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LAW AND THE ANTHROPOCENE

**Explorations on new legal narratives for the geological
transition**

FINAL MASTER'S THESIS

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Look again at that dot. That's here. That's home. That's us [...] Our posturings, our imagined self-importance, the delusion that we have some privileged position in the Universe, are challenged by this point of pale light. Our planet is a lonely speck in the great enveloping cosmic dark. In our obscurity, in all this vastness, there is no hint that help will come from elsewhere to save us from ourselves. [...]

There is perhaps no better demonstration of the folly of human conceits than this distant image of our tiny world. To me, it underscores our responsibility to deal more kindly and compassionately with one another and to preserve and cherish that pale blue dot, the only home we've ever known.

Carl Sagan, Pale Blue Dot, 1994

ABSTRACT

The narrative of the Anthropocene represents an interdisciplinary operational concept. It defines the challenges that humanity, as a species and global community, must face in the present. The main cause of the geological transition is the social metabolism promoted by the capitalist-world economy. In this context, law plays a fundamental role, being the institutional system that allows the development of capitalism. Likewise, law has favored the establishment of hierarchies of all kinds (for reasons of gender, race, religion, social class, etc.), which are the ones that end up generating the inequalities embedded in the capitalist economy. The geological transition represents, therefore, a challenge for the hegemonic conceptions of law. It must be transformed into the process of adaptation that humanity faces at this time, in particular, generating inclusive strategies that enable a just transition.

KEYWORDS

Anthropocene — Earth System — constitutional law — social metabolism — global capitalism — world-economy — possessive individualism — sustainability

RESUM

La narrativa de l'Antropocè constitueix un concepte operatiu interdisciplinari, que defineix els desafiaments que la humanitat com a espècie i comunitat global ha d'afrontar en el present. La causa principal de la transició geològica és el metabolisme social promogut per l'economia-món capitalista. En aquest context, el dret hi juga un paper fonamental, en tant que és el sistema institucional que permet que es desenvolupi el capitalisme. Així mateix, el dret ha afavorit l'establiment de jerarquies de tot tipus (per raons de gènere, raça, religió, classe social, etc), que són les que acaben generant les desigualtats existents arreu del món. La transició geològica representa, per tant, un desafiament per a les concepcions hegemòniques sobre el dret, que ha de transformar-se en el procés d'adaptació que la humanitat afronta en aquest moment, en particular, generant estratègies inclusives que permetin una transició justa.

PARAULES CLAU

Antropocè — Sistema Terra — dret constitucional — metabolisme social — capitalisme global — economia-món — individualisme possessiu — sostenibilitat

RESUMEN

La narrativa del Antropoceno constituye un concepto operativo interdisciplinar, que define los desafíos que la humanidad como especie y comunidad global tiene que afrontar en el presente. La causa principal de la transición geológica es el metabolismo social promovido por la economía-mundo capitalista. En este contexto, el derecho juega un papel fundamental, como sistema institucional que permite que se desarrolle el capitalismo. Asimismo, el derecho ha favorecido el establecimiento de jerarquías de todo tipo (por razones de género, raza, religión, clase social, etc.), que son las que terminan generando las desigualdades existentes en el mundo. La transición geológica representa, por tanto, un desafío para las concepciones hegemónicas sobre el derecho, que debe transformarse en el proceso de adaptación que la humanidad afronta en este momento, en particular, generando estrategias inclusivas que permitan una transición justa.

PALABRAS CLAVE

Antropoceno— Sistema Tierra — derecho constitucional — metabolismo social — capitalismo global — economía-mundo — individualismo posesivo — sostenibilidad

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INTRODUCTION

What if we were to accept the Anthropocene as a new geological era? What if we conceived it not only as a stratigraphic concept, but a multidisciplinary one? How should we understand the narrative of the Anthropocene? How does this impact in our ideas about law?

These are some of the questions that are intended to confront in the following Final Master's Thesis. In the current complex global scenario, characterized by the impact of human activities on the Earth System as a whole, part of the scientific community has considered we are moving towards a new ecological era, the Anthropocene. This would imply fundamental challenges in the organization of human societies, and as we shall see, it would have an impact on law too. The main purpose of this work is to study how the narrative of the Anthropocene can help reconfigure the way we have conceived the world so far, and particularly contribute to the discussion about how this narrative should affect the current conceptions about law.

The reasons for choosing this subject are diverse. On the one hand, there is an academic interest. I knew that I would have to dedicate months on it and it had to be a special topic, that made me want to open the computer to write and read about it. I stumbled over the term 'Anthropocene' while doing the Final Degree's Thesis, two years ago, although I only went through it on tiptoe. Performing the Master in Environmental Law allowed me to rediscover the term, and it still intrigues me to this day. Actually, it keeps waking me up questions that are increasingly difficult to answer.

On the other hand, I feel that it is fortunate that this topic is booming, because the existing literature is surprisingly extensive. Moreover, there is a clearly personal reason. Analyzing the Anthropocene has revealed many things to me, and has confirmed my desire to start a research career. In fact, this Final Master's Thesis aims to be a chapter of my future predoctoral thesis, an introduction to a much more extensive subject: the research for legal and social proposals to face patriarchy, as a form of oppression and domination prevailing in the Anthropocene.

The work consists of three main chapters, as well as a chapter exploring future lines of research and the final conclusions of the work. In the first section, I analyse the term 'Anthropocene' as the fundamental theoretical matrix of the work: its origins, its precedents, the alternative concepts that have emerged, as well as the criticisms that have

been made around it. All this, to argue that ‘Anthropocene’ is the term that best describes the dimension of the current environmental crisis. Secondly, I examine the Anthropocene as a paradigm of domination. Accordingly, the second section focuses on the capitalist system as the hegemonic model of domination in this new era. A system that promotes oppressive hierarchies, unequal exchange, global homogenization, possessive individualism and unsustainability.

The third section constitutes a dissertation around the legal challenges that must be faced in the Anthropocene. This allows us to realise that law plays a fundamental role, as the institutional system that allows the developing of capitalism as the hegemonic social system at a global level. The fourth section is an introduction to the future lines of research that I will develop in my doctoral research. My purpose is to analyse patriarchy as a form of domination in the context of the Anthropocene, which leads to many other forms of oppression.

The research process has consisted mainly in exhaustive bibliographic exploration on the topic, allowing me to build a fundamental research framework to be developed in the future. Once the collection of information was finished, I sketched out a scheme with the structure that should make up the thesis and proceeded to the subsequent drafting. The corrections and suggestions of the tutor after writing each section allowed the work to gain quality and form, forcing me to rethink my writing in a more critical way. Likewise, the analysis of law from the critical legal studies has allowed me to forge a critical spirit in relation to the hegemonic model of social reproduction and the dominant conceptions about law as a social discipline and institutional framework.

This thesis is based on qualitative research. This means that, although the study is kept in a formal language, the contingent counts subjective appreciations, sometimes using the first person. It is linked to the most panoramic disciplines of Public Law—i.e., International Law and Constitutional Law—as well as to Philosophy and Sociology of Law. In a research work in social sciences, as in the case of law, a personal position is inevitable, although sometimes it is attempted to be hidden. Regarding me, I have tried to make my perspective and my personal position explicit at all times, trying to express myself with the utmost honesty. It is convenient to add that in some moments of the thesis, when it is relevant to focus on humanity as a whole, I have also used the first person of the plural.

Moreover, the reason I have decided to write the present work in English is that, as I have just exposed, my purpose is to start a predoctoral thesis next year. This Final Master's Thesis is intended to be the beginning of my career as a researcher, that is, a first exploration that links with my eventual future thesis. Therefore, since English has the best possibilities of communication, I have used this language since the beginning.

Finally, I would like to finish this introduction with some acknowledgements.

I would first like to express my deepest appreciation to Dr. Jordi Jaria, my tutor. Per acompanyar-me en tot moment en l'aventura de l'Antropocè, per fer-me qüestionar allò que sembla inalterable i per les converses al despatx intentant reconstruir el món. El món no sé si el canviarem, però a mi sí m'ha canviat la forma de concebre'l. Gràcies per tot, Jordi. Sempre ha estat un privilegi.

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1. THE TERM ‘ANTHROPOCENE’

This section aims to discuss the term ‘Anthropocene’, designing the new geological era in which we have supposedly entered. The idea of Anthropocene is the fundamental theoretical matrix that will be developed throughout this dissertation, as far as it expresses the dimension of the current environmental crisis. Studying the origins of the term and its surrounding discussions is necessary to identify its characteristics and later discuss all that it entails for further theoretical development.

