansion (Daly, 2013; Moore, 2015; Harvey, 2014), production by extraction (Gago and Mezzadra, 2018; Dunlap and Jakobsen 2020) and the cycles of boom and bust (Harvey 2014). Karl Polanyi (1957) also argued that capitalism as a mode of production necessitates a constitutive outside which is capable of providing never-ending resources for the permanent renovation of the production itself. Therefore, it is the non-commodified relations and things incorporated into the system which constitute the social and cultural premises of capitalism itself (Gago and Mezzadra, 2018). I will discuss these further in the next chapter.

This claim of current crises having capitalogenic roots is further vindicated in many world-ecological examinations of world-history, which show that the long-sixteenth century with the rise of early capitalism was a true watershed for a new era of wide-scale global ecological destruction (Moore, 2015; see also e.g. Zhang, 2013; Foster 2009; Foster 2010). The unsustainability of capitalism's foundation is thus central to the world-ecological

analysis. As a form of organising nature, capitalism and capital accumulation are rooted in violent relations with the rest of the world and these relations are dynamic, expansionary and intrinsically destructive (see e.g. Moore 2015; Dunlap and Jakobsen 2020; Harvey, 2014; Harvey 2016). In order for capitalism as a system to survive, it requires that consumption or the commodification of primary resources grows perpetually. Capitalism is thus founded on the idea of infinite resources and the possibility of infinite growth (Baer, 2012). Thus, the concurrent global crises can be understood as "natural" (in lack of a better word) results of capitalism[5].

The main argument for so-called green capitalism is the belief that through technological development most economic growth could be decoupled from ecological impacts, thus enabling the capitalist production model to persevere without contributing to ecological destruction. This idea of green capitalism has arisen over the past couple of decades as a way of maintaining the dominant economic system in the face of deep criticism, while at the same time creating new ways to generate profit. This idea of an ecologically friendly capitalism has permeated the operational culture of many governments, included in policy-making, become a guiding principle of corporations, think tanks, charities, NGOs and most notably the United Nations' Sustainable Development Goals (Zeng, Maxwell, Runting et al. 2020). The only problem with combining capitalism with actual sustainability is that there is no actual evidence or theoretical grounds that this could be done. Ward et al. (2016) have for example shown by comparing historical data with modelled projections of economic growth that future growth in GDP (Gross Domestic Product) cannot plausibly be decoupled from growth in material and energy use, thus proving that GDP-growth cannot be sustained indefinitely and that it will always have a material impact. And even though country-specific relative decoupling has happened in countries in the Global North, this has only occurred because rich countries have effectively "outsourced" a large part of their carbon pollution, by importing the production of energy-intensive industries such as steel, cement and consumer goods to countries in the Global South. To this end, even some proponents of 'green capitalism' admit that the idea remains poorly conceptualized and is founded on scarce empirical examination (see e.g. Fletcher & Rammelt, 2017). In their recent research Zeng, Maxwell, Runting et al. (2020) argue that the green growth -narrative may only work as a smokescreen for further environmental destruction.

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[5] For a partially different analysis on the origins of the current global unsustainabilities see e.g. the world system analysis by Gills and Frank (1994), which I will present later in this thesis.

Therefore to understand the climate emergency as capitalogenic (caused by capitalist practises) rather than for example anthropogenic (caused by humans) has major implications in regard to how the problem is approached. Even though it is clear that the ecological destruction at hand is created by humans, it is not created by all humans equally and totally. Viewing climate emergency as an anthropogenic phenomena gives an extremely monolithic image of humanity (Moore, 2017), which can lead to misinformed responses to the emergency. The narrative of humans in their humanity being the sole culprit behind crises such as the climate emergency also overlooks and erases thousands of years of indigenous peoples history and sustainable stewardship. Understanding climate emergency as capitalogenic is thus historically more accurate and it denaturalizes capitalism into a specific process in history, rather than a deterministic destiny of life (Moore, 2015).

Capitalism should however not be seen as the only system or set of practices which can be or has been destructive for the web-of-life. Local and regional ecological crises have occurred throughout history, but the scale and speed of current ecological destruction is unforeseen, with the dominant global system premised on that destruction. Capitalist world-ecology is currently killing everything, from megafauna to microbiota, as well as ripping apart the finely built relations between beings, one hundred times faster than ever before in human history (Moore and Patel 2018).

Chapter 2. Theory and the analytical method

2.1. Theory: World-ecology

World-ecology is a conversation which attempts to understand and map out the coproductive relations between humans and non-human nature in an interconnected configurations of production, power and environment-making in the web-of-life[6]. Drawing from the critical traditions of transdisciplinary sciences, world-ecology as a theory was originally developed by the environmental historian Jason W. Moore through his reinterpretation of world-historical trajectories and especially the rise of capitalism as a global world-economy built on othering, cheapening and extractive forms of organisation of non-human nature, labor and lives (Moore, 2015). As an examination of these historical processes, world-ecology begins with the question of how humans — and the interactions mostly called social, such as power, inequality, violence and work — function within nature, rather than separate from it (Moore &

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[6] note: the concept 'web-of-life' will be further explained later in the chapter

Patel, 2018). Therefore, within the world-ecological thinking systems such as capitalism become *an ecology*, a way of organising nature, rather than a parallel system interacting with nature, nor a mere part of 'the ecology' of the world (Moore, 2015).

As a theoretical contribution, world-ecology is an effort to provide a unified theory of historical capitalism, which joins accumulation, power, and nature in a dialectical unity. The theory presents the modern world-system as a capitalist world-ecology, a world-historical matrix of human- and extra-human nature premised on endless commodification and expansion (Moore, 2011). World-ecology is not a theory on the history of the entire world, but rather on the history of the processes, which explain why the world looks the way it does right now (Moore and Patel, 2018).

2.1.1. World-ecology as part of a new wave in transdisciplinary environmental research

The world-ecological conversation has become a central part of emerging transdisciplinary socio-environmental research as well as of development studies and other related fields (see e.g. Deckard 2016; Marley & Fox 2014; Bustos-Gallardo, B. & Irarrazaval, F. 2016; Toivanen & Kröger 2019; Walewicz 2019; Niblett 2012). This rise of world-ecological analyses within these multidisciplinary fields can also be seen as part of a wider shift in socio-environmental research in general. Ulrich Beck (1992) has described some of the earlier phases in transdisciplinary environmental research. According to Beck, the earliest research on socio-environmental interaction concentrated explicitly on environmental issues and their effects on human societies, which started around 1960 with a focus on natural sciences and technological solutions, largely overlooking ideological, historical, structural and cultural factors. The second phase, starting after the 1970s, began to factor in the societal, human, cultural and ideological issues, but kept them as separate realms from the 'natural' (Beck, 1992).

The world-ecological theory can however in my view be seen as part of a new third phase, characterized by a more comprehensive, decolonial and intersectional perspective, which has also been influenced by the so-called ontological turn[7] in social sciences. Some of the recent scholarly work within multidisciplinary social and environmental sciences hosts an increasing focus on the epistemological and ontological aspects of human-nature relations and entanglements in somewhat holistic ways (see e.g. Cadena & Blaser 2018; Haraway 2016; Cadena, 2015; Schulz, 2017; Sullivan, 2017 among many others). These scholarly contributions offer new critical takes on socio-ecological issues, while deconstructing and

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[7] On the ontological turn in social sciences see e.g. Holbraad & Pedersen (2017) and Viveiros de Castro & Skafish (2015).

abandoning the very categories and framings through which socio-environmental issues have been studied before (in addition and linked to conversations such as degrowth, ecofeminist and decolonial studies, and work done by many indigenous scholars).

Theoretically the world-ecological conversation also lends a lot of it's orientation and analytical perspective from Wallerstein's world-systems theory and Marx's early theorisations of capitalist political economy. The systemic, interconnectedness of Marx's political economy is similar to the ideas of Moore's world-ecology, in which environments and beings are co-productive of each other, while being part of and constituting the wider whole. In addition, Moore (2015) also stresses the importance of postcolonial and feminist paradigms in understanding world-ecology and how the current capitalist world-ecology is constituted and perpetuated through multiple power disparities and enabled through intersecting structures of marginalization.

2.1.2. Capitalism becoming a world-ecology

Although world-ecology is not merely a theory or re-reading of capitalism, a lot of the world ecological literature is centered around the historical processes of capitalism as a way of organising nature. Unlike many scholars studying both the origins of capitalism and the roots of contemporary environmental crises, the world-ecological theory does not trace these only to the industrial revolution of the 19th century, but rather to the early structurings of imperialism and colonialism in the long-sixteenth century (1450-1640). Though individual practises of capitalist function have occurred already earlier in history, as an actual "world-ecology" capitalism only started to emerge after 1450 (Moore, 2010). In his book *Capitalism in the Web-of-life* Moore (2015) provides an initial mapping of the process of capitalism becoming a world-ecology with an example from Madeira in the 15th century. According to Moore (ibid.), the colonization of Madeira provides a good example of capitalist environment-making and of early world-ecological structurings, as it brought with it a new kind of interaction between power, capital and nature. In Madeira during the 15th century the capital from Spain entered a specific new relation with monoculture crops, deforestation, slavery and imperialism. According to Moore (2015), this treatment of nature characterised by commodification and cheapening of non-human nature as well as the expansion of capitalist frontiers, established a wider direction of development, which the world is still on.

The long 16th century (1450-1640) with its several parallel colonial projects (similar to that in Madeira) brought with it some fundamental changes to dominant economic logic, including the imperative of the accumulation of capital and labor, but also the capitalization and commodification of nature. This resulted in an unprecedented level of transforming land

and labor. (Moore, 2015) The following socio-ecological processes were also made possible by developments in technology, especially in ship building, mining, metallurgy, cartography and sugar cane production (Moore, 2017b) but also due to stronger establishment and institutionalization of the psycho-social assumptions which capitalism is premised on (see e.g. Merchant, 2013). The 'holy trinity of capitalism' of endless accumulation of capital, endless conquest of nature and commodification of everything were henceforth systematically (albeit unevenly) combined together in a messy and contingent meshwork of relations between humans and the rest of nature (Moore, 2010; Barbier, 2011). According to Harvey (2005) this shift in global economy, which is often perceived merely in terms of colonial expansion, was not only colonization of space but also the conquest of time in regard to creating capitalist forms of labour and the power over the fruits of commodity production and exchange.

Most regions and their local ecologies, as well as their economic and environment-making activities have thereafter become a part of this wider world-ecology through chain-like systems of production and extractivist appropriation of resources. Varied and previously relatively isolated "local bundles of socio-ecological relations were incorporated into – at the same moment becoming constituting agents of – capitalism as an ecological regime" (Moore, 2010: 191). The same expansion has thereafter reached the densest of forests, mined through mountains, enclosed most of the worlds land into private and corporate property, enclosed hundreds of millions of people to work in service of capital accumulation and externalised most of non-human nature as a waste-disposal and a pool of resource (Moore, 2015). According to Moore (2015) each new cycle and expansionary phase [8] of capitalism was founded on key processes of acquiring new Cheap Natures (such as forests, minerals, agricultural land), which included Cheap Energy (i.e timber, coal, oil), Cheap Food, and Cheap Labor (i.e. slaves or desperate English factory workers from the industrialization era).

2.1.3. The Cheap and The Unaccounted as the foundation of capitalist world-ecology

Though the world-ecological theory builds on the realisation that human labour is not the only producer of value in the world, it simultaneously offers a comprehensive analysis on the significance of cheap(ened) and unaccounted human labour and lives for capital

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[8] In his book "Capitalism in the Web of Life" (2015) Moore presents a periodization for capitalist environment-making, which is differentiated according to the hegemonic powers and ideologies. These periods are 1) a Germanic-Iberian cycle (c. 1451–1648); 2) a Dutch-led cycle (c. 1560s–1740s); 3) a British-led cycle, c. 1680s–1910s); 4) an American-led cycle (c. 1870s–1980s); 5) a neoliberal cycle that commenced in the 1970s and is still ongoing (Moore, 2015, p. 119–120).

accumulation and production. Since its gradual birth in the long-sixteenth century, capitalism has always relied on the praxis of turning life into useful work for the accumulation of value (Moore 2017). The world-ecological theory thus re-incorporates this prerequisite of cheapened and invisible work into the analysis of capitalism through examinations on how the relations of power, capital and nature transformed during the long-sixteenth century.

According to Moore, (2017c) all human activity, and along with it civilizations in general, enact and impose hierarchical valuation of reality – this means that some things and relations are valued more than others. However, under capitalism the valuation of whose work counts, and whose does not, is extremely narrow (Moore, 2017c). To put it simply, Moore (2017c) argues that under capitalism the condition for some work to be valued is that most work is not. Since the long-sixteenth century, the global economy came to be structured according to these rising (onto)logics of capitalism of territorial and epistemic power, focused on the appropriation of uncommodified work/energy (Moore, 2017c). The 'discovery' and utilization of new, cheap and free natures (and labor) have enabled the continuation of this form of production for centuries, as new value was extracted for profit and annexed into the circulation of capital (Moore, 2015). In the light of this, as Harvey (2010) argues, the "primary accumulation of capital" should therefore be seen as dispossession, exploitation and annexation of marginalized subjects and Nature into the capitalist system (Harvey, 2010; in Banerjee, 2010).

Drawing on the work of other critical scholars (such as Federici, 2012; Dalla Costa and James, 1975; Vogel, 2014) the world-ecological theory thus centers around the notion that capital accumulation and the generation of wealth and material well-being in modernity are all inextricably dependent on unpaid or low-paid labor of marginalized people (along with cheap(ened) and colonised nature). This means that the cheap things produced under capitalism have all emerged through a violent praxis, which relies on the unpaid work and energy of "women, nature, and colonies" (Mies, 1986 p. 77). This free or 'cheap work', through (and because of) which the world-historical capitalism emerged, consists of work, energy and lives, which are reproduced mainly outside the monetary practises, but which are indispensable for capital accumulation (Moore, 2017c). The huge scale and significance of unpaid work (such as care) performed mostly by women and the colonized, are estimated to account for around 70 to 80 percent of the entire world gross domestic product (GDP), and this does not even include the value extracted from low-paid workers of the modern precariat (think sweatshops and Amazon factory workers) (Moore, 2017c). This cheap and free labour along with the material conditions of capitalist production – such as land, raw materials, energy and other uncultivated resources – are mostly used as 'free gifts' under capitalism,

with the extracted value of these being privatised and the ills publicised (degradation, waste, depletion) (Koch, 2011).

The unequal socio-ecological exchange (for the original theorisations on ecologically unequal exchange see e.g. Bunker, 1984 and 1985; Foster, 1999) demonstrated by scholars such as Dorninger et al. (2021) have shown how the global economy is largely defined by asymmetric net flows of materials, energy, land, and labor, allowing high-income countries and corporations to appropriate resources and to generate wealth and monetary surplus through what is merely called 'international trade'. This division does not however exist only between the world-historical Global North and South; The world-ecological theory studies these relations within deeper and wider system-wide structures of power, knowledge, capital and nature which expand through interspecies and intraspecies relations both globally and locally (Moore, 2015).