1.1. Appearance of the term Anthropocene

It is told that the leading researcher in diatoms, Eugene F. Stoermer, originally coined and used the term ‘Anthropocene’ from the early 1980s to refer to the evidence of the effects of human activity on the planet Earth.¹ After two decades, in a note published in 2000, Stoermer and the Nobel Prize-winning, atmospheric chemist, Paul Crutzen proposed the use of the term ‘Anthropocene,’ to emphasize the central role of humankind in geology and ecology.² It combines the Greek root ‘anthropo-,’ meaning ‘human,’ with the suffix ‘-cene,’ the standard suffix for ‘epoch’ in Geology.³

However, the word ‘Anthropocene’ did not acquire a significant notoriety until it was popularized in 2002, when Paul Crutzen published in *Nature* the article ‘Geology of mankind: the Anthropocene,’ showing up that the effects of human activity on the global environment had been escalating in the past three centuries. His point was that the name of the current geological era should reflect the impact of human species on Earth. Therefore, he suggested assigning the term ‘Anthropocene’ to the present, “in many ways human-dominated, geological epoch, supplementing the Holocene.”⁴ Thus, the term ‘Anthropocene’ was offering a point of reference capable of articulating the widespread conviction that, in the present, the Earth System is configured mainly through human action.

The concept has been gaining much attention within the scientific community since then, and it has made its fortune as a focal point of a successful narrative of the present. Indeed,

¹ Andrew C. Revkin, ‘Confronting the ‘Anthropocene’’ (2011) *Dot Earth – New York Times blog*.

² Paul J. Crutzen and Eugene F. Stoermer, ‘The “Anthropocene” (2000) 41 *Global Change Newsletter* 17.

³ Naas Grové, ‘Living in harmony’ (2016) 48 *Dendrom, A Living Library* 3.

⁴ Paul J. Crutzen, ‘Geology of Mankind: The Anthropocene’ (2002) 415 *Nature* 23.

the term implies giving a geological dimension to the changes undergone by the Earth System in the present, and it is projected on the different domains of scientific knowledge.⁵ Although the term ‘Anthropocene’ is still in process of being accepted officially into the geological scientific community,⁶ the narrative has been consolidated, especially since the turn of the millennium.

1.2. Foregoing terms to the concept of Anthropocene

Actually, the term ‘Anthropocene’ is relatively new, but not the idea, which has been referred with other terminologies since the 19th century, when the transforming capacity of human beings on the planet was already becoming evident.⁷ As a matter of fact, Crutzen himself points out that the Italian geologist Antonio Stoppani had referred to the ‘Anthropozoic era’ as long ago as 1873, speaking about “a new telluric force which in power and universality may be compared to the greater forces of earth.”⁸ Joseph LeConte, professor of geology at U.C. Berkeley, coined the term ‘Psychozoic era,’ using this term for first time in his 1877 text book *Elements of Geology*, which had undergone 13 editions between 1878 and 1907. LeConte defined the Psychozoic era by saying that “the Neolithic commences the Psychozoic era, or reign of man—the period when man had established his supremacy.”⁹

In 1922, the Russian geologist Alexei Pavlov had referred to the ‘Anthropogenic system,’¹⁰ and in 1926, the Soviet scientist Vladimir Vernadsky had acknowledged the increasing impact of mankind, stating that “the direction in which the processes of evolution must proceed, namely towards increasing consciousness and thought, and

⁵ Louis J. Kotzé, *Global Environmental Constitutionalism in the Anthropocene* (1st edition, Bloomsbury 2016).

⁶ The Anthropocene Working Group (AWG) of the Subcommission on Quaternary Stratigraphy, provided its summary of evidence and its provisional recommendations on a potential new geological time interval at the 35th International Geological Congress in Cape Town, South Africa, between 27 August and 4 September 2016. Vid. Working Group on the ‘Anthropocene’. “What is the ‘Anthropocene’? – Current Definition and Status”. *Subcommission on Quaternary Stratigraphy, International Commission on Stratigraphy (ICS)*. Vid. Subepigraph 1.3.1. Concept discussions.

⁷ Jordi Jaria i Manzano, *La Constitución del Antropoceno*. Pending publication.

⁸ Crutzen (n 4).

⁹ Joseph Leconte, *Elements of geology: a text-book for colleges and for the general reader* (D. Appleton and Company 1879).

¹⁰ Mark Maslin and Simon L. Lewis, *The Human Planet: How We Created the Anthropocene* (Pelican Books 2018).

forms having greater and greater influence on their surroundings.” Vernadsky had coined, together with the French Jesuit P. Teilhard de Chardin and E. Le Roy, the concept of ‘Noösphere,’ the world of intelligence, to mark the growing role played by humankind’s brainpower and technological talents in shaping its own future and environment.¹¹

In 1992, an American science and environmental journalist, Andrew Revkin, coined the word ‘Anthrocene’ in his book *Global Warming: understanding the Forecast*.¹² However, it was not adopted by the scientists either. Later in 1999, Michael Samways proposed the term ‘Homogenocene,’¹³ which was used again by John L. Curnutt in the year 2000,¹⁴ as a more specific definition for the current geological epoch, in which biodiversity is diminishing and biogeography and ecosystems around the globe seem more similar one to another, mainly due to invasive species that have been introduced around the globe either on purpose (crops, livestock) or inadvertently.

Nevertheless, the term that has finally been imposed is the ‘Anthropocene,’ as a metaphor for global environmental change. It seems to be broad enough to describe a great multitude of events coming from the same actor, as well as to specify that it is a new geological era or epoch (‘-cene’). However, the term Anthropocene has not been free from criticism either. As we shall see in section 1.4., some alternatives to this term have also been proposed in recent years.

1.3. Framing the Anthropocene: conceptual discussions

Although scientists had known for decades that humans exerted an enormous pull on Earth’s natural resources, geologists and other scholars have been pondering in the last years whether that influence is so great that results into a new geologic interval, the Anthropocene. Much of the discussion is stratigraphic, which has to do with the development of Earth System science, and has been focused on the existence of sufficient evidence to add a new category to the international chronostratigraphic chart, which is

¹¹ ‘Have we entered the ‘Anthropocene?’’ (International Geosphere-Biosphere Programme, 31 October 2010).

¹² Andrew Revkin, *Global Warming: Understanding the Forecast* (Abbeville Press 1992).

¹³ Michael Samways, ‘Translocating fauna to foreign lands: here comes the Homogenocene’ (1999) 3 *Journal of Insect Conservation* 65.

¹⁴ John L Curnutt, ‘Alien species in North America and Hawaii: impacts on natural ecosystems’ (2000). 81 (6) *Ecology*, 1756

the official chart of geologic time maintained by the International Commission on Stratigraphy (ICS). If that change is made, geologists would also need to decide whether to add the Anthropocene as an epoch—on par with the Holocene epoch (11,700 years ago to the present)—or as an age within the Holocene.¹⁵ Furthermore, the interval's starting point would need to be set. The decision was assigned to the Anthropocene Working Group (part of the ICS Subcommittee on Quaternary Stratigraphy), which intended to present its findings and a recommendation to the ICS in the 35th International Geological Congress in Cape Town (South Africa), between 27th August and 4th September 2016.

'Anthropocene' is also being used by many people as a synonym for climate change or global environmental change. However, the impacts have been running deeper than just our use of fossil fuels. Canadian journalist Naomi Klein said of rapid global climate change, that the Anthropocene embraces even more than this, encapsulating all the immense and far-reaching impacts of human actions on Earth.¹⁶ Also atmospheric climatologists and chemists, ecologists and oceanographers, and many other experts in Earth-related sciences have a broader view of human-induced changes in the planet than is implicit in the search for geological evidence in rock strata.

Meanwhile, the understanding of human action as a fundamental feature of this new geological era required the integration of the social sciences perspective (without neglecting biogeochemical approaches). For this reason, the concept of Anthropocene began to be discussed in the social sciences, as the guiding thread for the narrative of the present. In culture, the concept of the Anthropocene has also been approached via humanities such as philosophy, literature and art. Nevertheless, some people suggest that it is overly focused on the human species, while ignoring systematic inequalities, such as imperialism and racism, that have also shaped the world. Furthermore, some authors have written about the poverty of a nomenclature that traps us within the anthropocentric worldview.¹⁷

¹⁵ John P. Rafferty, 'Geology's Anthropocene Debate' (2015) Britannica Book of the Year, in *Encyclopaedia Britannica*.

¹⁶ Naomi Klein, *This Changes Everything: Capitalism vs. The Climate* (Penguin Books. Simon & Schuster 2014).

¹⁷ Eileen Crist, 'On the poverty of our nomenclature' (2013) (3) *Environmental Humanities* (129).

Other discussions have been put on the table around the Anthropocene: is it a geological era, an epoch, a period, a stage, a cultural age? Certainly, the debate about the Anthropocene as a geological term is much older. Nonetheless, the wave of attention spread into the popular media around the Anthropocene long ago escaped the confines of the academia and entered the public discourse. In 2016, when the AWG presented his point of view in the 35th International Geological Congress in Cape Town, the major media around the world reported that the scientific community had proposed the designation of a new geological epoch.

The Anthropocene captured the interest of the media, becoming an issue with cultural implications, dissolving the boundaries between natural and social sciences. This is precisely the most significant importance of the Anthropocene as a cultural concept, its capacity to blur the limits set between many areas. In this context, the most important thing is that it opens up the possibility to free us from traditional dichotomies, as nature-culture, and to redefine the relationship between environment and society.¹⁸ The ability of the Anthropocene narrative to challenge established categories and limits is evident even within the AGW itself. The Group has currently 35 members, and among them are classical stratigraphers, geologists who investigate the classification of geological strata, as well as Earth System scientists, ecologists, archaeologists, oceanographers, historians, a soil scientist and an international lawyer.¹⁹

For the first time in the history of geology, decisions on geological periodization included natural sciences, social sciences and humanities, which contributed to the concepts of time, space, production of evidence and interpretation.²⁰ Political science, anthropology, sociology and philosophy, along with history, are the communities of humanities and social sciences in which the Anthropocene, as a cultural concept, is being debated most intensely. As a proof of evidence, there are several new magazines focused on the subject: *Elementa: Science of the Anthropocene* and *Anthropocene*, both representing the natural

¹⁸ Helmuth Trischler, 'El Antropoceno, ¿un concepto geológico o cultural, o ambos?' (2017) 54 *Desacatos* 49.

¹⁹ Anthropocene Working Group (AWG). 'What is the 'Anthropocene'? – Current Definition and Status'. <<http://quaternary.stratigraphy.org/working-groups/anthropocene/>> accessed 4th February 2019.

²⁰ Trischler (n 18)

sciences, and *The Anthropocene Review*, which focuses more on the perspective of social sciences and humanities.²¹

The Working Group on the Anthropocene, belonging to the Subcommittee on Quaternary Stratigraphy, has established a definition for the Anthropocene. The definition goes as follows: “The present time interval, in which many geologically significant conditions and processes are profoundly altered by human activities.”²² This includes changes in erosion and sediment transport associated with a variety of anthropogenic processes, including colonization, agriculture, urbanization, and the chemical composition of the atmosphere, oceans and soils, with significant anthropogenic perturbations of the cycles of elements such as carbon, nitrogen, phosphorus and various metals. That also includes the environmental conditions generated by these perturbations, for instance global warming, ocean acidification and spreading oceanic ‘dead zones,’ the transformation of the biosphere both on land and in the sea, as a result of habitat loss, predation and species invasions.²³

However, the inclusion of all these elements involves changes in the Earth System as a whole, and this would be the reason why the concept of Anthropocene is innovative. As we have been explaining, the idea of the Anthropocene was conceived to capture the very recent rupture in Earth history arising from the impact of human activity on the Earth System as a whole. Earth System should be conceptualized as a single, dynamic, integrated system, and not a collection of ecosystems.²⁴ Therefore, the new paradigm of Earth System science includes the appearance of a new ‘object,’ as opposed to localised ecosystems or global processes (such as the water cycle) considered in isolation. Because in truth, Earth System science is not a cumulative addition, but a break, a new start with a new object that has appeared.

Nevertheless, the AWG states that the Anthropocene is not a formally defined geological unit within the Geological Time Scale, and because of it, care should be taken to distinguish the concept of ‘Anthropocene’ from the previously used term ‘Anthropogene.’ Therefore, the AWG is cautiously considering the Anthropocene as a

²¹ Ibid.

²² Anthropocene Working Group (AWG) (n 19)

²³ Ibid.

²⁴ Clive Hamilton, ‘The Anthropocene as a rupture’ (2016) 3 *The Anthropocene Review* 93.

‘potential geological epoch,’ at the same hierarchical level as the Pleistocene and Holocene epochs. The new epoch would be situated in the Quaternary Period, after the Holocene. Nevertheless, they propose an alternative definition as a lower hierarchical level, inside subdivision of the present Holocene.²⁵

Thereby, for the AWG, the Anthropocene ought to be scientifically justified. That is, the geological signal being produced in strata needs to be in a sufficiently large, clear and distinctive form, and it has to be useful as a formal term to the scientific community. Also as a non-stratigraphic term, the Anthropocene has already been proven as useful for the rest of the scientific communities, and thus will continue to be used. Notwithstanding this, it remains to be decided if the formalization within the Geological Time Scale would make it more useful or broaden its usefulness to other scientific communities, such as the geological community.²⁶

When it comes to determining the beginning of the Anthropocene, the AWG generally used to consider to be ca. 1800, together with the Industrial Revolution in Europe. This also matched Crutzen’s original suggestion,²⁷ who specifically situates it in 1784, the year that Scottish inventor James Watt patented the parallel motion (or double-acting engine), an arrangement of connected rods that guided the piston rod in a perpendicular motion. This technological improvement gave rise to the so-called water steam engine, which would be fundamental in the development of the first Industrial Revolution, both in the United Kingdom and in the rest of the world. This also involved the massive expansion of fossil energy use. Nevertheless, 1784 is considered a mere symbolic date, for it was decades before industrialized countries, and after them globalised societies, could use massively technologies based on fossil fuel combustion.²⁸

Moreover, in a binding vote on 21st May 2019²⁹, the AWG decided that the date should be set towards the middle of the 20th century. The AWG concludes that the Anthropocene

²⁵ Ibid.

²⁶ AWG. ‘What is the ‘Anthropocene?’ (n 19)

²⁷ Will Steffen, Paul J. Crutzen and John R. McNeill, ‘The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?’ (2007) 36 (8) Royal Swedish Academy of Sciences 616.

²⁸ Clive Hamilton, Christophe Bonneuil and François Gemenne, *The Anthropocene and the Global Environmental Crisis. Rethinking modernity in a new epoch* (Routledge 2015).

²⁹ Following guidance from the Subcommittee on Quaternary Stratigraphy and the International Commission on Stratigraphy, the AWG completed a binding vote on 21st May 2019, to affirm some of the key questions that were voted on and agreed at the IGC Cape Town meeting in 2016. The details are as follows: No. of potential voting members: 34. No. required to be quorate (60%): 21. No. of votes received: 33 (97% of voting membership)

has emerged as a popular scientific term used by scientists, the scientifically engaged public and the media, in reference to the period of Earth's history where humans have a decisive influence on the state, dynamics and future of the Earth system. The group ends by considering that the Earth has actually entered in this period.

However, the proposal of the AWG is not the only dating that has circulated so far. Several different starting dates for the Anthropocene epoch have been proposed, reflecting different disciplinary perspectives and criteria regarding when human societies first began to play a significant role in shaping the Earth's ecosystems. This includes, for instance, the extinction of large Pleistocene mammals, such as the mammoth, approximately 14,000 years ago (before the onset of the Holocene epoch), the expansion of agriculture (5,000 years ago) or the expansion of mining (3,000 years ago).³⁰

Pedologists have been arguing that evidence of anthropogenic modification of soils going back 2000 years defines the start of the Anthropocene,³¹ and at the same time, some archaeologists have argued that "the beginning of the Anthropocene can be usefully defined in terms of when evidence of significant human capacity for ecosystem engineering or niche construction behaviours first appear in the archaeological record on a global scale."³² These behaviours are traced to the domestication of plants and animals beginning 10,000 years ago.³³

A geographical starting point would point out it was in the 16th century, with the Columbian Exchange. A worldwide drop in atmospheric carbon dioxide concentrations would have coincided with the death of some 50 million indigenous people, when goods, ideas and people moved from Europe to the Americas,³⁴ introducing diseases, depopulation, forest regrowth, trans-continental trade, species exchange and pollen

Q1. Should the Anthropocene be treated as a formal chrono-stratigraphic unit defined by a GSSP? 29 voted in favour (88% of votes cast); 4 voted against; no abstentions.

Q2. Should the primary guide for the base of the Anthropocene be one of the stratigraphic signals around the mid-twentieth century of the Common Era? 29 voted in favour (88% of votes); 4 voted against; no abstentions.

Both votes exceed the 60% supermajority of cast votes required to be agreed by the Anthropocene Working Group as the official stance of the group.

³⁰ Rafferty (n 15).

³¹ Giacomo Certini and Riccardo Scalenghe, 'Anthropogenic soils and the golden spikes for the Anthropocene' (2011) 21 (8) *The Holocene* 1269.