Moore (2017c) argues that one of the reasons why most world-historical theories have thus far overlooked the unequal interrelations of non-human nature, energy and cheap or free labor is because most scholars have been focusing on the wrong issues of whether the reproduction of labor-power directly produces value, rather than asking how the reproduction of unpaid labor-power is a prerequisite for the accumulation of capital (Moore, 2018). By including the unpaid and low-paid work of women, colonies, slaves and nature into one's analysis of the capitalist praxis, it becomes evident that capitalism is only able to 'produce value' because it extracts that value from beings and relations outside of the commodity nexus. The world-ecological analysis of unpaid work also uncovers some of the initial psycho-social conditions for capital accumulation, centered around the imaginary of external nature and lesser beings (including most humans). The cheapening of lives and labor is thus very much linked to the idea of Galtung's (1990) cultural violence (compared to direct and structural violence) which "preaches, teaches, admonishes, eggs on, and dulls us into seeing exploitation and/or repression as normal and natural, or into not seeing them … [as] 'right' or at least not 'wrong'" (p. 291). The possibility of capitalism in appropriating and exploiting marginalized subjectivities and Nature therefore relies on the violent imaginaries made so mundane that for a long time they have remained unrecognized by the dominant social thought (Laurie & Shaw, 2018) I will discuss this further later in this chapter.

2.1.4. Materiality in world-ecology

Central in Moore's theorising of capitalism as a world-ecology is the double movement of capitalism through nature and nature through capitalism. The way capitalism and with it the Capitalocene has unfurled lies on the "specific configurations of human and extra-human

actors" (2015: 37). The world-ecological theory lies on the assumption that humans are intrinsically part of the web-of-life, which permeates all of existence. All beings, systems and habitats are thus relational configurations co-produced within the web-of-life and with it also capitalism is an "evolving totality of nature, power and capital" (Moore, 2017a, p. 288) The double internality (capitalism in nature and nature in capitalism) presents the rise of capitalist practices and later the entire world-system as a new way of organizing nature, creating new relations between work, reproduction and the conditions of all of life.

The world-ecological theory also builds on the fact that everything has a material foundation. The material foundation of everything becomes rather evident when one understands that neither labour nor capital can function without energy; without energy, labor is nothing more than a corpse and capital is nothing more than a sculpture (Keen et al. 2019, p. 41). Capitalism is thus a system that functions through Nature, not parallel to it (Walewicz, 2019, see also Behrens et al. 2007), and in which value is co-produced, or rather rearranged, in complex entanglements. The world-ecological theory thus reconsiders and critiques "living labour" as the primary creator of the world and Society at large.

Practises such as agriculture can thus be understood as relational configurations in which humans have "mixed labour with the earth", as Williams (1980) reiterates, instead of being merely combinations of social and environmental elements. The elements are however so inextricably interwoven that it is impossible to distinguish which parts in the processes of production are "social" and which are "natural". It is also important to emphasize that other socio-economic practices (maybe deemed more modern) such as finance, service work or data and technology are also as dependent on the non-human nature as are practises such as agriculture or fishing; Wall Street is no less independent of the environment as is the field; No financial banker survives without food, water or land and no technology is built or managed without resources from the earth. (Moore, 2017a)

In the same vein, large-scale historical processes and empires are also entirely constituted of socio-ecological bundles of relations, *acting through*, rather than upon, the rest of nature. This materiality is however always intertwined with abstract structures of power and shaped through individual and patterned practises. Most matter in the web-of-life is always situated within wider psycho-social, behavioural and power laden relations, which are currently dominated by global capitalism. Scholars such as Dagget (2019) and Pirani (2018) have for example elaborated how the rise of coal and oil in revolutionizing the entire realm of energy production and consumption was only possible due to the existence of necessary social conditions. The large-scale burning of fossil fuels is only possible through a meshwork of human and non-human labor and entanglements, in addition to the actual biological

substance of the fossil fuel. Without a system which requires the continuous surfacing and burning of fossil fuels, oil and coal remain nothing more than a-political matter, "concealments of millions of years of past death and sunshine" locked in the earth's crust. (Moore, 2015)

Understanding the manifold relationalities and interdependencies allows one to start looking at how every state, class and colonial project, every revolt and strike, and every movement and accumulation of money is bundled with extra-human nature and borne out of often unequal relations of power (Moore, 2015). The world-ecological conversation thus emphasizes unlike many other environmental research or world-system theories that beyond interconnectedness, things, beings and processes are *interdependent*, in complex configurations in which life enables life. Within this framing the concurrent global crises, including the climate emergency, become to be seen as manifestations of the web-of-life's functionality in response to the extractivist and destructive expansion of the capitalist world-ecology and the unsustainability of the contemporary world-system at large.

2.1.5. Web-of-life and holistic relationality

What arises from the deconstruction of the necessary building blocks of capitalist world-ecology, is the need for an alternative understanding of how life is constituted and how humans relate to the rest of nature. The world-ecological theory provides this alternative with the concept of a *web-of-life*, which conceptually shares a lot with some of the current research within the fields of ecology and biology (see e.g. Sharma, 2015) as well as cosmologies centered around the idea of life as a convivial whole (such as Vivir bien, Sumak Kawsay, Ubuntu, the theory of Gaia and some ecofeminist theories). Many of these conceptualisations or cosmologies are built upon the idea that the world is relationally constituted through contingent, historically produced, infinitely variable forms in which each part, human or non-human, organic or non-organic, is intrinsically bound up with the wider relations that make up the whole (Swyngedouw, 2011).

This holistic relationality of life has also been approached within biology by for example Kriti Sharma (2015) who has shown in their book 'Interdependence - Biology and Beyond' that biologists have already for a long time produced a massive amount of empirical observations which all illustrate that the world is "vibrant, intricate, causally complex --, in which products depend on processes, processes depend on products, wholes depend on parts, parts depend on wholes, and living beings depend on one another for their lives" (p. 1). What is shared by the world-ecological theory and many of the other conceptualisations of an interdependent world is that the interchange, the metabolism and the system of

reactions all create a closed whole in which there is no "out-there" available to be used to manage the waste, negative surplus or unwanted subjectivities of being.

In the world-ecological conversation activity and environment-making situated in the web-of-life are further described through the concept of 'oikeos', which Moore (2015) refers to as the "creative, generative, and multi-layered relation of species and environment" (Moore, 2015 p. 4). Oikeos thus names the relation through which humans and non-human beings are with, to, for and within each other. Oikeos is the ever-humming machine of web-of-life's functionality, in which environment-making as an analytical tool provides the interchange of how the oikeos is arranged, shaped and manifested in the web-of-life. It is very much related to the signifier 'ecology' in world-ecology (and its associated concepts such as ecological regime), which also refer to a holistic perspective on the society–environment relation; meaning that if the organism and environment constitute the parts, ecology signifies the whole that emerges through these relations (Moore, 2010). Likewise to similar notions such as Gaia and the Pachamama, the web-of-life does not refer to a-historical existence, but it actually is history materialized; a contingent sequence of events and play of relations, rather than a mere unfolding of timeless laws and universal destinies.

By conceptualising existence through the concept of the web-of-life, capitalism also becomes nothing more and nothing less than a way of organising nature (or the web-of-life). Through world-ecological analysis 'Nature' thus seizes to be a passive substance upon which people leave their footprint, and becomes an active bundle of relations formed and reformed through the historically and geographically specific movements of humans with the rest of nature (Moore, 2015). This also means that what is often understood as "human environments" such as urban landscapes are also nature (or rather the web-of-life) organised in a certain way, as are apartments, takeout-food, our phones, or the clothes we own. It is thus important to note that although the web-of-life is made up of relations of co-constitutive existence, this does not mean that those co-productive relations cannot be unequal, unsustainable or exploitative.

If one accepts the world-ecological notion of the web-of-life, in which everything is tightly hitched to everything else, a sectoral and mechanistic image of the world starts to crumble. What people have learned to call the 'economy' does not make conceptually sense anymore, as the 'economic' is understood as interdependent and inseparable from what has been called 'social', 'ecological', 'technological' or 'cultural'. In practical terms this would then mean that politics around for example burning of fossil fuels cannot be separated from the global carbon cycle, or the resulting impacts on the atmosphere, ecosystems, global ice

cover, weather patterns, ocean acidification, farming yields, sea levels, public health, government budgets and worldwide refugee figures (Gills and Morgan, 2019).

World-ecological theory forces us to step outside of comfortable conceptual tools of human and nature, town and country, centre and periphery, production and circulation, resource and labor. Before all else, the world-ecological theory helps scholars to situate capitalism (and the concurrent and resultant rise of socio-ecological crises) historically and geographically into the web-of-life. This means analysing capitalism not as an economic system but as a materially-bound and multispecies world-ecology of capital, power and co-production (Moore 2016; Haraway 2016). If one accepts this notion of a co-constitutive world, it has strong implications on how people continue to act and relate to the world around and within them. Climate emergency thus becomes an internal systemic crisis, an emergency threatening the functions of life in general, not an external threat merely impacting the social or economic spheres of life. This lack of system-wide thinking and critical re-reading of history has not only been the problem of economists or general historians, but also within the mainstream 'Green Thought' (environmentalists and political ecologists), which has been extremely slow in recognizing the essential role and labor of cheap lives and non-human nature (Moore, 2015). This is partly due to the dominant truth-systems, the institutionalized social imaginaries at the root of capitalism, which have been cemented into the shared consciousness of societies today. In the next chapters I aim to uncover and explain the significance and role of social imaginaries in making and perpetuating the capitalist world-ecology.

2.2. Analytical Method: Imaginaries and the imaginary foundation of society

Power, production and perception entwine in the web-of-life. There are no structures of power or production, without first being structures and/or acts of perception (Moore, 2015). These aspects of living cannot be separated, as they are unified in every act and moment of life. Therefore to understand the everyday, the mundane, the all-the-time-visible (in which the most powerful power dwells hidden) one must deconstruct the forces behind those. Historically the dominant schools of thought in Western philosophy have deemed perception and experiencing reality as passive processes, meaning that how people hear, see, learn and experience their surrounding reality depends solely on how the 'things' perceived reach their consciousness and the 'essence' of those things. However, according to a growing amount of literature (see e.g. Silva, 2020), there is now a better understanding of the ways in which historical sources determine and guide the active nature of perception. In trying to

understand this active character of experiencing reality, the theoretical concept and analytical tool of **social imaginaries** is an excellent starting point.

In this thesis I refer to imaginaries as representations of individual and social existence. They are the "truths" according to which people (me, you, we) live their lives, the widely shared understandings of "what is" and "how it is" (Castoriadis, 1987). As a concept, 'imaginary' has become so common (especially within anthropology, often replacing the notion of cultural beliefs, see: Strauss, 2016) that most authors do not even cite a source for it anymore. Those who do cite the source, most times reference either Lacan, Anderson, Taylor or Castoriadis.

Imaginaries are pre-reflective conditions of sense-making, which guide acting and living even before thinking and speaking starts (Bottici, 2011). One of the main theoreticians of the concept of 'imaginary', philosopher Cornelius Castoriadis (1987) argues that most social systems are only held together through a set of social imaginary significations, which allow the majority of people adhere to different instituted ways of life on earth. What Castoriadis calls the imaginary foundation of society also bears similarity to Pierre Bourdieu's use of *doxa*, in the sense that both scholars use the two concepts to reflect what is taken for granted and "what goes without saying, because it comes without saying" (Bourdieu, 1977 p. 167). In practical societal uses both *doxa* and imaginaries help to petrify social realities and limits of societal change (Strauss, 2016). While some imaginaries are shared within smaller self-identified groups, others are shared by people across distance, with no common identity, but who may be exposed to the same global media, economic institutions, or social practices (Strauss, 2016).

Imaginaries are ontological, as both concepts imply (by simply existing) that multiple realities are possible (Adams, 2011). Imaginaries can be understood as specific ontological assumptions or perceptions, which are repeated in multiple and often influential social contexts, learned from participation in shared practices and through exposure to shared discourses and symbols (Strauss, 2016). Ontologies, when understood similar to cosmologies[9] (both always escaping full description), are abstract realms or systems of thought, which provide the principles, values and structures of world-making and being, which can then be analysed or defined within those ontologies (Marchart, 2018).

In regard to research and knowledge-creation, political ontologies can provide a perspective for examination, while imaginaries can be pinpointed and used as bite-sized biopsies of specific ontologies, thus providing a better grip on agency and the possibility to situate moments into structures and historical processes. Imaginaries are thus the specific

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[9] as opposed to the other (albeit intertwined) meaning of ontology as the philosophical study of being.

threads through which certain ontologies are enacted in day-to-day practises. They are the threads which weaved together constitute ontologies (though ontologies cannot be only defined by the imaginaries which characterise them) *and* institutional and physical social structures and environments. In studying societal transformation and agency, imaginaries may also provide a more comprehensive analysis compared to ontologies, as they are dynamic, non-essentializing tools for dissecting reality, rather than static fields of reality-making; a person might not be able to reflect upon, realize or describe their ontological framework (i.e. "how I see the world and being"), but they might be able to reflect upon and realize specific imaginaries they use, embody and enact (e.g. "Society is different from Nature" or "Humans are inherently selfish and competitive").

An important aspect regarding imaginaries as analytical tools is the distinction between the imaginary foundation of society and the symbolic realm of existence. According to Strauss (2016), Castoriadis equates the symbolic with signifiers and the imaginary with the ideas that are their significations, meaning that while "significations appear only as they are carried by signifying structures . . . this does not mean that they [significations] can be reduced to these [signifying structures], that they result from them in a univocal manner, or, finally that they are determined by them" (1987: 136 in Strauss, 2016). As an analytical tool social imaginaries also differ from imagination (as in utopist imagination) in its temporality, (un)intentionality and the possible lack of axiological scrutiny. Imaginaries refer to what is now and always, i.e. one's "grasp of the world" (Castoriadis, 1987 p. 149), while in the common usage, 'imagining' or 'imagination' refers to what people think what could be or what ought to be. Imaginaries are also not reducible to language, thus contrasting the postmodernist notion according to which the rational world and the rational subject are more or less constituted by language (Low, 2010). In addition, imaginaries should also not be understood as a mere "issue of the mind", which as an approach itself reflects specific philosophical dichotomies of for example mind and body, and physical and non-physical. Imaginaries should rather be understood as world-making bridges, foundational mechanisms of action and being in a co-productive and dialectical existence.