³² Bruce D. Smith and Melinda A. Zeder (2013) 'The onset of the Anthropocene'. 4 *Anthropocene* 8.

³³ Hamilton (n 24).

³⁴ Rafferty (n 15).

counts, all of which are said to be associated with a small dip in the atmospheric concentration of CO₂.³⁵

Another starting point (1943-63) is associated with the nuclear weapons testing, because residue from nuclear fallout during that time was spread across the globe. The fact that such residue was not present in rock layers laid down prior to 1945, made that starting point a very definitive marker for many geologists.³⁶ Anna Tsing suggests that the inflection point between the Holocene and the Anthropocene might be the wiping out of most of the refugia from which diverse species assemblages can be reconstituted after major events.³⁷ Finally, the argument of philosophers Clive Hamilton and Jacques Grinevald is that the Anthropocene concept would not have been possible without the emergence of Earth System science in the 1980s and 1990s. This branch of science intends to be a way to understand the novel role of humankind in the Earth System, in a distinct way from the understanding in environmental science.

1.4. Alternative concepts

As previously seen, the term ‘Anthropocene’ is not the only one proposed to describe the current planetary transformation through human activity. Even after its dissemination among the scientific community, other alternatives have been proposed particularly from the domain of social sciences, trying to capture alternative narratives in the same vein. Donna Haraway³⁸ provides us with some proposals, asking for what we really want to define. The most daring is the term ‘Chtulucene,’ trying to describe the current epoch as “one in which the human and nonhuman are inextricably linked in tentacular practices.”³⁹

³⁵ Hamilton (n 24)

³⁶ Ibid.

³⁷ Anna Tsing, ‘Feral Biologies’ (2015), Anthropological Visions of Sustainable Futures’ Research Paper (University College London).

³⁸ Donna Haraway, ‘Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin’ (2015) 6 *Environmental Humanities* 159.

³⁹ *Cthulhu* is a deity devised by the author of fiction and terror Howard Phillips Lovecraft, whose mythology deals with strange beings called Great Old Ones who inhabited the Earth long before humanity appeared and their present attempts to recover it. Donna Haraway describes Cthulhu as “Lovecraft’s misogynist racial-nightmare monster Cthulhu” in “Anthropocene, Capitalocene...” p. p. 160. Vid. also Haraway. *Staying with the Trouble: Making Kin in the Chthulucene (Experimental Futures)*. (Duke University Press, 2016).

On the other hand, she discusses the terms ‘Anthropocene’ and ‘Capitalocene.’ The second term is also used and endorsed by Jason Moore to refer to a distinct geological epoch in which the capitalist formula is understood as a system of power, profit and reproduction in the web of life that begins in the era of Columbus.⁴⁰ For Moore, it captures the way through which capitalism organizes nature—“as a multispecies, situated, capitalist world-ecology.”⁴¹ For some anthropologists too, the term ‘Anthropocene’ is not precise, as far as refers to the humanity as a whole, when actually only small groups of people in the industrial countries are truly responsible for the environmental problems of Modernity. Instead of stimulating the urgently needed social and political change, the term obscures concrete responsibility by emphasizing intrinsic human qualities rather than choices resulting from established capitalist interests.⁴²

In relation to the effects of capital on the Earth System, but going even deeper, Justin McBrien reminds it is also a ‘Necrocene,’ a system that not only accumulates capital, but drives to the extinction of species, cultures, languages and peoples.⁴³ In fact, Moore is aware of this other term, and thinks there are evident relations between Capitalocene and Necrocene, between the creativity of capitalist development and its ‘deep’ exterminism, which would not be anthropogenic but capitalogenic.⁴⁴

It is also interesting another referenced term in Haraway’s commentary: ‘Plantationocene.’ In a recorded conversation for Ethnos at the University of Aarhus in October 2014, the participants collectively generated this name for the devastating transformation of diverse kinds of human-tended farms, pastures, and forests into extractive and enclosed plantations, relying on slave labour and other forms of exploitation. Scholars have long understood that the slave plantation system was the model and motor for the carbon-greedy machine-based factory system that is often cited as an inflection point for the Anthropocene.⁴⁵

⁴⁰ Jason W. Moore, ‘The Capitalocene, Part I: on the nature and origins of our ecological crisis’ (2017) 44 (3) *The Journal of Peasant Studies* 597.

⁴¹ Jason W. Moore. (Ed.) *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*. (Kairos - PM Press 2016).

⁴² Andreas Malm and Alf Hornborg, ‘The Geology of Mankind? A Critique of the Anthropocene Narrative’, (2014) 1 (1) *The Anthropocene Review* 62.

⁴³ Justin McBrien, ‘Accumulating extinction, Planetary Catastrophism in the Necrocene’. In J.W. Moore (Ed.) *Anthropocene or Capitalocene?* (Kairos - PM Press 2016).

⁴⁴ Moore (n 41).

⁴⁵ Haraway (n 38).

With irony, economist Kate Raworth tempted the nickname ‘Northropocene,’ as only five among 36 members of the AWG were based in countries outside of the OECD.⁴⁶ Actually, it seems to me a good reflection of the world in general, mainly dominated by the northern countries. The truth is that it has been a tiny fraction of humanity that has caused these profound changes. More specifically, a small group of western white men engaged first in the Industrial Revolution and then in the expansion of capitalism as global economic and productive system.⁴⁷ Following this speech, other terms illustrating that the transition to the new era has not involved all of humanity, could be ‘Industriocene’, ‘Europeocene’ or ‘Occidentalocene,’ considering that the profound changes over the planet Earth started with the Industrial Revolution in Europe in the 18th century, and culminated in the USA.

On another note, it also seems to be interesting the term ‘Manthropocene,’ coined by Raworth too. In a critique of the lack of women scientists in the Anthropocene Working Group—we will refer to it below—she complained about the fact that the intellectual deliberations about the Anthropocene were dominated by white northern male voices.⁴⁸ It also makes sense, because the gender perspective remains unarticulated in the discussions of the Anthropocene. In this vein, the term ‘Androcene’ would also make sense to me, trying to describe the patriarchal logic that dominates the world. However, both terms do not describe the present era, nor do they differentiate it, since the male-female hierarchy has always existed, or otherwise, it would be confusedly describing an era that would possibly go from the appearance of human species on Earth until, at the very least, the present day.

Terms as ‘Manthropocene’ or ‘Androcene’ prove to be unhelpful in operational terms, since they would consist at the end on the renaming of the Holocene. What I would like to discuss here is the exploration of the hierarchy male-female in the concrete context of the Anthropocene, conceived as the epoch from the Industrial Revolution onwards. It was then that new forms of domination over women emerged, consolidating through decades till now. The ‘Anthropocene’ could also be renamed ‘Patriarchocene,’ if one considers the low or no female participation in the implementation of this machine of deep changes. Women did not either promote the structure of female submission that made these

⁴⁶ Ibid.

⁴⁷ Alejandra Mancilla, ‘El mal llamado “Antropoceno”’ (*El ojo parcial*, 3 April 2016) <<https://eljojoparcial.wordpress.com/2016/04/03/el-mal-llamado-antropoceno/>> accessed 23 March 2019.

⁴⁸ Kate Raworth, ‘Must the Anthropocene be a Manthropocene?’ (2014) *The Guardian*.

changes possible—because of, for example, the limited access to education, the exclusion from political life, and the unpaid work as a mother, housewife and caregiver for most of our history.

The criticism that arises from these reflections, and that must be done to the Anthropocene term, is that from the prefix ‘anthropo-,’ it could be interpreted that the human being as a whole species is responsible for causing the changes and for taking the whole world towards dreaded destinations, yet still unknown.

In the end, in my opinion, the terms proposed by all these authors do not succeed to capture in one word all that Anthropocene implies, but symbolize a critique of some parameters of domination that are partly causing the Anthropocene itself, and partly remain unincorporated when constructing the argumentative discourse justifying this term. However, having considered all the proposals, I have decided to opt for the ‘Anthropocene.’ In so doing, I think that I am using a concept that encompasses most of the nuances implied by the different terms proposed.

The use of the term ‘Capitalocene,’ no matter how expanded the system may be, does not take into account that we also find, in other non-capitalist systems, forms of exploitation and domination of the human and animal species and of nature itself. It would be the case, for example, of countries with a planned economy as the former Union of Soviet Socialist Republics (Soviet Union). See that, without being a market economy, they were also dominated by the idea of development—with its five-year growth plans, the promotion of coal mining, oil, nuclear energy, heavy industries, the arms race... I suggest, then, that environmental degradation is not exclusively linked to the capitalist economic system, but can also be linked to other systems. This does not detract from the fact that capitalism is the dominant and prevailing system that is penetrating all corners of the world; for this reason, I consider vital to analyse this system as the main one, in the next section.