Following Strauss' (2016) contribution in understanding imaginaries, by using imaginary as an analytical tool in understanding (eco)social realities, we can avoid turning shared existences or culture into abstractions, but rather see the interplay of concrete material and symbolic conditions, constituting and co-building those cultures and existences. By bringing in imaginaries to examine social existence(s), one is able to unearth some of the foundations patterning reality and shaping the biophysical world. In a world of multiple concurrent crises it is essential to be engaged in struggles over society's meaning and

significations, above and beyond scientific evidence and empiria, as people rely highly on their preimposed truth systems in defining what knowledge and information is, what relevance to give to it, and how to respond to it. As Wright et al. (2013) argue, failing to engage with society's social imaginary significations, people will simply continue to adhere to 'the way things are'.

2.2.1. Institutionalization of imaginaries

Unlike many of his counterparts, Castoriadis emphasizes both the individual and social levels of the imaginary, noting that imaginaries should also be studied in how they are institutionalized, or in other words cemented into shared existence; physical environments, social practises, governance and socio-economic structures. The institutionalisation of social imaginaries thus refers to the co-production of realities through onto-epistemic and material realms. Through institutionalisation, the previously intangible imaginary becomes "embodied" elsewhere beyond and in addition to the individual and social unconsciousness; The imaginary of democracy is embodied in the practices of parliamentary governance; The imaginary of Cartesian dualism[10] on Society and Nature's separation in the covered surfaces and built infrastructures of cities; The imaginary of money as a reflection of value in the international trade and financial system; And the idea of nation states within immigration policies, international relations and internalised identities of most humans on the planet.

Through institutionalization imaginaries also become cross-temporal links between historical processes and current structures. The foundational imaginaries of any social system, when embodied, become to be legitimized by those physical environments and current practises, thus perpetuating their own existence (see image 2.). The institutionalization of imaginaries (in physical environments, social structures and patterns of behaviour) thus starts to strengthen people's reliance on those imaginaries, because as Kahneman (2011) has shown, people have a psychological tendency to believe and rely on information which is familiar to them. Thus the historical structurings of certain ontological imaginings are crucial in understanding contemporary systems of power. By understanding both the diachronic and synchronic levels of the imaginary institution of society, one is able to

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[10] Named after the French philosopher René Descartes (1596-1650), according to whom, reality is characterized by dichotomies, primarily the mind and body, which are separate and different from one another, and which can exist by itself. The cartesian dualism also implicates the basic propositions of the scientific revolution in connection with the rationalist and mechanistic image of reality, by imposing 'an ontological status upon entities (substances) as opposed to relationships (such as energy, matter, people, ideas and so on became things)' (Watts 2005, 150–151). The either/or' rather than 'both/and' logics of for example Nature and Society's separation (not societies-in-nature) partly derives from cartesian philosophy (Moore, 2017b).

partake in the re-politicisation and de-normalisation of the present and the dominant ontological structures functioning in capitalist modernity, which are also at the root of current responses to the climate emergency. Therefore, due to institutionalisation, the imaginaries behind capitalist world-ecology should not only be seen as an aspect of the historical process, but also as an intrinsic part of what renews capitalist practises now.
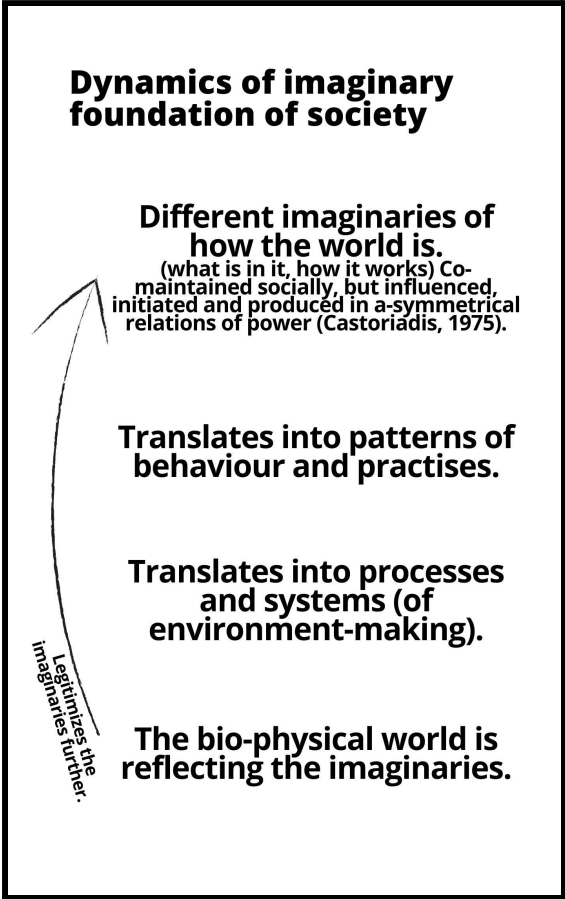
Dynamics of imaginary foundation of society

Different imaginaries of how the world is.
(what is in it, how it works) Co-maintained socially, but influenced, initiated and produced in a-symmetrical relations of power (Castoriadis, 1975).

Translates into patterns of behaviour and practises.

Translates into processes and systems (of environment-making).

Legitimizes the imaginaries further.

The bio-physical world is reflecting the imaginaries.

Image 2. Dynamics of imaginary foundation of society (author's own elaboration).

This entanglement of physical environments and imaginaries as structures of life-worlds also bears a lot in similar with the world-ecological notion of 'real abstractions'[11] and the idea of environment-making. Though the world-ecological theory discusses these 'abstractions', required for capitalist production and environment-making, further analysis on these aspects are needed in order to develop the conversation further. What Moore calls 'real abstractions' should thus be analyzed as imaginaries. This is because in most world-ecological literature the ontological aspects and specific abstractions (for example Society and Nature -dualism) seem to exist freely with only limited regard to who enacts those imaginaries and how. As an alternative way to analyse these world-ecological abstractions, social imaginaries remove the abstraction from the abstractions, making them available to be examined in specific moments enacted by specific people and social actors. By studying the institutionalisation of imaginaries central to capitalism (such as the mechanistic worldview and Society and Nature -dualism) one can begin to see how those imaginaries are sown into the social institutions and pattern the way societies function.

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[11] Following Sohn-Rethel (1978) and Toscano (2016) Moore (2015) refers to 'real abstractions' as abstractions with operative force in the material world, such as the idea of Society and Nature as separate things.

2.2.2. Imaginaries and complex agency

In the current world-ecological conversation heterogeneous subjectivity, complex structures of accountability and entanglements of shared and individual consciousness remain rather unrecognized and underanalyzed. In addition, many previous studies on the climate emergency and sustainability have had a tendency of dividing subjectivity and actorship into clear-cut categories of oppressor and the oppressed, or even overlooked the issue of actorship altogether in the midst of describing grand processes (Yusoff and Gabrys, 2011). The incorporation of both the individual (psyche) and the socio-historical levels of the imaginaries is important as it helps to avoid the essentialization (or obscuring altogether) of individual subjectivity, while at the same time addressing the social and power-laden characteristics of being in the world (Adams, 2011).

To reiterate, in the contemporary world most of the people living in the Global North, and an increasing number of people living in the Global South, embody both victim and culprit all at once in regard to for example the climate emergency. The seemingly voluntary participation in a society built on unsustainable extractivist modes of being makes most people somewhat complicit in the creation and perpetuation of the said crisis. However, as De Castro and Danowski (2018) argue, it is essential not to confuse "McDonald's itself with the teenager conditioned into consuming junk food, or Monsanto with the small farmer obliged to spray his genetically modified corn with glyphosate, let alone the pharmaceutical industry and the cattle force-fed with antibiotics and hormones" (p. 176). Though the 'kid eating the McDonalds' is to some extent acting on their own will, there are multiple layers of power, influence, structural coercion, socio-economic factors and historically constructed ontologics sometimes determining but always guiding the realm of the possible and the desirable for individual or social action.

Because imaginaries as dynamic tenets of ontologies allow the kind of complex agency and accountability, they can also provide ontological openings for mapping out social transformations and work in settings of parallel realities. Such analytical tools are arguably extremely useful in current historical junctures in which the old order (capitalist world-system) is proven to be unsustainable and starting to crumble, but alternatives are not yet systematically inhabited or embodied. In situations like this people can embody and enact imaginaries from different ontologies. An example of this could be the academic, red, green and queer social groups I belong to, in which people may adhere to and renew capitalist imaginaries (of e.g. consumerism, Society and Nature -dualism and growthism) in many public spaces but enact and embody more convivial, empathetic and relational imaginaries in private settings.

2.2.3. Imaginaries and the capitalist world-ecology - the onto-epistemological background

In this chapter I will describe the onto-epistemological background and assumptions of examining the current world-ecology through the analytical method of social imaginaries. At the core of capitalism as a world-ecology is a series of violent abstractions of Society and Nature's separation and cheap lives, which provide the backbone of the imaginary foundation of capitalism. Following Sayer (1989), Moore (2017) calls these abstractions "violent" because they remove essential relations from each node in the interests of narrative and theoretical coherence, which in turn result in distorted imaginaries used to make sense of the world. The abstractions are violent also in practical terms, as they fundamentally enable capitalism's world-historical praxis, which is founded on the cheapening of lives and work of most humans and non-human natures (Moore, 2017). This imaginary foundation of capitalism is extremely crucial as capitalism can only function because of imaginaries which constitute the initial devaluation of most of the web-of-life (Moore, 2015). Certain imaginaries thus make aspects in the web-of-life exploitable and readable for capital in order for them to be incorporated into the capitalist machinery.

A major crossovers of (especially) Castoriadis' theorisation on imaginaries with the world-ecological conversation can thus be found in the epistemic and psychosocial practises necessary in identifying and appropriating what the world-ecological conversation calls 'Cheap Natures'. For Moore, the most significant abstraction for capitalism is the dichotomy founded on Cartesian dualism which includes the philosophical and psychological separation of "nature" from "society". Following Thomas (2017) this separation which Moore calls 'convenient fiction', is an imaginary which enables exploitative environment-making and obscures the relations which capitalism has with non-human nature. This abstraction of the dualism between **Society and Nature** (intentionally in uppercase), provides us the **first central imaginary** at the root of capitalism as a way of organising nature.

According to Moore (2017), the Cartesian philosophy also delivered some of the other basic propositions for the capitalist revolution and thus generated the system which in the end resulted in the concurrent crises governments and international institutions are now attempting to solve. **The second central imaginary** is present in the world-ecological conversation less overtly compared to the Society and Nature dualism, but it is nevertheless crucial in providing some of the foundational psychosocial prerequisites for capitalist environment-making. It is the **imaginary of a mechanistic world-view**, which is founded on 'an ontological status upon entities (substances) as opposed to relationships (that is to say energy, matter, people, ideas and so on became things)' (Watts 2005, p. 150–151). Both the

mechanistic worldview and the imaginary of a Society and Nature dualism encourage and either/or rather than both/and logics – Nature and Society rather than societies-in-nature (Moore, 2017). These both intertwine with the **third central imaginary**, which is the **imaginary of cheap lives and hierarchical existence** which renders the actively created inequalities under capitalism as natural and enables the unequal exchange of value by extraction, exploitation and appropriation.

The rise of the imaginaries of a mechanistic world-view, Society and Nature dualism and hierarchical existence delivered the basic propositions and premise for capitalist environment-making by deeming non-human nature and most of humans as external, cheap and available to commodify. This later translated into concrete practises and finally global world-ecological structures. Though these are not the only imaginaries foundational to the rise of capitalism as a way of organising nature, they provide a strong backbone for studying the central ontologics of capitalism (others could be i.e. money reflecting inherent value or growth as a necessity etc.). The cartesian philosophy embedded in the aforementioned imaginaries also promoted the narrative of purposive control over nature by means of science and technology, thus giving rise to a rationality of world conquest and domination (Glacken 1967, 427; Altvater 2016). According to Ingold (2008), modern societies' hegemonic ways of thinking is strongly based on the image of the world as a mechanistic machine, in which living things are externally bound, solid objects in an engineered world, all competing for limited space along the lines of their adjacency. In this image of struggle, it is the very objectness of organisms which defines their existence, thus generating a view of life in boundaries rather than bindings (Ingold, 2008).

The imaginary of hierarchical existence is also central in Moore's theorisation of capitalist environment-making (2015), as he argues that the main reason that most non-human beings (and many humans as well) have been exploited and dispossessed, is that they have systematically not been considered as beings of inherent value. Val Plumwood (1993) also argues that non-human nature has only been made available to be conquered, exploited and molded in relation to the powerful, *because* it is first defined as a "terra nullius", a resource without its own purposes or meanings. This is apparent for example in the language of 'free gifts' of nature, which are representations of the imaginary of human exceptionality and the idea of nature's externality. However, as the world-ecological research has shown, nature has never been free nor gifted, but rather forcibly extracted by empire, science and capital (Moore 2018). Cheap Natures are thus only cheap due to human and extra-human work that makes them possible to be erased and devalued (Moore, 2018). To reiterate, natural resources and unpaid or cheap labor can only be taken advantage of,

because they are ontologically and epistemologically rendered such (often through both epistemic violence and physical or systemic violence). Imaginaries, and the ontological sphere in general, are thus a foundational aspect in all world-historical processes and should therefore be analysed more explicitly also in world-ecological research.

2.2.4. Foundations of the imaginary foundations

Few imaginaries (if any) are universal, neutral, a-historic or even reflecting "reality" in its plurality and dynamic totality. Ontologies have their histories, and some imaginaries can be traced back to very specific times. Although the dualistic and mechanistic worldview has its ontological roots in early antiquity, as social imaginaries they only became harnessed and globalised into a civilizational organizing principle during and after the long 16th century (see e.g. Väyrynen 2006; Braudel 1953; Wallerstein 1974; Moore 2016a). Since then the Cartesian dualism as a system of thought has become a tangible force in the making of the modern world and shaping the entire face of the earth in its image. Ecofeminist Carolyn Merchant (2013) has shown that the rise of Cartesian dualism, Baconian belief in scientific and mechanical mastering of the earth, and the racialized cultural hierarchy (central in legitimising the cheapening and exploitation of new frontiers) started to gain dominance at the same time as Europe was going through immense changes in land use. This is what Merchant (2013) calls as the capitalist ecological revolution, a process in which non-human-nature began to be mastered for wealth rather than survival, and production was oriented for profit rather than subsistence.

The imaginary separation of Society and Nature is also present in the history of the language used to describe these 'things'. The words nature and society, (in English), only assumed their familiar meanings after 1550, over the arc of the "long" sixteenth century (c. 1450–1640) (see Braudel 1953; Wallerstein 1974; Moore 2016), prior to which these two 'things' would not have existed in the same way as they are currently imagined and used to shape social existence globally. The Cartesian philosophy of separation is also present in the scholarly work of Adam Smith and other academics who continued the Baconian-Lockean representations of "man and nature" (Merchant, 2013). The imaginary of a mechanistic world was strengthened during the seventeenth century scientific revolution, after which Western societies have primarily treated non-human nature through the spectacles of mechanistic science, which deems matter as dead and inert, remaining static unless humans act upon it; "The world itself is a clock, adjustable by human clockmakers. Nature is passive and manipulable" (Merchant 2010, p.7). Through these contributions capitalism as a way of

organising nature became to be further reinforced by the belief that economics as science could prove that capitalism is functioning according to a natural law (Merchant 2013).