Moreover, there is a tendency to assume the false idea that all nations have monetary societies, oriented to the market. In the developed countries, all resources and activities are included in the mercantile sector, and more or less prices can be established. However, there are communities with production strategies for survival that exist outside the formal market.⁴⁹ Actually, although they are being aggressively influenced by the prevailing

⁴⁹ Jytte Nhanenge, *Ecofeminism. Towards Integrating the Concerns of Women, Poor People, and Nature into Development* (University Press of America 2011) 560.

capitalism, they have scant transformation capacity on the biophysical basis of social reproduction, but still are part of the humanity that must accommodate the changes.

On the other hand, capitalism does not encompass all paradigms of domination, which are also potential modifiers of the Earth System, such as nuclear races or constant flows of people all over the world, just as they modify humanity itself, such as hierarchies based on race or gender. We must remember that we are looking for a term that identifies the cause, but also includes the possibility of adaptation by overcoming the hegemonic model of capitalist social reproduction in the new geological era. The use of the term ‘Anthropocene’ offers us an integrative structure; it assimilates the current capitalist accumulation, the male/female hierarchy, the degradation of the planet and the rest of the domination forms and oppressive structures over society and the environment.

1.5. Consolidation of the Anthropocene as a comprehensive narrative of the present

As we have seen, there are still some debates regarding the exact starting point of this era, but it is not difficult to realize that we live in a world where human activity is the most important factor influencing the whole Earth System, understood as a unified, complex, evolving system beyond the sum of its parts. The planet is becoming increasingly dangerous, unpredictable, unstable and incompatible with human survival.⁵⁰ In any case, the breadth of proposals about a starting point should make us think—to people from several walks of life—about the various impacts that humans and their activities have had on the planet, actually since the existence of the human being. They involve irreversible and uncertain changes, and for this reason it does not only imply geological, but also social consequences.

This is the reason why all disciplines have come into play. It has much to do with social organization, economic, environmental and social policies and especially with law, as a discourse to organize society. If we are actually living in the Anthropocene, this would mean that human action is projected on a finite and vulnerable planet. Consequently, we are facing a civilizing crisis whose end is uncertain. This means also a global crisis of sustainability and justice, an era of looming ecological collapse and a growing economic inequality. The environmental crisis of the Anthropocene is deeply connected to

⁵⁰ Will Steffen et al, ‘Planetary Boundaries: Guiding Human Development on a Changing Planet’ (2015) 347 Science 1259855.

economic structures that have enabled the world's most affluent populations to consume a disproportionate share of the planet's resources, while relegating a vast percentage of humanity to evident poverty. 20 percent of the world's population consumes roughly 80 percent of the planet's resources and owns approximately 95 percent of the planet's wealth. As inequality grows and the environment deteriorates, billions of people struggle to satisfy basic human needs.⁵¹

In this context, the narrative of the Anthropocene, which conceives the biophysical basis of social reproduction as the result of anthropic action, raises the question of sustainability, which also implies a new look at ethics and, consequently, at law.⁵² Law has already begun to project itself in the interface between society and nature, addressing the technological risks in the context of the environmental crisis. However, it is necessary to go further, since the narrative of the Anthropocene demands a panoramic conception of the social response in this scenario. Therefore, the building of a constitutional matrix will be particularly crucial, which allows to open ways to articulate the transition, to the extent that the constitutional language is articulated as the core of law.⁵³ Considering this, it seems imminent and reasonable to go to the fundamentals of the problem, to design this new constitutional basis, capable to suit to the situation of contemporary humanity, defined by the Anthropocene's discourse.

In my opinion, besides the conceptual discussion previously presented, a much more arduous and complicated task is to make the consequences of the Anthropocene as short as possible. It is only possible by changing the direction that things have taken, through the cooperation of all global and local institutions and social groups to come up with solutions, or at least, beginning with mitigation measures. In essence, the task will be to define the normative structure of a city that has become global. Previously a more comprehensive description of the Anthropocene as a result of certain social processes is needed. This will be addressed in the following section.

⁵¹ Carmen G. González. 'Global Justice in Anthropocene', Ch 10. *Environmental Law and Governance for the Anthropocene* (Louis Kotzé, ed.) Hart Publishing 2017 <https://www.academia.edu/Global_Justice...> accessed 12 January 2019.

⁵² José Eduardo De Siqueira, 'El principio Responsabilidad de Hans Jonas' (2009) 3(2) *Bioethikos* 171, in Jaria i Manzano (n 7).

⁵³ Jaria i Manzano (n 7).

2. THE ANTHROPOCENE AS A PARADIGM OF DOMINATION

As it pointed out by some scholars, the Anthropocene qualitatively differs from previous eras in Earth's history in three key characteristics.⁵⁴ The first is that there is planetary-scale human agency. The second would be that there are social and economic networks of teleconnections spanning the globe. Thirdly, it is dominated by planetary-scale socioecological feedbacks. The contribution to these three basic features by the capitalist system seems to be clear. Apparently, the description and study of this new geological era does not seem to be approached adequately through the union of old concepts and methods. We need instead a new paradigm in Earth System science that is based on a deep understanding of the physical and biological Earth System, and on the economic, social and cultural forces that are now an intrinsic part of it. Now seems the right time to change the mentality and hegemonic conceptions, to rethink the analysis and models that let us study the whole Earth System.

2.1. Capitalism as a pattern of domination

To begin this section, we must start from describing the hegemonic system of social reproduction, i.e. the capitalist world-system.⁵⁵ There is no doubt that capitalism has been the most significant social process contributing to cause the transition to the Anthropocene, although, as we have seen previously, this has not been the only form of human domination on planet Earth.

We should first admit that the pre-industrial human communities would have had relevant impacts on ecosystems. However, they did not have enough population, adequate technology, or appropriate socio-economic organization to produce changes of global magnitude. In recent times, instead, the increasing consumption of planetary resources in a finite context leads to a human occupation of the Earth System and determines its

⁵⁴ Jonathan F Donges, Ricarda Winkelmann, Wolfgang Lucht, Sarah E Cornell, James G Dyke, Johan Rockström, Jobst Heitzig and Hans Joachim Schellnhuber, 'Closing the loop: Reconnecting human dynamics to Earth System science' (2017) 4(2) *The Anthropocene Review* 151.

⁵⁵ The *World-systems approach* has a multidisciplinary perspective; it is a macro-scale approach to world history and social change and emphasizes the world-system as the primary unit of social analysis. The world-system divides work at the interregional and transnational level, while distinguishing between core, semi-peripheral and peripheral countries. Immanuel Wallerstein developed the best-known version of world-system analysis from the 1970s onwards. Especially: Immanuel Wallerstein. *The Modern World-System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century* (Academic Press 1976)

configuration, and in this way, we can speak of a new phase of social life, as well as a geological era. Thus, the biophysical basis of social reproduction is shaped by processes that transform it.⁵⁶

In its first phase, the mercantile one, the capitalist-world economy developed through the construction of national markets. Born in the West in the late Middle Ages, primarily in parts of Europe and the Americas, it was progressively expanding, incorporating all the geographical areas of the planet. During the 19th century, in its industrial phase, this capitalism grew in the context of the Industrial Revolution. This entailed a systematic exploitation of nature, the standardized production of products and the progressive distancing between the centers of production and those of consumption.⁵⁷ At the same time, it produced an extension of the use of technologies derived from the Scientific Revolution. This represented a qualitative leap in the use of fossil energy by human beings, and progressively marked the transition to a new paradigm in the processes of transformation of the Earth System.

However, the progressive exhaustion of the consumption capacity of the system generated the need to move towards the financialization of the economy.⁵⁸ The economic difficulties faced by governments everywhere from the 1970s onward, made it extremely difficult to resist the pressures for ‘structural adjustment’ and opening frontiers.⁵⁹ As a result, the rolling back of the costs of production was achieved, but far below what was necessary to end the squeeze on profits. More and more, capitalists sought profits in the arena of financial speculation rather than in the arena of production. Such financial manipulations have resulted in great profits for some players, but it has rendered the world-economy very volatile and subjected to swings of currencies and of employment.

At present, we live in the so-called ‘late capitalism,’ in reference to modern capitalism from World War II onwards. This third phase, the financial one, has involved a transition from productive capitalism and industrial base to the domination of financial capital. In this late phase, transnational corporations have taken advantage of the situation, by

⁵⁶ De Siqueira (n 52).