The imaginaries discussed above are of course not only descriptive of capitalism. Though imaginaries such as Society and Nature -dualism and the idea of a mechanistic world are central to the foundation of capitalist practises, they are not *capitalist imaginaries.* World system analysts such as Frank and Gills (1994) have for example argued for a longer 5,000 year history of imperial capital demolishing environments, which shows that extraction and anthropocentric appropriation aimed at building empires, has longer roots than the history of capitalism as a system. Thus the extractivist mode of being in and within the world also existed before early capitalism and the period of European colonization. Societies and communities long before capitalism have enacted such imaginaries by enslaving each other and degrading the surrounding environment[12]. In addition, as argued by for example Gudynas (2018) the ontologics of exploitative environment-making also permeates other modern iterations in addition to capitalism — including socialism and its adaptations. There are many examples of contemporary socialist states, which have been institutionally enacting the same core imaginaries as their capitalist counterparts (though it is important to note that all states are part of the larger world-economy, which is largely characterised by market driven corporate capitalism and capitalist forms of environment-making).

The imaginaries central to capitalism should therefore be understood as representations of larger ontological processes intertwined with paradigms such as developmentalism and modernism. Scholars such as Freitag (1998), argue that the same ontological foundations, which many of the scholars mentioned here place at the root of capitalist world-ecology, should not be considered separate from the hegemonic position of the Anglo-Saxon Enlightenment, characterised by empiricism as epistemology, utilitarianism as ethics and pragmatism as political action which together form(ed) the ideological and normative fabric of the Western-derived social imaginaries, which have then become to be institutionalized in global structures. Merchant (2006) also traces historical processes such as the so-called Scientific Revolution in the sixteenth and seventeenth centuries and the Industrial Revolution in the 19th century as parts of a larger mainstream narrative of Western culture, which were driven by science, technology, and capitalism's efforts to "master" nature. In addition, Plumwood (1993) argues that in addition to the imaginaries of the human/nature

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[12] What however differentiates the older examples of ecological destruction, such as the wide-scale deforestation in the Greco-Roman empires (see e.g. Hughes 2010), from contemporary extractivism-led exploitation of non-human nature is the scale, speed and depth of those practices, partly advanced by modern technology and partly by the institutionalisation and intensification of human-centered imaginaries, which have gradually erased previous and co-existing, nurturing, regenerative, and often sacredness-based ontologies of the earth (Merchant 1982).

divide and human exceptionality, the ontological basis of colonization over the rest of nature (i.e. extractivism) also stands on the pillars of dualized conception of self and other, reason and emotion, universal and particular, which jointly form the basis of how modern humans have learned to treat the earth and other humans.

The historical changes in dominant imaginaries have also been studied by the philosopher Charles Taylor (2004), who has described the transformation from classical imaginaries based on what he calls 'natural order' and monarchy to one based on individualism, economic rationality and the separation of public from private spheres. An important aspect in this transition to modernism was that it was led by elites with new social and economic theories, which were fuelled by increasing state rivalry during the emergence of capitalism during and after the long sixteenth century. Benedict Anderson also argues in his seminal work 'Imagined Communities' (1991) that social imaginaries have been central in the creation of nation states which took place in the 18th century. New imaginaries provided the socio-semiotic systems which made it possible for different people to feel a shared sense of identity and interests. All of these different 'narratives' thus form the imaginary foundation into which most people in modern societies have unconsciously been socialized and which most people, especially in the Global North, enact in their everyday lives thus perpetuating and continuing the historic storyline of capitalist world-ecology.

By understanding capitalism and it's global power through the imaginaries which the system is founded on, researchers can start to see how those institutionalised imaginaries continue to shape and perpetuate the normative conditions in which people exist and encounter other humans and non-human beings in today's world. Capitalist world-ecology has transformed the entire face of the earth, while the imaginary foundation of it has continued to be cemented into the ontologies of most people. As Swyngedouw (2011) argues, most people in modern societies have learned to call Nature only in metonymic lists of specific signifiers ("DNA, elephants, mineral water, The Andes, hunger, heart-beat, biodiversity, CO2") which do offer a certain unstable meaning, but which are inherently slippery, and refuse to fixate meaning consistently. In capitalist world-ecology the imaginary of what Nature is thus becomes a symbolic tapestry, a montage of meaning, held only together with quilting points. (Swyngedouw, 2011)

While individual and shared social imaginaries have a world-making effect when institutionalized, the movement is two-way; Institutionalized imaginaries of hegemonic systems also become to gain more power in individual and social consciousness, as the outside world reflects those imaginaries and thus provides 'proof' for the actuality of those

imaginaries. Imaginaries are thus the way how people come to internalize abstract social phenomena, systemic practises or existing power-structures. The same imaginaries and thought-systems which originally gave the ontological prerequisite for transforming environments in the image of capitalist production through extraction and appropriation, are now also solidified as part of wide-scale social consciousness hundreds of years after the long-sixteenth-century and early capitalist world-domination. This makes the realization of alternatives beyond capitalism so challenging or even impossible, as the central imaginaries at the foundation of capitalism are the dominant structurers of reality in general. These dominant imaginaries thus continue to perpetuate the legitimacy of capitalist practices even in a situation where the entire biosphere is falling apart due to actions driven by those imaginaries.

2.2.5. Distorted imaginaries in a world of crisis

"Ever since the Enlightenment, Western philosophers have shown us a Nature that is grand and universal but also passive and mechanical. Nature was a backdrop and resource for the moral intentionality of Man, which could tame and master Nature." Anna Lowenhaupt Tsing (vii, 2015)

The contemporary world characterized by imaginary structures of separation, closure and domination moulded by capitalist environment-making presumes infinite growth and infinite resources. This distortion now institutionalized and embedded in the web-of-life is crucial in understanding the current capitalist world-ecology as a historic process which has "disrupted the 'eternal natural condition' of life itself" (Marx 1977, p 637). This disruption of life itself is institutionalised in the physical world, global structures and cemented into shared truth systems. In a world of crisis the distorted imaginaries of capitalist world-making are a thread moving through subjects to structures, connecting individual consciousness to shared ontologies and lived environments. The imaginaries of Society and Nature dualism, human exceptionality, mechanistic world and hierarchical existence are what weave unsustainable action into unsustainable praxis. The resulting rigid separation and domination of non-human nature is seen as a 'natural' state of life, even though it has in fact been engineered as such. These distortions are however only provisional.

No system of production can escape the finity of the planet. The material reality of earth and physical laws such as entropy and thermodynamics dictate that resources and usable energy will eventually run out, as the earth is not capable of regeneration at the speed at which energy and resources are currently being (ab)used (Koch, 2011). Therefore, regardless of how people, corporations and governments of modern societies view and

interpret the functionings of the earth, the operational principles of the web-of-life remain the same (Sharma, 2015; Moore, 2015).

Chapter 3. International responses to the Climate Emergency

In this chapter I will present an overview of the currently dominant and most wide-scale international responses to the climate emergency, those led by the United Nations. The materials I am using are the Paris Climate Agreement, Katowice Climate Package (also known as the UN Climate Rulebook or the Paris Rulebook), and the related reports from the three Conference of the Parties in Paris, Katowice (COP-24) and Madrid (COP-25). This chapter will present and discuss the Nationally Determined Contributions (NDCs), which are country-specific climate pledges and the cornerstone of the Paris climate agreement.

This chapter will also present the background, current action and the resulting impacts of the UN-led responses to the climate emergency. I will examine the Climate Negotiations and Agreements with a specific focus on whether and how the central imaginaries of capitalist world-ecology are present in the framings and discussion around climate emergency and in the resulting policy-responses. For the sake of simplicity and due to the very limited frame of a master's thesis I will focus on three "core imaginaries", which can be further divided into more specific imaginaries and together constitute a large part of the imaginary foundation of the capitalist world-ecology. The imaginaries in question are distinct in an analytic sense but should regardless be understood as embedded in each other and overlapping, as they derive from the same world-ecological history of mechanistic, rational, Cartesian and patriarchal worldviews enabling capitalist production and environment-making. These are **1. Society/Nature dualism**, (which includes the idea of Nature as external and separate), **2. mechanistic and non-holistic world** (meaning the understanding of reality through objects, entities and sectors, rather than relations, connections and oneness) and **3. hierarchical existence** (meaning that inequalities between all beings and among humans is natural). The analysis done in this thesis is not an analysis of the text per se, or the material in a vacuum, but rather an analysis of the material as a representation of wider world-systemic praxis.

3.1. It's an emergency

The scientific consensus on climate change is clear and strong. Already in 1992 the existential threat posed by multiple socio-environmental crisis was understood across

academia, leading the Union of Concerned Scientists and more than 1700 independent scientists, (including most of the living Nobel laureates in the sciences) to publish a statement, the "World Scientists' Warning to Humanity", which called for societies to halt environmental destruction and warned of a vast human misery, if significant global changes did not occur in regard to how people treat the Earth. (Ripple et al. 2017) Despite this and other similar warnings published decades ago, there is still little to nothing to show for of actual efforts to mitigate, halt or reverse the catastrophic effect of the climate emergency (Gills and Morgan, 2019). Almost three decades later, in 2020, the possibility of climate emergency resulting in actually catastrophic effects is becoming ever more likely, as recent scholarly work estimates (see e.g. Kulp and Strauss 2019; Lenton, Rockström et al. 2019; Wang, Jiang et al. 2019; Hope et al. 2019; Lynas 2020; Moses 2020; Matthews et al. 2020; Xu, Kohler et al. 2020). According to a recent study by Lewis et al. (2019) none of the world's major carbon emitters (including the U.S., China and the European Union) have made commitments which align with limiting climate warming to a 2-degree Celsius increase above pre-industrial levels. Without any further and actually impactful policy measures towards systemic change, the world is thus on track to at least 4C warming by 2100 (Clemencon, 2016). According to a study by De La Vega et al. (2020), within this scenario, the projected levels of CO_2 at the end of the century would not have been experienced at any time for the last 15 millions years, since the Middle Miocene Climatic Optimum, a time when sea levels were more than 20 meters higher than now and temperatures 4C warmer. This is a time so far back that the humans as a separate species did not yet exist[13]. It is also a time and climate of which there is no evidence that large scale agriculture, which billions of humans depend upon for survival, is possible. With this very likely trajectory, the loss of life, human and non-human, will be terrible; with a temperature increase of 4C, the tropics for example will become uninhabitable within this century because of heat and humidity (Mora et al. 2017). The possibility of ecosystems and species adapting to millions of years worth of climate change in the span of decades is minimal.

To have a chance in avoiding these catastrophic effects (such as civilisational collapse, ecosystem collapse and hothouse earth, see Steffen et al. 2018) atmospheric CO_2 concentrations would need to be stabilised around or below 450 parts per million[14], which would require societies to reach complete carbon neutrality by 2050 (IPCC, 2019). However, according to Steffen et al. (2018), even if the global emissions are drastically reduced in line

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[13] Hominids only differentiated into the branches that correspond to modern day orangutans, chimpanzees, gorillas, and humans around 5-6 millions years ago (Wood, 2010).

[14] The concentration of carbon dioxide in Earth's atmosphere is currently at its' highest ever recorded reading of 417 parts per million and rising (NOAA, 2020).

with the widely shared goal of 2C, a series of self-reinforcing bio-geophysical feedbacks loops and and tipping cascades[15] may still result in a cycle of continued warming and a future of largely uninhabitable earth (Steffen et al. 2018).

Crucial to note is that even if warming could be limited to the optimistic 2C increase, large parts of the world's surface will still become less habitable or in some cases uninhabitable (Steffen et al. 2018). The people in these regions will probably face wilder extremes: increased droughts in some places and floods in others, catastrophic storms and raging wildfires, all likely to result in decreased food security, increased risk of conflict and migration of tens of millions. Islands and coastal areas in many parts of the world will disappear completely. Acidifying seas, the death of coral reefs and glacial melting may lead to the collapse of marine food chains. On land, rainforests will retreat, rivers fail and deserts spread. The mass extinction which is already happening will continue to empty the world of our fellow species. And this is what a mere 2C increase, 'the successful scenario', will look like. (Steffen et al. 2018; Gills and Morgan, 2019)

3.1.1. What has been done?

Although greenhouse gas emissions needed to peak before 2020 and then rapidly decrease in order to avoid the aforementioned catastrophic trajectories and scenarios of socio-ecological collapse, no substantial steps have been (or are being) taken to deal with the emergency. In accordance with Gills and Morgan (2019), even though large-scale international efforts such as the formation of UNFCCC, the Paris Agreement and following COP-process (which I will examine further in the coming chapters) have inarguably been huge efforts, they have also been huge failures.

Here is why: Since 1992 (the formation of the United Nations Framework Convention on Climate Change, UNFCCC), societies have failed to make any adequate progress in solving any of the long foreseen environmental emergencies, with the exception of stabilizing the stratospheric ozone layer (Ripple et al 2017). Annual global emissions have steadily increased, with numerous sources confirming this (Gills & Morgan 2019). Combined annual emissions of all countries have increased by more than 60% during this century, and over half of all CO2-emissions in all of human history have been released during the last 30 years, after the release of the first IPCC report in 1990 (Ritchie & Roser 2017). Even since the signing of the Paris Climate Agreement, (which was called a success in global climate action) global carbon emissions have only continued to increase.

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[15] According to one of the world's leading climate scientists Will Steffen, 9 of the 15 known global climate tipping points regulating the state of the planet have already been activated (Moses, 2020).

During this same time period the amount of government subsidies to fossil fuel industries have increased in almost every country, more than doubling between 2010 and 2017 (Stefanski, 2017). In 2018 fossil fuel subsidies were double the combined value of all subsidies to renewable energy, electric vehicles and carbon pricing scheme revenues (IEA, 2019). The clothing industry, responsible for more emissions than aviation and cargo shipping combined (UNEP & Cyril Villemain, 2019) has doubled in the last 15 years. Around the world 250 new coal power plants are under construction (Olhoff & Christensen, 2019) Industrial meat production (which is also the clearest example of the organized mass murder of our fellow species), representing 14,5% of all greenhouse gas emissions globally, (FAO, 2013) has increased 4-5 fold since 1961. In 2019, for the first time in history, the annual amount of virgin materials[16] entering the global economy exceeded 100 billion tonnes (Circle Economy, 2020). Additionally, in 2020 the Covid-19 stimulus packages amounting to USD 2.2 trillion (£1.74 trillion) issued by governments of 16 major economies, were directly invested into sectors that have a large and lasting negative impact on the environment (Vivid Economics & Finance for Biodiversity Initiative, 2020).