⁵⁷ Max Weber. ‘El origen del capitalismo moderno’, in *Historia económica general* (Fondo de cultura económica 1978).

⁵⁸ Jaria i Manzano (n 7).

⁵⁹ Immanuel Wallerstein. *World-systems analysis. An Introduction*. (3rd edn, Duke University Press 2005).

acquiring a series of competitive advantages that allow them to grow, act beyond the control of states and maximize their social and planetary impact.

Be that as it may, in its different phases, capitalism has removed the planet and even provoked a change of era. In the last two centuries, we have moved from a species that adapted to the environment and defended itself against the threats of nature, to a living being that defines its own conditions of existence in the Earth System.⁶⁰ The next question, then, would be how far can human beings go. Or better: How far does humanity's dominating power go? Perhaps this is the kit of the matter, but first we must return to the analysis of the predatory capitalist expansion.

For Wallerstein, "it is and has always been a *world-economy*. It is and has always been a *capitalist world-economy*."⁶¹ A world-economy is a large geographic zone where there is a division of labour and hence significant internal exchange of basic or essential goods as well as flows of capital and labour. The capitalist system develops itself in the context of a world-economy, since it requires a very special relationship between economic producers and the holders of political power. Capitalists need a large market, but they also need a multiplicity of states, so that they can gain the advantages of working with states but also can circumvent states hostile to their interests in favour of states friendly to their interests.⁶² That efficacy would be a function of the constantly expanding wealth that a capitalist system provides. This capitalism recognizes the right to free economic activity and economic exchange based on private property and the market, through competition.

Capitalism is technology-dependent. Technology has become a fundamental instrument to appropriate, own and patent all the goods. The important dependency on technologies for the successful accumulation of capital fosters the development of technology at a very rapid pace. The coercive laws of competition allow, by employing a new technology, the reduction of the production's costs and the increase on production speed. Therefore, it enables a competitive advantage over the other capitalists, which results into a greater profit for the first ones. As they adopt the same technology, others will even develop a newer technology that gives them an advantage. And so it goes, at an ever accelerating

⁶⁰ Ibid.

⁶¹ Wallerstein (n 59).

⁶² Ibid.

pace, until the pace of the development of new technologies is slowed due to an overabundance of commodities relative to the demand.⁶³

Late capitalism is based on both industrial products and financial products, with its own risks. Mass production requires investment in buildings, machinery, raw materials, fuel and labour. But an additional way of making money, the speculation, allows buying real estate, construction contracts, oil, crops, stocks, bonds, currencies, etc.⁶⁴ In both areas, labour-power itself becomes a commodity; and the means of production are owned by a few people, the capitalists, who dominate the social order. The masses do not own the means of production; they produce the wealth of the regime, but the richness is appropriated by a minority.⁶⁵

Be that as it may, even today, late capitalism still needs labour to survive. And who better than these masses to perform this diversified function, to produce the wealth of the system? Corporations follow a distribution law according to their own size, whose capital is concentrated in the same way. A large number of small capitals exploit a small group of workers, and a small number of large capitals exploit a large group of workers.⁶⁶ The benefits are usually proportional to the number of workers employed. Therefore, the more workers exploited, the more profits they make. The more profits they make, the more workers they can exploit.⁶⁷

This is the world most people still live in, big landlords as well as subsistence farmers in villages, corporate executives as well as labourers in sweatshops in major cities, well-paid professionals as well as informal workers in tourist sites, well-off workers as well as desperate migrants, in transit in the hope of better lives.⁶⁸ Inequality consequently remains alive, as there is no control over capital accumulation. The fundamental social architecture of capitalism is the main cause of economic inequality, so there is no

⁶³ Jorge E. Viñuales, 'Law and the Anthropocene' (2016) C-EENRG Working Paper 2016-5, 8.

⁶⁴ L. Harry Gould, *Marxist Glossary* (2nd edition, New Outlook Publishers 2019).

⁶⁵ Ignasi Brunet Icart. *La construcción del capitalismo financiarizado* (Asociación Castellano Manchega de sociología- Fermín Caballero 2015).

⁶⁶ Michael Roberts, 'Desigualdad y explotación' (*Sin Permiso*, 13th April 2018) <<http://www.sinpermiso.info/printpdf/textos/desigualdad-y-explotacion>> accessed 10 January 2019.

⁶⁷ Ian Wright, 'The social architecture of capitalism' (*From here to there, Ian Wright Site*, 16 November 2017) <<https://ianwrightsite.wordpress.com/2017/11/16/the-social-architecture-of-capitalism/>> accessed 22 April 2019.

⁶⁸ Leslie Sklair, 'Globalization: Capitalism and Its Alternatives' (2002) *Frontiers of Globalization Research*.

capitalism without inequality: it is an unavoidable and necessary consequence of the rules of the system.⁶⁹

The concentration of capital is global in the current phase of capitalist accumulation. It seems clear that transnational companies are a fundamental engine of globalization, and that on all sides they are pushing for freedom of trade and movement of capital. Never have so few companies had so much power: it is the era of the great business empires, the also called oligopolies.⁷⁰ It is intuited then, that the basis of this impulse has been the great units of capital. In fact, according to the classification of the non-governmental organization Global Justice Now published in 2017, which compared the turnover of the main corporations with the budgetary income of the countries, 69 of the 100 main economic entities were corporations. The 25 corporations that billed the most exceeded the GDP of many countries. What's more, the 10 largest corporations earned more money than the 180 poorest countries in the world combined. The list included within these "poor" countries: Ireland, Indonesia, Israel, Colombia, Greece, South Africa, Iraq and Vietnam.⁷¹

Parallel to this paradox, there has been a crisis in the traditional categories of ownership of goods (collective vs. private). It seems that the classical conception of ownership defined by the European matrix legal culture may be structurally inadequate to respond to the social challenges of the Anthropocene, by configuring the dominion over a specific good as the conceptual centre of the system of attribution of responsibilities over the biosphere.⁷² In this sense, we should distinguish between the goods of all—the public goods—and the common goods, which would not belong to anyone and over which there would be no relation of dominion, but, in the context of the Anthropocene, obligation of care.

In this context of global expansion of capitalism, the local political systems are under dominance of plutocratic dynamics. Consequently, representative democracy turns into low-intensity democracy, where the market ends up being the real decision-maker. The great dilemma lurks the world of politics: on the one hand, the massive combustion of

⁶⁹ Wright (n 67).

⁷⁰ David Fernández, 'La amenaza de los oligopolios mundiales' (2016) *El País*.

⁷¹ '10 biggest corporations make more money than most countries in the world combined' (*Global Justice Now*, 12 September, 2016) < > accessed 22 March 2019.

⁷² Jaria i Manzano (n 7)

fossil fuels cannot continue. However, they themselves discover that the societies and policies to which they are accustomed, and that they hope to continue promoting, are inextricably based on fossil energy.⁷³ We are therefore today facing a scenario of multiple crises (economic, ecological, energetic, democratic-institutional, etc.) that configure a major crisis of the model of civilization, the overcoming of which can only be conceived through a step forward into the design of a more just, less unequal society.

Regarding to inequalities, capitalism is a factory of hierarchies. Capitalism and social inequalities are complementary, because by fulfilling the objective of economic growth, poverty grows at the same time, as the paradigms of distribution of social wealth that govern the capitalist system, which reproduce and increase all social inequalities, remain unchanged. In fact, the Marxist theory sustained that inequality is inherent in the capitalist mode of production, inevitably produced during the normal operation of capitalist economies, and cannot be eradicated without fundamentally altering the mechanisms of capitalism.⁷⁴ Consequently, therefore, income inequality is necessary to produce the variety of labour needed by the various levels of a multitude of different economic activities.

As a natural outcome of this, labour inequalities rapidly creep and penetrate all parts of the public sphere, and also in the private. We are quite familiar with the worldwide hierarchies within the modern world-system: men over women, whites over blacks (or non-whites), adults over children (or the aged), educated over less educated, heterosexuals over the LGBTQ+ community, the bourgeois and professionals over workers, urbanites over rural dwellers...⁷⁵ Since polarization has been increasing over time, this is how the progeny of capitalism has grown, forming the family of the ‘-isms’ that describe all these forms of oppression: sexism, heterosexism, racism, ageism, academicism, and other hierarchical forms of ‘anti-universalism’ that have become ever more important.

One of the most primitive hierarchies in the history of human beings is patriarchy, which conceives and forks the dualism man-woman. While patriarchy arose long before capitalism appeared, it is precisely with the emergence of the second that the sexual

⁷³ Alf Hornborg, *Nature, Society and Justice in the Anthropocene* (Cambridge University Press 2019).

⁷⁴ Richard Peet, ‘Inequality and poverty: a Marxist-Geographic theory’ (1975) 65 (4) *Annals of the Association of American Geographers* 564.

⁷⁵ Wallerstein (59).

division of labour was reinforced and deepened: work for the maintenance of life (reproductive or care work) attributed to women, and work for the production of livelihoods attributed to men. When surplus production appeared, the need for the accumulation of wealth arose, and the division of labour in the family served as the basis for distributing property between men and women.

Patriarchy in general and capitalism, as a particular form of patriarchy, deny women the access and control over internal and external economic resources, and they tolerate the invisibility of the domestic contribution or reproductive labour in macroeconomics. Under these conditions, women are exploited, just like men under the capitalist system, but with a differentiated impact. Domestic and care work allows the conditions of exploitation and overexploitation of the labour force to be maintained. As Engels argues, “The first-class opposition that appears in history coincides with the development of the antagonism between man and woman in monogamous marriage; and the first-class oppression, with that of the female sex by the male.”⁷⁶

As we have stated previously, patriarchal domination obviously has a premodern history—actually it is admitted that it could have been born in prehistory—however, it acquires an entirely new quality with the universalisation of commodity production.⁷⁷ Specifically, the sexual division of production consolidates in the Industrial Revolution, with a phenomenon of socialization of reproduction, characterized by social domination over the bodies of women, who will remain subjected to different oppressions by the mere fact of having the ability to give birth.

Capitalism is built on a patriarchal division of human activities, which associates value-creating work with masculinity (and with a series of socially masculinized values, such as efficiency, competitiveness, aggressiveness); while degrading and feminizing reproductive activities, which indirectly contribute to the reproduction of capital and are associated with a series of values considered feminine, such as caring, tenderness, affection or even irrationality.⁷⁸ Thus, capitalism appears as a specific patriarchy producer of goods that erects a complete civilizing project of masculine domination and has its

⁷⁶ Friedrich Engels. *El origen de la familia, la propiedad privada y el estado*. (Marxists Internet Archive 2017). Original version: *Der Ursprung der Familie, des Privateigentums und des Staats*, 1884.

⁷⁷ Roswitha Scholz, ‘Wert und Geschlechterverhältnis’ (*Exit*, February 1999) <<https://www.exit-online.org/textanz1.php?tabelle=autoren&index=21&posnr=37&backtext1=text1.php>> accessed 20 April 2019.

⁷⁸ *Ibid.*

condition of possibility in the oppression of women. It would not be a ballast of the past, but rather capitalism generated a new form of patriarchy that characterizes it.⁷⁹

Hence late capitalism consolidates itself as a system of social reproduction and defines the narrative of the transition to the Anthropocene: in a panorama of infinite inequalities, starting from the oppressive man-woman hierarchy, in which, mainly, it is the white, western, rich and middle-aged man who ends up showing the power, with the unconditional support of the institutional mechanisms that allow the increase of social metabolism. Particularly, the nation-state stands as the main institution with a structure that allows the deployment of the process of capitalist accumulation, provided that it facilitates the conditions of exchange through the establishment of homogeneous rules and coercive institutions guaranteeing the appropriation of nature, the distribution of resources obtained in accordance with certain power relations, and the allocation of externalities within the framework of an emerging internal market.⁸⁰

2.2. Global Core vs. Global Periphery

In its beginnings, the capitalist world-economy developed through national markets, where the core was the city, and the field became the periphery. Subsequently, colonial empires were formed, propelling unequal exchange, leaving evident sequels, and culminating with the contemporary globalization.⁸¹ If one thing can be stated today, is that globalization and the crossing of borders are not signs of equality; an essential feature of the capitalist world-economy is the core-periphery duality on a planetary scale.⁸² There

⁷⁹ Facundo Nahuel Martín, 'El capitalismo como patriarcado productor de mercancías' (*Viento sur*, 1st December 2015) <<https://vientosur.info/spip.php?article10742>> accessed 20 April 2019.

⁸⁰ Jaria i Manzano (n 7).

⁸¹ Nicolas Ridoux, *Menos es más. Introducción a la filosofía del decrecimiento* (Spanish edition of Joana Mercader, Los libros del lince 2009). In *Ibid*.

⁸² Capitalist theories, depending on the place where they were developed, have different perspectives, with disseminating aspirations, depending on the political, social and cultural systems that sustain its environment. Even though, when analyzing capitalism, some studies distinguish between the North and the South, these are not entirely true, since the geographical delimitation that the rich and poor countries try to show is not real but partially real. In the South there are rich countries, and in the North poor countries, and in addition, poverty and richness are lived by people from both hemispheres. Therefore, in this work we have opted for the *Core-Periphery theory*. In other words, the global core means the industrialized countries, consumers, and the global periphery would include those around capitalism, who produce and provide for the core. These two categories are not but an existing proposal for study, developed by the Latin American structuralist school. Its main exponent was ECLAC (Economic Commission for Latin America), which had a great influence on the thinking of its members, especially on the Argentine economist Raul Prébisch.

is still a division of the economic and political systems, which create dependence between the industrialized countries, in the core, and the countries that we locate in the periphery, predominantly devoted to production of raw materials.

Greater capital-intensive production is concentrated in the central or core countries, and the rest of the world has a production based on intensive labour and extraction of raw materials, which reinforces the dominance of the dualistic hierarchy of the global system. This produces an unequal worldwide distribution according to certain systems of division of labour, leading to social and spatial economic inequalities. While core countries have strong state institutions, important military equipment, powerful global political alliances, good education and wealth, periphery countries receive a disproportionately small share of global wealth. Some obstacles that periphery countries usually encounter are lack of technology, unstable governments, poor education and health systems. In addition, the traditional asymmetries in power relations have been aggravated, under the pressure of the growing control of the transnationals over resources, services, conditions and relations, until the generation of an emergent immaterial economy.⁸³

The transformation of natural resources into capital requires extractive policies, and consequently, it allows the inevitable creation of certain power structures and inequalities. From my point of view, there are three facts that legitimize this unequal distribution of natural resources between core and periphery. First, the fact that nature is not evenly distributed on planet earth. Secondly, that the fact some territories have many natural resources, is not directly linked to the possibilities of these territories to exploit them. Last but not least, that the capitalist global centre promotes the exclusion of different exchange relations that cannot be subsumed into hegemonic cultural patterns. This excludes, for instance, the framework of indigenous cultures, outside the prevailing system, and their ways of accessing the natural resources that are available to them. The outsourcing of costs makes it possible to conceal certain consequences of social metabolism, through the use and exploitation of some in favour of others, as well as the implementation of specific valuation practices and the exclusion of others.

In this scenario, then, the periphery and semi-periphery countries are subordinated to the core countries, in a structured hierarchy. This fact ends up constituting the causative and

⁸³ William I. Robinson. 'Capitalismo global: Reflexiones sobre un Nuevo Mundo'. (*Rebelión, artículos de William Robinson*, 5 July 2017). < <http://www.rebelion.org/noticias/2017/7/228765.pdf> > accessed 7 January 2019.

crucial element of the transition towards the Anthropocene. It is a dependency on which both live and mutually feed each other; there is a high economic and political dependence from the peripheral countries of the core countries, and at the same time, the core needs to buy—or extract—the raw materials. Inequality widens with trade: peripheral countries sell cheap raw materials and buy expensive processed products. At the same time, the concentration of investment and labour in extractive activities discourages other economic areas of dependent countries, impeding other necessary activities. I find important not to forget the enormous environmental impact that all this generates, whose repair is costly.

Moreover, the core-periphery duality causes the externalization of environmental costs. The structural imbalances of the capitalist world-economy come to the fore in numerous assumptions, manifesting, in each case, different cases of outsourcing of environmental costs.⁸⁴ Thus, for example, we can highlight the following models of externalization: the disproportionate occupation of the oceans and atmosphere by the core countries, the traffic of toxic waste to the global South, pollution resulting from extractive activities or land grabbing.⁸⁵ It should also be stressed that the inequities of the system, in relation to the appropriation of resources by hegemonic actors in the central economies, transcend the externalization of environmental costs, as shown by the case of the appropriation of the knowledge of peripheral communities, known as biopiracy.⁸⁶

In any case, it is necessary to bear in mind that unequal exchange is not disconnected from political (and legal) structures. The fact is that the hegemonic institutional framework actually facilitates core actors' access to natural resources on the periphery at a minimal cost, making the externalization of environmental damage a structural element of the system. In effect, institutional mechanisms legitimize the capitalist world-economy. In this transition towards the Anthropocene, a new perspective on the anthropic transformation of the Earth System is opened to us. In short, it can be concluded that inequality is the result of the economic structure as well as of institutional factors, to the extent that institutions establish and guarantee the effectiveness of the rules of the game, particularly those that determine the appropriation of resources and influence their

⁸⁴ Jaria i Manzano (n 7).