What has happened instead of an actual change, is that the traditional paradigm of economic growth has in some instances been substituted with a green-growth narrative (although the former is still thriving), which suggests that the world can outgrow its dependence on fossil fuels and over-consumption with a few minor policy adjustments. Private sector voluntarism promoted for the last decades has not resulted in any measurable shifts away from business-as-usual. Green investment funds, which have been around for many years, have not affected the business model of large corporations built on short-term profit calculations. Renewable energy technologies have only recently started to compete in the energy markets after struggling for decades. The European emissions trading system has also been limping along for a decade with minimal impact on actual emission trajectories, while China is also about to adopt the same approach. (Clemencon, 2016)

The disconnection between the urgency to act and the failure to address the concurrent global crises has been approached by scientists from a number of perspectives and various fields (Levy & Spicer, 2013). These contributions have included for example collective action failures (Ostrom, 2009), the inertia of complex systems (Levy and Lichtenstein, 2012), representations in the mass media (Boykoff, 2007) and the power of the fossil fuel industry and lobbying (Newell and Paterson, 1998). While all of these perspectives, and many others not mentioned, offer crucial insights and aid in understanding

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[16] The extraction and processing of new materials is responsible for about half the world's carbon emissions and 90% of biodiversity loss (International Resource Panel IRP, 2019).

the realities of the responses to the emergency, there is also a need to further bridge the political ontologies of the contemporary power structures with analyses of the current climate responses. Exploring the psycho-social foundations of modern societies in the face of the climate emergency provides scholars the opportunity to not just focus on the metaphorical symptoms or the metaphorical illness, but rather uncover the materially bound, power-laden and historically situated context which creates the illness in the first place.

3.2. International Climate Responses

Following the Rio Earth Summit in 1992, The United Nations Framework Convention on Climate Change (UNFCCC) was established with the intention to 'stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system' (UNFCCC, 1992, p. 4) One of the agreements reached at the founding of the UNFCCC was the creation of a body to discuss, develop and review the Convention (UNFCCC, 1992, Article 7). This process known as the Conference of the Parties (COP) was initiated in Rio, with a series of regular conferences to discuss and find solutions for the climate crisis at hand. The first 'Conference of the Parties' (COP) was organised in 1995, which marked the beginning of the negotiations on target carbon emission reductions. In 1997 COP3 in Japan resulted in the 'Kyoto Protocols' in which 38 industrialized countries committed themselves to cut their greenhouse gas emissions by 2012 to an average of 5.2% lower than the established 1990 benchmark level. COP7 in Marrakesh in 2001 resulted in the adoption of detailed rules, which were planned to become binding in 2005. The 2009 COP in Copenhagen was designated to develop a replacement agreement for the 'Kyoto Protocols', but participant-states could not agree on the binding terms and targets, which led to an extension to the Protocol in the 18th COP-meeting in Doha in 2012. During this extension period the Paris Agreement of 2015 was finally agreed upon at the COP21. (Gills and Morgan 2019)

In the next subchapters I will give a brief overview of the climate negotiations and agreements in Paris, Katowice and Madrid (the last COP-meetings before 2020) to provide a general overview of the most recent international discussions around the climate emergency, which are currently framing the climate action of governments worldwide. The following section is not a comprehensive summary but rather an introductory overview of the main issues, decisions and points of discussion and contestation in the three COP's. We will start this journey in Paris.

3.2.1. Paris

The Paris climate agreement was formally adopted by the Parties of the Climate Convention at the 21st COP in 2015. The agreement builds upon the United Nations Framework Convention on Climate Change (hereafter UNFCCC), and for the first time brings all countries together in a joint effort to combat climate change and adapt to its effects. (UNFCCC, 2020a) The central aim of the Paris Climate Agreement was to strengthen the global response against the effects of the climate crisis, while keeping the global temperature rise well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase even further to 1.5 degrees Celsius (UNFCCC, 2015). The agreement (in 1/CMA.2) "re-emphasizes with serious concern the urgent need to address the significant gap between current ambition and the goals of limiting warming to 1.5C or well-below 2C". With the Paris agreement the signatory parties also agreed that the global emissions need to peak as soon as possible, while recognising that developing countries might need a longer time to achieve this. The signatory parties agreed to undertake rapid reductions from then on, in accordance with the best available science, in order to achieve a balance between emissions and removals from 2050 onwards. (UNFCCC, 2015) With the adoption of the Paris agreement, its 195 signatory countries committed to a new collective paradigm which aimed to catalyse even stronger global action in the fight against climate change (Bodansky, 2016).

Van Asselt et al. (2018) argue that the Paris agreement was unique in its approach, as it stands on the ideas of decentralised policy planning and implementation. Specific targets in the agreement are planned and adopted at the domestic level and expressed in the form of Nationally Determined Contributions (NDCs) (Van Asselt et al. 2018). These contributions (NDC's) are the cornerstone of the Paris agreement, and as the primary policy-tool, they summarize the country-specific objectives for greenhouse gas (GHG) reductions. The agreement also commits countries to update their NDC's every five years, where each successive update has to be at least as ambitious as the current one. Although the agreement is procedurally binding, it is founded entirely on these voluntary

country-specific pledges when it comes to the actual emission reductions.[17] (Clemencon, 2016)

As non-legally binding, the agreement states that the objectives are to be met by "each party -- being responsible for its emission level as set out in the agreement" (referred to in paragraph 16 of this Article in accordance with paragraphs 13 and 14 of this Article and Articles 13 and 15.) The agreement is thus built entirely around voluntary country pledges, with global carbon emissions trading as one of the only shared schemas set in the agreement (Clemencon, 2016). Before the negotiations in Paris, some countries—including the European Union—publicly called for binding commitments to reduce emissions, which was however scrapped due to strong lobbying especially from the United States (Clemencon, 2016).

The agreement builds on the financial commitments of the 2009 Copenhagen Accord, which aimed to scale up public and private climate finance for developing nations to $100 billion a year by 2020 (Denchak, 2018), which was eventually extended until 2025, as the goal was not met[18]. In addition to the failure of ensuring adequate climate finance to the poorest nations, the idea of equitable burden sharing and the historical responsibility of industrialized countries were not included in the Paris agreement. Due to strong avocation from large emitters, mainly the United States, the agreement came to include market-based mechanisms, such as carbon trading and free markets as central parts of international climate action. According to Clemencon (2016) this inclusion of market-based mechanisms, exclusion of legally binding commitments and the acceptance of a more or less universal accountability were achieved partly because few industrialized countries made use of the fact that China and India no longer shared the same interests with the poorest countries, due to the economic growth and wealth accumulation over the last decades. While India and most African nations (with per capita emissions extremely low) maintained their demand that

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[17] According to a comprehensive expert study conducted by FEU-US and Acting On Climate Together (2019) most nationally determined contributions remain completely inadequate. According to the report, "of the 184 climate pledges, 36 were deemed sufficient (20 percent), 12 partially sufficient (6 percent), 8 partially insufficient (4 percent) and 128 insufficient (70 percent)" (ibid. p. 8). 126 of the 184 pledges are also partially or totally dependent on international finance (which the parties did not commit to in Madrid), technology and capacity building for their implementation. The same research also found that those pledges which are close to being or are adequate, have not been sufficiently implemented so far and are therefore also likely to fail. In the current situation where minimal amount of international support has materialized, a large part of national pledges may never be implemented. (FEU-US & Acting on Climate Together, 2016) To further reiterate the shortcomings of the current NDC's, Clemencon (2016) has shown that even if all of the currently pledged voluntary national contributions (NDC's) would be fully implemented, global emissions in 2030 would still be 12 gigatonnes of CO2 above the allowance for avoiding a warming of more than 2C.
[18] To put the $100 billion into perspective: In 2019 fossil fuel subsidies were $120 billion (IEA, 2019) and global military spending in 2017 alone was about $1.7 trillion, of which over a third came from the United States (NRDC, 2019).

rich industrialized countries should take responsibility of their historic debt of overspending the earth's carbon budget, China showed less interest in the differentiation between per capita and historic emissions, thus making it possible to overlook historical emission in the Paris agreement (Clemencon, 2016). In the end, climate vulnerable countries in the Global South accepted the agreement, as it was better than no agreement at all, and that the 1.5C warming ceiling was to be written into the agreement. The possibility of some financial support was also better than no support, and the possibility remained that the agreement could inspire other public and private sector action from which all countries could benefit. (Clemencon, 2016)

3.2.2. Katowice

Three years after Paris, the 24th Conference of the Parties took place in Katowice, Poland in December 2018. At Katowice the main objective was to start the process to operationalize the Paris agreement through detailed rules and policies for implementation. In addition to this the goal was to start a process of strengthening the Parties national contributions and to create a framework to ensure transparency of the process. (UNFCCC, 2020b) According to the UNFCCC (2020b), the meeting in Katowice ended with a successful outcome, a rulebook achieved through technical discussions and political compromise. The resulting Katowice Climate Package (also known as the Paris Climate Rulebook) includes the following information and guidance on how to operationalize the goals set out in the Paris agreement:

- what information needs to be communicated in the Nationally Determined Contributions (NDCs);
- how the enhanced transparency framework (ETF) will be operationalised;
- defining the process for establishing new targets for climate finance;
- how to conduct the Global Stocktake, (the assessment of collective progress toward the Agreement's long-term goals and identification of remaining gaps, challenges and opportunities for enhanced action);
- how to assess progress on the development and transfer of technology. (UNFCCC, 2020b)

As part of the Climate Package the parties negotiated three separate elements related to how countries would cooperate internationally. The report specifies that countries may use mechanisms of Internationally Transferred Mitigation Outcomes (ITMOs) toward their nationally determined contributions (NDC's), which in practise referred to mechanisms such

as carbon trading. (World Resources Institute, 2020) While engaging in ITMO's the Katowice climate package encourages countries to promote sustainable development, ensure environmental integrity and transparency, and apply robust accounting to ensure emissions are not counted twice. However, countries were not able to agree to the guidelines of how to actually avoid this double counting related to internationally transferred mitigation outcomes. Along with the Paris agreement, the COP in Katowice also encouraged countries to pursue non-market approaches in implementing their NDCs. (UNFCCC, 2019)

While the 24th COP-meeting concluded with the adoption of detailed guidelines for most parts of the Paris agreement, the conference fell short on the first objective: to limit the increase of global temperatures to 1.5C or well-below 2C. None of the major emitting countries were ready to step up their climate ambition in ensuring the needed action for reaching the goal. Therefore, the COP24 did not include any firm commitment to more 'ambitious' NDCs. (World Resources Institute, 2020) What the meeting did succeed in was the collective agreement on how the existing NDC's can be transparently assessed and measured. It also included some additional agreements on financial pledges for the most climate vulnerable countries (Obergassel et al., 2019) Another key element of the Katowice climate package were the procedures for implementing the first 'Global Stocktake' to assess the effectiveness of global climate action. (Obergassel et al., 2019)

According to Obergassel et al. (2019), the most significant aspect of the COP in Katowice was that it brought debates about implementation procedures to a close. This made way for tackling the main task of the entire COP-process, which is to strengthen the national and international climate actions and to ensure the implementation of the existing pledges. However, the parties still continued their inability to reach any agreement on the specific mechanisms for ensuring fair and reliable support for poorer countries in their efforts to combat the emergency (Obergassel et al. 2019). In addition, the gap between climate science and the climate negotiations grew ever more evident in Katowice; A report by the Intergovernmental Panel on Climate Change (IPCC) was published right before the conference and despite commissioning it, the COP did not agree to endorse the report's findings. The final text from the COP merely stated that the report was "noted". (Obergassel et al. 2019)

3.2.3. Madrid

The COP25 held in Madrid in December 2019 was intended as a technical conference for negotiators to complete the Katowice Climate Package. The two remaining key challenges for the Conference in Madrid were to agree on a plan to handle the issues of **Loss and**

Damage and the **Climate Markets** (UNFCCC, 2020c). These two subjects remained the leftover topics from the negotiations in Katowice, as they were the most contentious issues the parties could not agree upon (Zero Waste Europe, 2019).

The first issue, 'Loss and Damage', refers to article 8 in the Paris Agreement, intended as the main policy framework to "avert, minimize and address loss and damage associated with climate change impacts, including extreme weather events and slow onset events" (UNFCCC, 2015 p. 12). The Loss and Damage element was created to address the inequalities related to the climate emergency in recognising that many countries (predominantly in the Global South) are already, and will be even more severely, impacted by the crisis more than others. The Loss and Damage article discussed in Madrid aims to provide compensation for the most vulnerable countries and to countries which will have higher adaptation, recovery and forced migration costs due to the climate emergency. (Robb, 2019) The problem of the Loss and Damage clause in the Paris agreement is that there was no financial mechanism in place to provide this funding. Rich industrialized countries continued to resist the idea of binding commitments, because of liability and possibility of lawsuits. Therefore, the COP25 ended up with a few non-binding agreements which 'urge' countries to provide financial assistance, and promises to build support programmes in the future (Robb, 2019).

The second main topic in Madrid was to come up with a detailed plan for global carbon markets, which according to Clemencon (2016) have been extremely contested throughout the international climate negotiations ever since Kyoto in 1994. As an emission reduction mechanism, carbon markets refers to a global scheme aimed at regulating carbon by supplying priced permits which can be traded on a market. The idea is that hypothetically if the prices are 'right', international carbon emissions would go down, because the cost of not polluting is cheaper than the costs of paying to pollute. However, the actual effectiveness of carbon trading in curbing total emissions has proven to be marginal as shown for example by Gilbertson and Reyes (2009) already ten years ago. In addition, many of the signatory parties expressed their concern that carbon trading schemes practically allow the rich countries to continue polluting, while some were also concerned that the schemes may have no impact at all. As a result, the COP25 reached no agreement and the discussions were passed onto future negotiations. (Robb, 2019)

In addition to the issues of Loss and Damage and the Carbon Markets, the COP25 in Madrid showed a growing focus on what the UNFCCC calls 'nature based solutions' (UNFCCC, 2020c). These refer to the role of 'nature' in combating emissions, for example through conservation, reforestation and biodiversity. Similarly, the importance and

significance of the oceans was brought to the forefront with the COP25 publicly advertised as the Blue-COP. These inclusions however remained mainly rhetorical as they didn't result in any tangible action or policy. (UNFCCC, 2020c) In addition, wide-scale scientific contributions were again published just before the meeting, which included "The Global Carbon Project report" and IPCC's reports on land and oceans and the cryosphere. These were again only "noted" in the final text of COP25 in Madrid (UNFCCC, 2020c). The discrepancies between the need for urgency called out by latest science and the actual climate talks was thus especially evident in Madrid (Clemencon, 2016). In conclusion, the 25th COP-meeting ended in failure to finalise the operational rules for implementing the Paris Agreement. The negotiators were also unable to draft sufficient roadmaps for further climate action.

Chapter 4. World-ecological analysis of the imaginaries at the root of UN's climate responses

According to the UNFCCC (2020a), "The Paris Agreement builds upon the [UNFCCC] Convention and for the first time brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so." Thus the Paris climate agreement and the following Conference of the Parties (COP) do chart a new course in international climate effort. The process can therefore be viewed as one form of success because for the first time ever almost all countries signed up to an agreement, despite great technical complexities regarding the negotiations (Gills and Morgan, 2019). However, in regard to the actual threat presented by the climate emergency, the form of success celebrated by the UN delegates does not matter; Planetary systems, dying species and annihilated ecosystems cannot negotiate (Gills and Morgan 2019). What does matter is whether the negotiations would have resulted in actions to ensure the wellbeing and existence of life on our planet. Thus far they have not. The question therefore is not whether the currently dominant climate responses are sufficient, but rather *why* they have failed so greatly. In this chapter I will analyze the Paris climate agreement and the following COP policy documents from Katowice and Madrid through this question. Following the earlier chapter on the imaginary foundation of capitalist world-ecology, I will structure my analysis according to the most dominant imaginaries at the root of capitalist environment-making, those of Society/Nature -dualism, the idea of a mechanistic world and hierarchical existence. My aim is to show how these continue to be

perpetuated and strengthened in the international climate negotiations and responses to the climate emergency.

4.1. The imaginary of Society/Nature dualism and a mechanistic world

Perhaps the clearest example of the prevalence of cartesian dualism and mechanistic worldview cannot be found from the materials themselves but in the fact that the international climate action itself happens in a silo, separated from other international processes such as trade agreements and global economic practises. This goes against the world-ecological notion of a co-constitutive world in which all parts and beings are interdependent of each other, meaning that there are no issues or processes which would only be economic, social, or environmental, without also being the others.

The COP-process documents, as well as the Paris agreement and Katowice Climate Package present climate change overwhelmingly as a natural-environmental issue, and threat to humankind coming from outside the realm of societies. Within this framing, the documents approach climate emergency as an external phenomena or an event which only *impacts* the social, economic or political realms. The environmentalism in the UN-led climate discussion, as represented through the materials, is about protecting a 'thing' (the environment) all the while maintaining the dynamics of human exceptionality and separation.

When addressing the importance of adaptation to climate change the Paris agreement calls "to protect people, livelihoods and ecosystems" (Paris agreement, article 7, subsection 2), with a distinction made between ecosystems and people, and people and their livelihoods. Likewise, the Katowice climate package (article 9 subsection 12) "invites Parties and interested organizations to share case studies of initiatives that focus on ecosystems and adaptation planning for vulnerable communities and groups as agents of change" (art. 9, 12). Humans are thus not seen as part of ecosystems and the projects aiming to promote the adaptive capacity of ecosystems and human communities are presented as an additional policy mechanism, rather than a thread mainstreamed across the entire schema. The methodological separation of things, ecosystems, people, groups and livelihoods shows how the mechanistic imaginary of the world is a significant marker of how the dominant climate responses approach the crisis.

The narrative of nature-based solutions, which were brought to the forefront especially in Madrid is also a clear example of how non-human nature is viewed and treated as external to human societies. Not only is the climate emergency deemed as something outside of humanity, the idea of human-domination over nature is reflected in the wishes to "harness" nature further in tackling the emergency. Within this narrative in which some parts

of nature are categorized as useful in regard to international climate action, there lies the implication that other aspects of Nature are irrelevant in the face of the crisis.

Climate emergency as an enemy is constructed as an external intruder deriving from Nature albeit impacting the social, economic and cultural. The materials further separates the climate emergency from other aspects of Nature, by focusing merely on carbon emissions. Throughout the materials the entire climate emergency is reified into an entity of excessive CO_2, which is then discussed as the sole culprit of the entire crisis and naturalized as something that just exists. The thing, CO_2, is further inscribed into the capitalist paradigm through its enrolment as a commodity in the processes of carbon emissions trading. The Paris agreement and other related policy documents are filled with this rhetoric of subconscious reification of the complex processes to a simplified object or a thing.

The language used throughout the Paris agreement, Katowice climate package and the reports from COP-meetings frame the crisis as something to be solved with policy fixes, rather than a systemic crisis which is interwoven into every aspect of living. An image of a holistic worldview, that of Mother Nature, is mentioned once in the Paris Agreement. On the fourth page of the Paris Agreement the signatory parties do note "--the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth, and noting the importance for some of the concept of "climate justice", when taking action to address climate change." This alternative image of the world is however presented as an othered, cultural description, rather than an ontological approach to the world. In addition, this image of the world is not further translated into anything in the agreement, and thus remains a mere nudge towards addressing cultural diversity in understanding the climate emergency.

The ontological framework at the root of the international climate responses strongly reflects the Cartesian dualistic understanding of Society and Nature and the image of the world as a mechanistic machine; a world which is made of independent blocks, interacting with each other but remaining separate, with clear-cut divisions between certain groups of blocks, such as those which are Nature and those which are Society. Because the materials address climate emergency as something external to human societies, dependency of those societies to non-human nature is also left unaddressed. In addition, because the climate emergency is framed as an external thing only affecting societies at the lines of adjacency, the threat and seriousness of the situation remains underestimated. Because of the imaginary of Society and Nature's separation it is possible for some decision-makers and laypeople to remain untroubled, as cognitively it does not make sense how something

external such as the climate emergency (belonging to the environment) could affect them, as they live in a Society.

The imaginaries of Society/Nature dualism and mechanistic world-view (of seeing reality as hammering of blocks rather than weaving of threads, following Ingold, 2008) allows the dominant climate responses to frame the so called climate-related problems as an external threat, rather than a symptom of a system, thus avoiding to address the need for more complex, holistic and deconstructive actions. This framing also allows the disregard of other extremely related aspects such as unevenly distributed power, the world-systemic networks of control and influence, rampant injustices, and the fatal flaws inscribed in capitalist modernity. In the next subsections I will aim to further analyze the ontological foundations framing the international climate politics by focusing on specific reflections of the core imaginaries of Society/Nature -dualism, the image of a mechanistic world and hierarchical existence. These are the imaginary of anthropocentrism, economism, state-centrism and normalization of global inequalities, of which the two latter also strongly reflect the *institutionalisation* of imaginaries, as they are some of the key patterns which structure the global world-system today.

4.1.2. Imaginary of anthropocentrism as reflection of Society/Nature -dualism

Part, or rather an extension, of the Cartesian derived Society and Nature dualism, is the idea of anthropocentrism, or human exceptionality which, following Harvey (2014), is an example of how the wrongly constructed dualisms are further compounded by imagining that one dominates over the other. According to Moore (2017b), the dominant imaginary of human exceptionality in seeing human relations as distinct from nature, but also as effectively independent of the web of life, has shaped social thought for two centuries. Anthropocentrism has thus been an important imaginary in legitimising the making of cheap natures, as it is at the core of capitalist environment-making mechanisms in legitimising the exploitation and appropriation of non-human nature.

The anthropocentrism present in the UN-led international climate responses arises in the framing of the problem and in the language used. As an example, non-human nature is only mentioned through the use of the word "ecosystems" (only 5 times in the Paris Agreement and 3 times in the Katowice Climate Package). This might seem an all too evident finding, but there is great environment- and world-making power in framings like these; things that are not mentioned are rendered insignificant and thus excluded from the definition of the problem. In all of the policy documents of Paris, Katowice and Madrid, non-human nature is seen as an externality, a mere addition to the 'problem' human

societies are facing. Accountability for the climate emergency comes forth mainly in the few times the reports talk about anthropogenic emissions. The emissions are thus labeled to result from human-activity in general rather than specific human actions such as fossil fuel industry or consumption. The image of climate emergency as an anthropogenic phenomena obscures contemporary power structures, global inequalities and historically unequal emissions. As discussed in the world-ecological theory, this monolithic image of humanity is problematic as it labels the climate emergency into a problem created by all humans equally and thus covers up the tracks of the actors, actions and structures which are actually the main drivers of the crisis. There is thus thin comfort in the awareness of the crisis as human-induced, as the generalized description lacks a complex understanding of accountability, thus contributing to inefficient solutions.

4.1.1. Economism and and belief in techno-fixes - representation of Cartesian dualism and mechanistic world-view

Not only are the international climate negotiations systematically kept separate from economic activities, such as trade liberalization and corporate action, they are at the same time heavy with the narrative of economism and the belief in market-based mechanisms and technological fixes. This framework again posits humans as the masters of an external Nature available to be dominated, guided and 'fixed' according to political and economic needs, thus creating a system in which contradictory goals are pursued, with no coordination. While the belief in policy-tweaks, financial redirection and technological fixes remain strong in the international climate discussions, scholars such as Clemencon (2016) have shown that a plethora of issues remain completely unaddressed in the Paris climate agreement and following policy documents, which in reality are extremely relevant for decarbonising societies. As an example, the Paris agreement has an entire article (10) dedicated to discussing the potential of technological mechanisms in tackling the climate emergency, while concepts such as fossil fuels are unmentioned. None of the materials present any critique or take into account how the global economy continues to foster dependence on fossil fuels and growth-centered practises. There is therefore no explicit push towards excluding fossil fuels from global economic activities or decreasing overall consumption. This is one of the clearest examples of how the fundamental problems of the dominant economic system are not discussed or even addressed in the international climate negotiations.

To continue, market-based solutions are presented as the default policy-mechanism in the Paris agreement and following documents. For example in paragraph 8 of Article 6 of

the agreement, "Parties recognize the importance of integrated, holistic and balanced *non-market approaches being available to Parties to assist* in the implementation of their nationally determined contributions, in the context of sustainable development and poverty eradication, in a coordinated and effective manner, including through, inter alia, mitigation, adaptation, finance, technology transfer and capacity building, as appropriate" (hyphenation my own). In addition, the Paris agreement (UNFCCC, 2015 p. 3) recognizes that "sustainable lifestyles and sustainable patterns of production and consumption" also *play a role* in addressing the climate emergency, although the agreement does not specify what these lifestyles and patterns would look like. Non-market mechanisms are thus presented as optional additions for Parties who wish to use them, while market-based mechanisms such as carbon trading and climate finance are presented as the main mechanisms for the international community (UNFCCC, 2020c).

From a world-ecological perspective the strong reliance on market-based mechanisms such as carbon trading can again be seen as a representation of how capitalism as a system continues to commodify the web-of-life and make it readable for capitalist accumulation. However, the basis of all carbon trading, which is the pricing of emissions (and Nature in general) is extremely problematic, as value in its entirety can not be reflected in capitalist economic activities, as capitalism inherently relies on the devaluation of the labour of Nature, women and colonies. In addition, the capitalist procedures of pricing also reduce complex socio-spatial heterogeneities of carbon's relational place in the web-of-life to a generalized singular while overlooking the practises and constructed systemic dependencies due to which emissions continue to rise (Swyngedouw, 2011). Regardless of the lack of evidence of the actual efficiency of carbon trading in cutting down emissions (because it mainly moves emissions around) and other proposed solutions such as the expansion of palm oil biofuel production (which threatens the remaining tropical forests and biodiversity) and climate finance, these remain key policy approaches in the Paris agreement and following COP-process[19].

The centrality of market-based mechanisms also shows that the belief in neoclassical economics continues to shape and determine the realm of possibility for international climate action. The Paris agreement and following policy documents present the structures and mechanisms of the currently dominant economy as a solution rather than a problem, thus perpetuating the practises which are behind the current capitalist world-ecology. The proposed solutions continue to rely on individual market choices, financial redirection and

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[19] An effective alternative for the carbon emissions trade would have been a global carbon tax, but that was blocked by strong lobbying from the fossil fuel industry as shown by e.g. Barnes & Barnes (1999).

technological advancement. The reliance on market-based mechanisms also continues to function as a smokescreen for the unsustainability of those practises and structures creating the emergency. The Paris climate agreement and the related policy documents do not therefore explicitly call for phasing out or ending any of the practises actually creating the emergency, partly because they are outside of the 'mandate'. This treatment of the problem as an external threat, but also as a clearly definable threat (too much carbon) therefore strongly reflects the imaginaries of Society/Nature dualism and the idea of a mechanistic world.

4.1.3. State-centered approach - representation of the imaginary of a mechanistic world

Another core aspect in the international climate negotiations reflecting the imaginary of a mechanistic world, is how the entire process and system is characterised by a state-centered approach. The Paris agreement and the following policy documents are all written according to the idea of a world consisting of separate, interacting entities which each have their own specific responsibilities in solving the challenges presented by the climate emergency. Complex accountability and the understanding of an interdependent world are steamrolled by competitive realpolitik, in which no government (with perhaps the exception of Bhutan, see e.g. Climate Action Tracker, 2019) is currently acting according to the urgency of the situation (as is evident through the inadequate Nationally Determined Contributions, see FEU-US & Acting on Climate Together, 2019).

However, as Gills and Morgan (2019) argue, the collective institutional framework of a world made of separate entities is completely inept in solving a planetary wide problem, as emissions do not stop at borders, nor do droughts, floods or food system failures. The state-centered approach overlooks the interconnectedness and dependencies within the current world-system (and -ecology), by navigating the climate politics with distorted constructions of separate entities. The state-centered approach, which is reflecting the imaginary of a mechanistic world, also limits the possibility for any kind of holistic understanding of complex accountability and climate justice. The approach also obfuscates the reality of the world-economy functioning as an interdependent whole based on relations not limited or conservable only by some states. As an example of the problematics of the state-centric approach to climate action, the Katowice Climate Package (decision 1/CP.16, paragraph 70), specifically calls for the countries in the Global South to mitigate emissions from the forest sector by means of reducing deforestation and forest degradation, conserving and enhancing forest carbon stocks and fostering sustainable management of forests. These sort of specifications of responsibility for countries in the Global South overlooks the

interconnected and power-laden global structures, in which deforestation, as an example, is actually primarily driven by the consumption needs in rich countries and carried out by corporations rather than nations (see e.g. Curtis et al, 2018).

States in themselves should also be understood as institutionalizations of certain imaginaries. According to for example David Harvey (2005) the modern state is an intrinsic part of the modern development model characterized by accumulation by dispossession, which is counting on strong support of the state (see Ye et al. 2019). States are also often run by powerful groups of people, most often claiming positions of the elite and who are thus benefiting from the incoherence in climate action, as real transformations would disrupt the status quo, which they are benefiting from. As such, also the United Nations in general (a Union of separate Nations), should be seen as a normative power constructed through certain imaginaries. Modern nation states are one of the clearest examples of the globally institutionalized imaginaries of mechanistic world-view and the idea of life as a hierarchy. Another one is the extremely unequal global structures within which the climate negotiations are taking place and which in its entirety is a reflection of a world-ecology built on the imaginaries of cheapened and othered beings.

4.1.4. Climate inequalities - cheap, othered and commodified as institutionalized imaginaries

The question of the imaginary foundation of current climate responses is not only about which kind of imaginaries are at play in certain moments or practises, but also about how the physical world and global structures (the capitalist world-ecology) function as the realm in which all action takes place. Within a wider world-ecological context, the importance of global inequalities (the institutionalization of the imaginary of hierarchical existence) is crucial, as the naturalization of global inequalities as a praxis is an ontological prerequisite for keeping most humans outside or on the edges of humanity enabling the continuation of capitalist labour exploitation. The perpetuation of the imaginary of hierarchical existence also in the United Nations' climate action shows how colonial and neocolonial policies aimed at creating and mobilizing cheap labour for the sake of capitalist production continue to be renewed and held up on multiple fronts of modern societies.

The Paris Climate agreement and following policy documents divide countries in two categories of 'developed countries' and 'developing countries'. This division determines some of the actions required by said states, but it also reflects the negotiating power those states have in discussing climate action (Clemencon, 2016). However, in the materials these inequalities or power disparities between countries in the Global South and countries in the Global North are solely addressed in terms of vulnerability and the capacity to act. In

addition, the issue of climate justice is mentioned only once in the Paris Agreement (and not at all in the Katowice Climate Package or in the report of the COP in Madrid) and even then it is seen as an issue with "importance for some" (UNFCCC, 2015 p. 4). Climate injustices are thus seen as a problem only of the people, communities and countries affected by climate injustice, not as a characteristic of the entire system.

The different capacities to act in the face of the emergency are mainly aimed to be solved through financial assistance and capacity building, which however have not been actualised in accordance with the commitments. As discussed earlier, the financial commitments agreed upon in the 2009 Copenhagen Accord and again discussed in the Katowice Climate Package have yet to be met, all the while countries continue to invest in the expansion of extractivist mega-projects, new coal plants and military action (Robb, 2019).

In addition to the failure to narrow the gap between the unequal capacities to act, differences in climate responsibility and accountability also remain unaddressed, even though it is clear that modern industrialized countries are historically most responsible for the climate emergency and environmental degradation (see e.g. Jiang et al. 2019; Holz et al. 2018). The Paris agreement and the following policy documents for example exclude any notion of internationally equitable burden-sharing in controlling and reducing carbon emissions. This means that the agreement and the following climate policies have primarily overlooked issues of equity and environmental justice. This has effectively let the industrialized countries in the Global North off the hook, regardless of their historically massive carbon emissions already accumulated in the earth's atmosphere (Jiang et al. 2019). Therefore, the come-one-come-all approach to global climate mitigation in the Paris Agreement and following policy documents hides huge challenges faced by countries in the Global South, as the power differences and the dynamics of the current world-economy are not addressed (Jiang et al. 2019).

The inequalities characterising the capitalist world-ecology are also reflected in how the responsibilities for mitigation are pushed on those who are affected, rather than those who are causing the emergency. According to for example Holz et al. (2017), if the Paris climate agreement and the related policies would have followed the principles of climate equity, wealthy nations should have pledged to cut emissions by 28.5 Gt, and poorer nations by 6.3 Gt (by 2030). But in reality, the rich have pledged to cut 6.2, while the poor have pledged 10.6 (Holz et al. 2017). Even though many climate vulnerable states, such as small island states, have promoted more radical climate action and more equitable burden sharing, their influence has remained rather marginal in regard to the actual results of the negotiations (Clemencon, 2016). Emblematic of this is that the 2019 COP-meeting in Madrid

largely failed because of the inability to find common ground on climate equality (mostly represented in the issue of 'Loss and Damage').

The aforementioned disparities in international climate action reflect a wider institutionalised imaginary base of the current world-ecology, in which the power-laden structures and chains of command of dominant practises are naturalised, thus obscuring the active practises creating and perpetuating the crises. In the same vein, the way how climate accountability is (not) addressed is also emblematic of how the currently dominant global world-economy (/ecology) is structured to privatize profit and benefit, while making the harm and accountability public. Through a world-ecological analysis it is clear that what is lacking in the policy documents is the understanding that the emergency affects all life, but it does so in unequal terms due to existing institutionalized inequalities. In addition to the fact that the existing global inequalities result in different levels and depths of climate vulnerability and capacities to act, those same inequalities are also exacerbated by the current climate emergency, as the global power structures creating and renewing them are not addressed in the international climate responses.

4.1.5. Summary

This chapter has presented in broad strokes some of the imaginary foundations on which the currently dominant climate responses are built on and which they continue to enact. As per Moore (2015) the current capitalist world-ecology is centered around a set of violent abstractions, which centralize around the notion of Society and Nature -dualism and more implicitly the image of a world as mechanistic and 'naturally' hierarchical. In this chapter I have shown that these abstractions, or rather imaginaries which form the psycho-social core of the capitalist world-ecology, are also extremely prevalent in the Paris climate agreement and following policy documents. To draw together some of the key findings, below is a list of the central aspects of the dominant imaginaries present in the international climate responses. In the next subchapter I will further discuss the implications of viewing the world through these imaginaries and enacting them in the current international climate responses.

- **Nature is seen as external;**

- **Nature is seen as a thing;**

- **Climate emergency is understood as an external threat,** which can be reduced to a single component: too much carbon emissions;

- **Awareness of accountability is lacking,** with the structures and characteristics of the capitalist world-ecology being naturalized;

- **Mechanistic and state-centric image of the world** in which states are separate entities and society functions in sectors;
    - **Climate policy kept separate from all else** - no coordination between international economic policy making and trade liberalization;
- **Economism and the naturalisation of capitalist market-based solutions.** Dominant economic practises are presented as a solution rather than a problem;
- **Physical reality and global structures reflect the same dominant imaginaries,** thus framing and limiting the possibilities for alternative transformative imaginaries to arise and gain influence.

4.2. Implications of the distorted imaginaries in a world of crisis

I argue that one of the central problems resulting from the distorted imaginaries at the basis of the international climate action is that the resulting ontological framework also determines the idea of what is needed to solve the problem. As imaginaries refer to the ways how life, world and existence is understood, the dominant imaginaries characterised by capitalist and Cartesian logics strongly frame the way how the entire climate emergency is defined and limiting the potential of the responses to it. For example, the imaginaries of a mechanistic world and Cartesian dualism enable the continuation of decision-making and political action in silos; because the currently dominant imaginaries deem the world as a disconnected machine made up of things and sectors, the search for solutions is kept on a 'specific lane', without coordination with different aspects of societal life. This is evident for example in the absence of aligning economic policies with climate policies. The same imaginary foundation at the root of the capitalist world-ecology can also be seen to contribute to the problems which for example Kothari et al. (2015 p. 364-365) have found to be at the center of the United Nations' actions in general: Inadequate focus on direct democratic governance; Inability to recognize the biophysical limits to economic growth; Continued subservience to private capital; Modern science and technology held as panacea; Culture, ethics and spirituality ignored; Unbridled consumerism not tackled head-on; Global relations built on localization and self-reliance missing; No new architecture of global governance[20].

These findings thus support Wright et al. (2013) argument that one of the main problems of dominant international climate action is the narrow frame within which the negotiations and policies take place. The social imaginaries of Society/Nature -dualism, mechanistic world and hierarchical existence are currently represented and embodied in the

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[20] Of course it should be noted that the UN, being the enormous institution it is, along with (or despite of) the more dominant praxis, also hosts some transformative and critical initiatives (see e.g. the collaboration with the People's Food Sovereignty or some of the UN Special Rapporteur's on issues such as land grabbing, indigenous sovereignty and humans rights.)

technological optimism, pseudo-environmentalism of corporations, carbon markets and green consumption, which all shape the shared sense of what is permissible, desirable and possible in regard to climate action, thus limiting the responses to a shadow of what is actually needed (Wright et al. 2013).

This also relates to what Zizek (1999; 2006) and Mouffe (2005) have discussed as the post-political character of contemporary state and global governance. This post-political character of international policy-making is also present in the materials, in which the institutionalised imaginaries and contemporary power-structures (epistemic and physical) have reduced the political terrain to a realm of consensual governing and policy-making, centered on the technical and managerial administration of different sectors, thus resulting in the renewal of the status quo (Swyngedouw, 2011). This sort of a-political climate governance naturalizes the onto-epistemological foundations of the capitalist world-ecology and reduces politics to administration within a general neo-liberal consensus. This is also evident in how the dominant international discourse shaping the current responses to the climate emergency often frame the climate emergency in a way which makes it an impersonal, apolitical, and universal phenomena, which is divorced from "subjective, situated and normative imaginations of human actors" (Jasanoff, 2010: 235). The pre-political nature of imaginaries thus also determines the used vocabulary and the inclusion and exclusion of different issues. In the materials this is reflected in the conceptual externalisation of the entire problem, and in the economic optimism, reliance on policy tweaks and financial redirection as well as in the general procedural apathy within the entire process. This has led to a situation where the climate policies and 'solutions' presented in the Paris agreement and following COP-meetings have primarily only moved the problems around, rather than actually solved them (Clemencon, 2016).

Although the Paris agreement's article 7 paragraph 2 states that all "Parties recognize that adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions", the agreement and following policy documents lack a nuanced and full framing of the actual scale and depth of the crisis. Without addressing the imaginary foundations of currently dominant ways of being in the world, what we are faced with in times of crisis, as Guyer (2007: 416) has put it, are "reconfigurations of elements that are well-known already, moved in to colonize particular phases and domains of individual and collective life that have been released from answerability to a more distant past and future".

4.2.1 Embedded imaginaries and multifaceted subjectivities

The importance of studying the imaginary foundations of current responses to the climate emergency is not only in the uncovering of which sort of imaginaries are at play, but by doing so we can also understand how those responses relate to and are situated in wider world-making practises and global structures. The shortcomings of UN's climate responses are not only built on unsustainable assumptions and truth systems, but they also take place in and are manifestations of a world-system characterised by the core imaginaries of capitalist modernity (such as the separation of Society and Nature) and driven by global inequality and the constructed sanctity of pseudo-rational economism. In this thesis I hope to have shown that the ontological framework (represented through the three core imaginaries), according to which the international climate negotiations operate, is also reflective of some of the core problems of capitalist world-ecology in general. This is why, following Wright et al. (2013), the climate emergency as a systemic threat (along with other global crises) puts into question the very organization of contemporary societies, thus shattering in part how most humans living in industrialized and modern societies have learned to understand the world and their place in it.

Thus the shortcomings of the Paris climate agreement and following policy documents are also the shortcomings of the global system in general, in which the symptoms, the problems and the challenges for responses are intermingled with each other, all the while being systematically overlooked. This is the interplay, or rather cross-temporal intertwinement of process in moment and moment in process, where the imaginaries at the root of capitalist world-ecology have powered the transformation of global structures, and at the same time become further cemented into the social consciousness of people (and especially people in power) This intertwinement is most clearly present in the global institutionalised and normalised inequalities, which also continue to frame the policies of UN-led climate action.

In addition, as the currently dominant responses to the climate emergency are in some part institutionalizations of the imaginaries pivotal to capitalist world-ecology, so are the fancy halls and segregated cities in which the negotiations are held. The same imaginary foundation permeating and guiding the climate discussions also characterises capitalist environment-making (the world-eating, after Dunlap and Jakobsen, 2020) in general. The dominant imaginaries are reflected in the absence of minorities and in the ambivalence of the elite in the face of crisis; They are embodied in the covered surfaces of cities, in gated communities, forced on to other beings through extractivism and monocultures as well as sown into the everyday items and spaces in modern societies. This embeddedness and

institutionalization of the dominant imaginaries is also evident in the limited space for alternative practises to arise. As an institutional example within the UN-led climate discussions, The Talanoa Dialogue[21] preceding the COP in Katowice was an attempt to create more inclusion of practises inspired by non-dominant and non-eurocentric imaginaries. The Dialogue however had little to no effect on the actual policies on the agreements. It is thus important to note that while these alternative ontological openings occur, they mostly take place in established structures characterized by the dominant imaginaries, which historically have also operated as a forum for outright climate denialism (Clemencon, 2016). Dunlap and McCright (2011) have for example argued that climate denialism has been pivotal in delaying and constraining the needed regulations, such as the carbon tax (see also Mann, 2012). According to Clemencon (2016), also the final form of the Paris agreement was affected by climate denialism, as the United States delegation was effectively 'held hostage' by a right-wing Congress in which a majority of members did not believe in human-made climate change, thus achieving to block the inclusion of binding commitments.

By studying the wide-scale phenomena and systemic structures through the lense of imaginaries, one is also able to better describe social structures and global systems in general; By examining the psycho-social foundations of for example capitalism, one is able to see that the physical elements of those systems, and the specific institutions enact, are legitimized by and operate on those onto-epistemological assumptions. This is important as a lot of systems-critique tends to fall for the analytical and conversational dead-end of describing and blaming abstract phenomena, thus removing from the equation any accountability which can actually be pinpointed and named. By understanding imaginaries as the internalized and institutionalized engines of any social interaction and societal structures, people can better situate their own and other's agency within the system, and see that what we have learned to name as abstract '-isms' are actually enactments of imaginaries, along with the socio-historical structurings of biophysical environments and established relations.

To continue, as structurers of truth systems, institutionalized imaginaries guide thinking and action when no thinking is consciously happening. This means that these institutionalized socio-cognitive structures and patterns of social existence enable people to function in an 'auto mode'. In the context of climate action, this means that even when

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[21] Referring to a traditional word used in Fiji and across the Pacific in reflecting a process of inclusive, participatory and transparent dialogue, The Talanoa Dialogue was aimed at developing collective international action to move the global climate agenda forward. It was a year-long process of discussions, consultations, events and expert inputs that culminated in COP24 in Katowice. (Verkuijl, Piggot and Yehle, 2018)

conscious decisions are made to act sustainably, the default (the non-action, the 'just living', the 'non-political') takes place in a socio-physical environment and patterned existence, which is unsustainable and shaped by institutionalised imaginaries of the capitalist world-ecology. That is also why international actors and governments, which claim to be green and perhaps hailed as such internationally (e.g. green-washed companies or countries such as the Nordics), can identify themselves as environmentally conscious because the 'out-of-norm acts' are viewed as the defining ones; The continuation of dominant and institutionalized praxis is the normal, the 'nothing' and thus the non-defining. Therefore many progressive and leftist actors partake in these same ontological politics by reproducing the language and behavioural patterns built on for example Society and Nature's separation, growthism, and existential hierarchy as those are the politics-as-usual.

In addition, as the UN primarily consists of governments, which mostly answer to different spheres of social existence, the costs of more ambitious climate policies can be seen too high for any individual country, political party or negotiating group. This is because radical policies will harm specific, powerful actors and are traceable back to individual politicians, when the benefits of those climate policies are spread, and span over decades and continents (Wright et al. 2013). Therefore, partly because of this and due to its inherent structure and mandate within the hegemonic global order, the UN is not equipped for the radical or comprehensive climate action which requires the disruption of the status quo, of which it is a reflection and a part of. Without pressure from 'below', from social movements and communities, the currently dominant institutions and societal structures will not bring about the needed changes, as their legitimacy stands on the institutionalisation of some of the core imaginaries at the root of capitalist world-system. The needed pressure however requires that people all over the world realize and are able to situate themselves within the current world-ecological structures. This requires the removal of the smoke-screen of individualized responsibility towards a more nuanced understanding of being within the web-of-life, which is currently characterised by distorted and unequal relations of power and coloniality.

The aforementioned task is an important one because, even though most people in the Global North (and an increasing amount of people in the Global South) lead unsustainable lives in capitalist modernity, they are not the foundational driver of capitalism as a world-ecology; The majority of humans are not and have never been capitalists but consumers, commodities and resources, with specific internalized imaginaries enabling the continuation of the situation. To go back to the example by De Castro and Danowski (2018) we must be careful not to treat McDonalds and the kid eating at McDonalds as equals. By

understanding imaginaries as a foundational aspect of social being, (along with the institutionalisation of imaginaries) it is possible to study these complex agencies at play in capitalist modernity and in the context of the climate emergency. According to Yusoff and Gabrys (2011), traditionally most examinations of subjectivity in regard to the climate emergency have presented social relations and accountability in simplified ways, which have monopolized the way that social and organizational existence has been understood in dominant discourses of climate change. As Yusoff and Gabrys (2011 p. 517) suggest, the dominant climate rhetoric has primarily imagined 'humans as either drivers of climate change or recipients of its effects, rather than as a heterogeneous and differentiated social body with distinct desires, constraints, and imaginations'.

Through an incorporated diachronic and synchronic logics of examination it becomes clearer how the imaginaries enabling capitalist world-ecology are institutionally present in the contemporary thought-structures and cultures of action permeating the international climate discussions. Imaginaries such as Nature-Society divide arise from the agenda and its framings of the entire discussion. Thus the international climate action continues to be determined and reflective of imaginaries which are in no way equipped to tackle the crisis at hand and leading to responses of attempting to combine incompatible demands with opposing societal structures, which is resulting in incoherent action and organised hypocrisy. In conclusion, not only are the currently dominant climate responses completely inadequate in themselves, but they are also renewing and perpetuating the very imaginaries that are at the foundation of a system creating the crisis, that of the capitalist world-ecology. The problem is not that individuals, communities, governments and global actors are trying their hardest in a challenging situation, but rather that we still haven't stopped perpetuating the emergency. Additive climate policies mean nothing, if the actions which are creating the emergency are not halted.

Chapter 5. Conclusions

During a time of increasing climate talk and awareness, current human societies have continued to intensify the climate emergency and expand and deepen the practices behind the emergency. According to for example Clemencon (2016), the international climate responses led by the UN suffer greatly from the inherently distorted attempts to combine incompatible demands with the dominant framework within which the negotiations take place. This is further accentuated by the institutional misinterpretation and presentation of the problem, (which I have aimed to shed light to in this thesis), which has then resulted in

institutionalized hypocrisy (as defined by Lavenex in the context of the European Union, 2018), as no real effective results have come from the negotiations.

In this thesis I have shown how the framework and terminology used throughout the materials continue the institutional re-enactment of the distorted imaginaries powering extractive, othering and exploitative practises, which currently constitute the foundation of the capitalist world-ecology. I argue that this is one of the core issues why the dominant international climate policies have had no significant effects in curbing the catastrophical effects of the emergency. The core problem therefore is not that human societies are faced with an external crisis, which is now being handled to the best of our abilities, but rather that the crisis continues to be perpetuated as the actions and structures behind the crisis are not addressed. While the entire world is heading towards a civilisational collapse and a future of continual "heatwaves, droughts, flooding, loss of landmass, and hostile environments --" (Gills and Morgan 2019: 895), the governments at the UN climate negotiations focus on negotiation technicalities, and interests framed by realpolitik and international competition (Clemencon, 2016).

My main conclusions in this thesis are that: **1. The dominant climate responses of the UN (as the main international climate actor globally), are built on the imaginaries at the root of capitalism as a world-system/world-ecology.** This means that the very thought-structures powering the unsustainable global practises and structures also permeate the operational culture of most of the negotiating governments and international climate politics. On a wider scale, I hope to have further argued that **2. The current climate responses and roadmaps for systemic transformations towards sustainability need to address and better understand the psychosocial and ontological aspects of the crisis in question**. Without deep examinations of the truth-systems and imaginaries through which people make sense of the world and which they enact in their everyday, any responses to crisis are prone to remain dangerously limited. In addition, I hope to have shown that theories such as the world-ecological conversation, with its notion that all beings are part of the same co-constitutive existence (i.e. monism, or I would rather argue pluralism in monism), further developed with examinations of contentious and complex agency in the form of imaginaries, are extremely useful in mapping out the current global practises and the onto-epistemological assumptions at the foundation of these, while simultaneously addressing the a-symmetrical and psycho-social aspects of life and environment-making. Thus this thesis also answers to some of the critique towards world-ecological theory in general, which arises from for example the alleged analytical vagueness resulting from abandoning the traditional conceptual tools of Nature and Society (see e.g. Foster, 2016).

Therefore, this thesis hopefully shows that robust analyses with multilevel and multiscalar approaches are very possible within the emerging theoretical conversations such as world-ecology, which foster the idea of oneness in the web-of-life, without the risk of abstracting subjectivity, structure or action or abandoning pluralism within it.

This thesis is far from providing a systemic analysis of the shortcomings of the currently dominant climate responses or a comprehensive analysis of the ontological framework at play in them. What it does however do, is that it shows in broad strokes how the dominant ontologics of cartesian origins continue to affect and frame the main international climate responses, while perpetuating the very institutional practises behind the emergency. By presenting the central problems of the UN-led climate responses as reflections of specific imaginaries I hope to have provided arguments for situating those processes and practises also as part of the hegemonic global power structures of extractivism-driven capitalist world-ecology, as well as situating the process to a wider world-history of destructive environment-making (i.e. the capitalocene).

Although this thesis is just one contribution in trying to understand the current global crises and the unsustainability of dominant ways of being, I hope that I have provided some arguments for the usefulness of incorporating multiple levels of analysis for the world-ecological conversation. In a world dominated by mechanistic and hierarchical views of existence, science and research have also had the tendency of approaching the world either through case based studies or in sectors. The climate emergency (and the responses to it) is a unique thing in history, as it holds visible (and threatens) the myriad and complex configurations of the small and the large; the global and the local; the abstract and the tangible; the shared and the individual; and the historical and the current. This means that examinations of the emergency also need to take into account this multi-scalar complexity and embeddedness of synchronic and diachronic levels of world-history and -ecology. Along with the existential threat to current societies and non-human beings, the climate emergency thus also presents a challenge of comprehension with an unprecedented urgency. The current climate emergency with other concurrent global crises has come to question and defy the very realities according to which most people live by in modern societies (Evans & Gabbatiss, 2019), there is an urgent need for alternative imaginaries, a New Story, which would reunite humans with the rest of the web-of-life, and go beyond just capitalism.

5.1. Ways out, inwards and towards

Avoiding complete and global ecological breakdown will require drastic and comprehensive changes to the ways how contemporary societies are organized. This might seem an

insurmountable task against the backdrop of the current situation where billions of people are still not able to meet their basic material needs. The problem however is not that the planet could not sustain the lives of all people, but rather that it cannot sustain the *current modes of living* linked to overconsumption and -production which capitalist modernity is based on; For example, scholars such as Millward et al. (2020) have shown that a decent standard of living is possible for all within planetary boundaries, as human wellbeing is not tied to the vast amounts of contemporary material and energy use.

The task of avoiding the collapse of almost everything humans and other species need in order to survive, starts with the deep-felt realization that we are in an emergency which threatens all of life. To live life in a capitalist world-ecology characterized by extractivism, concurrent crisis and growing inequalities, is to live a life of trauma, without the tools to address it. Even though for most people in the modern world the omnipresent damage imposed upon the web-of-life remains rather invisible, the resulting malbeing is felt by all (albeit often subconsciously) and often without any possibility to name or process it (Dunlap and Jakobsen, 2020). In *the Round River,* Aldo Leopold (1953 p. 165) writes that "one of the penalties of an ecological education is that one lives alone in a world of wounds -- An ecologist must either harden [their] shell -- or [they] must be the doctor who sees marks of death in a community that believes itself well and does not want to be told otherwise." Regardless of the risk of ending up "living alone in a world of wounds", the kind of education Leopold is writing about is crucial. This will mean that we must allow the increasing destruction of the web-of-life to truly disrupt us, and not simply become "an accumulation of commodified experiences which mimic those that are sold in the marketplace" (Wright et al. 2016 p. 654). Dunlap and Jakobsen also argue (2020), following Ellul and other green anarchists, that exiting the current capitalist world-system (the Worldeater, as they call it) requires confrontation of the ethos of the system in all of its manifestations. This requires deconstructing and moving beyond colonial/statist society, embodying defiance against human (racism, sexism, all-phobia) and non-human hierarchies (speciesism/human supremacy) as well as other aspects of capitalism's symbolic culture such as patriarchy and divisions of labor (Dunlap and Jakobsen, 2020).

Constructing hegemony around new ontological regimes (and thus new socio-economic and political regimes) requires alternative imaginaries which enable the re-thinking of most social, material and spatio-temporal relations. As Wright et al (2013) have argued, by having the faculty to make present what is potentially absent, the imagination is at the very root of the possibility of any transformative action. Roadmaps for realising these alternative futures do already exist. As mentioned earlier, even though the whole of humanity

is currently living in the capitalocene, it is not the only time or reality existing. According to for example Escobar (2016) many alternative wisdom traditions, including those of indigenous peoples, can function as guides in the challenge of re-embedding humanity within the web-of-life. These forms of knowledge and being includes for example the Andean Buen Vivir, (with different names and varieties across Andean regions such as Vivir bien, Sumak Kawsay, Ñanderenko etc., see e.g. Gudynas, 2011); Ubuntu with its emphasis on human mutuality and its equivalents around Africa (Metz, 2013); Eco-Swaraj in India, with the focus on self-reliance and self-governance (Kothari, 2014); Decolonized degrowth (Kallis et al., 2020; Kallis et al. 2020; Nirmal and Rocheleau, 2019); and many others. (see Kothari et al. 2015).

The principles and strains of thought within these worldlings along with many ecological and environmental justice movements have a lot to contribute to the transformation of human existence within the web-of-life by allowing human societies to submit to and embrace (rather than control) the co-productive, dynamic and holistic workings of the living world, while also opening the world to a pluriversality of perspectives and knowledges. In the context of the current climate emergency, any alternative imaginaries guiding the interaction between humans with each other and non-human nature must also be embedded in deep history, attuned with the multi-cyclicity and interdependence of web-of-life's metabolisms and the planetary thermodynamic conditions which sustain the biosphere and which are, as we know, to a large extent reciprocally conditioned by it (De Castro & Danowski, 2018). Following Ingold (2008), a new ecology of life beyond the capitalist world-ecology must therefore be about the weaving and binding of lines, not the hammering of blocks. As an ecology of threads and traces, it must not only deal with the relations between organisms and their external environments but also with the relations along their enmeshed ways of life. (Ingold, 2008) These sort of alternatives, the new and old imaginaries of sustainable worldviews are already enacted in the-every-day by people, communities and movements across the globe.

It is however important to remember that this task to decolonize, re-common and build convivial practises within the web-of-life, is both a physical and a psychological task, as Moore and Patel (2017) argue. Reimagining without physical commoning or institutional and structural decolonization is useless. The problem is not that there are no alternative ways of imagining the world, but rather that the ones that are currently most predominant are also the ones according to which the physical and eco-social world is being shaped. Current global structures and influential international institutions continue to perpetuate harmful ways of being and perceiving the world and humans place in it, which is then built in and coerced into

the relations of humans and other beings, as well as the physical and lived environments. Therefore, the reimagining of humans in the web-of-life must happen in parallel and unison with the concrete, practical and physical tasks of reclaiming democracy, providing basic material needs for all (e.g. in the form of Universal Basic Income (see e.g. Bregman & Manton, 2018), and right to land and to one's own labour), destruction of global plutocracy, and halting the extractivism-led capitalist form of environment-making everywhere along with the overproduction and consumption of most materia.

These processes of tearing down the old structures along with the reimagination of eco-social life does not belong in oak-panelled rooms filled with men in suits, but it is and must be a collective act of liberation taking place in classrooms, living rooms, bars and cafes, sportfields, between the shelves of a shop, in the streets and park benches (Moore and Patel, 2017). This re-imagining and construction of something new is not a one-off task, with a detailed blueprint. Following Kallis and March (2015), under enlightenment, modernism and mechanistic thinking, new worlds are seen to arrive sequentially after the old ones fall. However, they (ibid.) continue by drawing from Ursula Le Guin's science fiction novel *The Dispossessed* (1974), that many possible futures already exist simultaneously with the dominant present, and that any futures "can only be realised through action taken in the present" (Ferns 2005, 256).

The imaginary foundation which the current capitalist world-ecology is standing on is at the same time a huge fortress to be tackled (due to the global magnitude and historical institutionalisation), but also a fragile house of cards, which onto-epistemological foundation does not hold closer scrutiny (Swyngedouw 2011). The world-ecological theory along with many other radical, critical and convivial schools of thought, as well as the variety of indigenous ontologies can together provide and co-build tools and structures, which foster the idea that "We are at all times embedded in this unifying energy of consciousness with the potential to attune with, identify with, and communicate with any and every other life form, object or being in the universe" (Metzner, 2005, p. 12).

We are intrinsically and inextricably tied to everything else in the web-of-life; Everything exists because all else exists. That is not a metaphor but a description of the actual dynamics of all existence. There is no political, social or economic action that is not climate action. There is no behaviour that does not relate to the rest of web-of-life. To realize the depth of the needed change means to become beings within and of the web-of-life. It also means stripping away the powers and weapons from those who benefit and live off of the extraction, exploitation and destruction of the web-of-life, and it means gaining the power

and the possibility of building a different kind of world-ecology and local existence with all beings.

SINGULARITY
by Marie Howe, 2019

(after Stephen Hawking)

Do you sometimes want to wake up to the singularity
we once were?
so compact nobody
needed a bed, or food or money —

nobody hiding in the school bathroom
or home alone

pulling open the drawer
where the pills are kept.

For every atom belonging to me as good
Belongs to you.   Remember?

There was no   Nature.   No
* them.   No tests*

to determine if the elephant
grieves her calf   or if

the coral reef feels pain.   Trashed
oceans don't speak English or Farsi or French;

would that we could wake up to what we were
— when we were ocean   and before that

to when sky was earth, and animal was energy, and rock was
liquid and stars were space and space was not

at all — nothing

before we came to believe humans were so important
before this awful loneliness.

Can molecules recall it?
what once was?   before anything happened?

No I, no We, no one. No was
No verb   no noun
only a tiny tiny dot brimming with

is is is is is

All   everything   home

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