⁸⁵ Joan Martínez-Alier, 'Ecological debt and property rights on carbon sinks and reservoirs' (2002) 13(1) *Capitalism Nature Socialism* 115.

⁸⁶ *Ibid.*

distribution. Consequently, inequality, starting from the centre-periphery hierarchy of the capitalist world-system, can only increase in its evolution if the hegemonic system does not change.

A small portion of humanity has appropriated the planet Earth and devastated it to ensure a certain kind of welfare culturally biased, in detriment of a multitude of other beings, human and nonhuman, who pay day after day the consequences of this claim. The affluence of high-tech cannot possibly be universalized because it is based on a global division of labour that is oriented precisely to abysmal prices and wage differences between populations.⁸⁷ For instance, a significant chunk of humanity is not party to the fossil economy at all: hundreds of millions rely on charcoal, firewood or organic waste such as dung for all domestic purposes.⁸⁸

Thus, humanity as a whole is not the responsible for causing the Anthropocene, but mostly a system, a way of life, a way of conceiving the world and things. Furthermore, from the beginning of the ‘enclosures’ or fencing of the English open fields, in the beginnings of Western Modernity, followed by Europe and then the rest of the world, the conversion has not stopped. I refer myself to the conversion of part of our living environment into alienable, and the appropriation of goods: pastures, arable lands and forests, energy sources, water, subsoils, genetic resources, indigenous knowledge and techniques.

2.3. Capitalism and globalization

We live in a global world, created by capitalism as the hegemonic model of social reproduction, where money is the fundamental unit of measure of both consumption capacity and resource availability. Wealth is based on the capacity to produce and trade under the rules of the market. The capitalist economic structure depends on the appropriation of all the material goods of production, as property of free disposition for the companies.⁸⁹ The hallmark of this era is the emergence of an authentic transnational

⁸⁷ Malm and Hornborg (n 42).

⁸⁸ Ibid.

⁸⁹ Robinson (n 83).

capital, with the integration of the states and a large part of humanity in a globalized system of production, finance and services.⁹⁰

Actually, in terms of capital flows, state borders have almost completely disappeared and globalization seems irreversible.⁹¹ Nowadays, many important contemporary problems lurk on a large scale, however, they cannot be adequately studied at the level of nation-states. They must rather be theorized in globalised terms.⁹² Analytically, transnational practices operate in different spheres: economic, political, cultural and ideological, but also on the legal level, as we shall see soon.

In 1995, the World Trade Organization (WTO) was launched after many years of negotiation. It promotes neoliberal free trade policies among member nations and serves as a body for resolving trade disputes between nations. It must be recognized, however, that the WTO appeared at a time when information technologies and the deregulation of financial markets had already generated a global economic structure. In this sense, we must go back to the Bretton Woods agreements of 1944, with the creation of the World Bank and the International Monetary Fund (IMF). Today, the WTO operates in close concert with these two institutions and, together, they determine, govern, and implement global trade and development.⁹³

Nowadays, economics is concerned with money and market prices, and does not need to consider nature; no nation on Earth escapes this.⁹⁴ Therefore, money has become the highest authority, the maximum governor. Its creators, human beings, have ended up falling prisoners of their own invention, becoming their own subjects. I allow myself to insist on this. Perhaps we have not paid enough attention, in the narrative of the Anthropocene, to the most powerful and transforming artefact of our capacities as human beings, namely money.

General-purpose money is almost universally taken for granted; it is not seen as something about which we have a choice. Many nation-states have tried to stop the

⁹⁰ David Held, Anthony McGrew. 'Globalización/Antiglobalización. Sobre la reconstrucción del orden mundial' (2004) 24 (1) Revista de ciencia política 237.

⁹¹ Sklair (n 68).

⁹² Ibid.

⁹³ Nicki Lisa Cole, 'The Globalization of Capitalism. The Rise of Capitalism's Fourth Epoch' (2017) Social Sciences. ThoughtCo < <https://www.thoughtco.com/globalization-of-capitalism-3026076>> accessed 9 January 2019.

⁹⁴ Hornborg (n 73).

damage of money within their borders. Nonetheless, they themselves have realized that globalization is an indispensable source of growth, despite encouraging maximum efficiency through low wages and little respect for the environment. Economic inequalities and the degradation of the environment derive from the increasingly global reach of the logic of money. However, the final challenge of the Anthropocene is to foresee a social system where the inertia of money is not the protagonist.⁹⁵

Furthermore, in this epoch of global capitalism, neoliberal trade policies and free trade agreements have allowed consuming nations—through money—access to an incredible variety and quantity of affordable goods, even, in many cases, creating needs we never really had. But they have also produced unprecedented levels of wealth accumulation for corporations and those who run them.⁹⁶ These processes of accumulation are complex, globally dispersed and generally unregulated. This creates job insecurity for millions of people, who become flexible labour. Neoliberal trade and development policies also wreak havoc on developing countries and crush their debts.

While it is true that there may be individuals, groups, institutions and even entire communities that can thrive outside the orbit of the global capitalist system, it seems to be getting harder as capitalist globalization penetrates ever wider and deeper. The building blocks of global system theory are the transnational corporation, the institutional form characteristic of transnational economic practices, a transnational capitalist class still evolving in the political sphere, and in the sphere of culture-ideology, the culture-ideology of consumerism,⁹⁷ since even though existing anti-consumerist elements in most societies, there are few cases of a serious anti-consumerist party winning political power anywhere in the world.⁹⁸

On the other hand, it should be noted that modern capitalism is presented in a homogeneous way, without featuring significant differences between states, and that is the reason why it is no longer useful to concentrate within the nation-states. To some extent, the same patterns of consumption and production can be found in Europe, the United States or China. In large part, this uniformity is due to the idea of hegemonic law,

⁹⁵ Following Hornborg's line. *Ibid.*

⁹⁶ *Ibid.*

⁹⁷ Sklair (n 68).

⁹⁸ *Ibid.*

consolidated in the course of the evolution of the institutional structure of the capitalist world-economy. A global legal homogenization has been attempted, excluding other approximations of law, such as those customs, principles and traditions of different peoples around the world that are no longer useful for its expansion and settlement throughout the entire planet. Consequently, the spaces of social, cultural and juridical exchange have been reduced, leaving only space for the hegemonic world-system.

In a certain way, the patterns that already dominated within the European nation-states have been applied over the world. Particularly, I must refer to patterns like the primacy of the individual subject, possessive individualism, competitiveness, contractualism... and also, the idea of holding total control over nature. This imitation and consequent unification of patterns, on the one hand, has contributed to the promotion of an exploitation process of natural resources, which has carried the ecological debt and an ever-increasing industrialization. In short, it has generated the environmental crisis. On the other hand, it has been excluding other conceptions of law, society and nature in the non-western cultures. Furthermore, we cannot forget that, in many of the countries colonized by Europe, the ideas of individualism, property and growth penetrated pretty fast. This implied the incorporation of the colonized societies and its natural resources into the process of capitalist homogenization.

Along with the impressive changes in information and communication technologies and digital-based devices, certain products can circulate simultaneously, and very rapidly in several countries and even in several world regions simultaneously. The strategies of design and promotion of the consumption of the products become increasingly sophisticated and complex, because not only do they have to compete with other products of a different or similar nature for the colonization of certain market segments, but they have to constantly adapt their products to multiple reference sources. That causes the loss or weakening of the unique and particular features of people and human groups such as language, their practices and behaviours, their elements of symbolic representation and the construction of social identities, and especially, their legal culture. It is true: the threat of the uniformity of the world is opposed to the paradigm of recognition of cultural diversity.⁹⁹

⁹⁹ Tulio Hernández, 'Cultura i globalització, diversitat i homogeneïtzació', Universitat Oberta de Catalunya. <<http://cv.uoc.edu/annotation...>> accessed 26 March 2019.

Definitely, it cannot be questioned that capitalism is deeply rooted in many parts of the world. This system drags the masses. The tools to convince and cover the intentions behind them are powerful. Progressively, the same social metabolism shifts everything that seems useless and becomes too apprehensive to plurality to tolerate other cultures or species. In addition, in a global market context, the need for standardization becomes intrinsic. From my point of view, the consequences of the global system do not differ either, since a model of cultural and biological homogenization generates the loss of knowledge and biodiversity, ecological debt, poverty, violation of human rights, etc.

The homogenization should make us reflect on another point: its consequences in the legal sphere. As Max Weber explains, capitalism is only possible within the rational state, one that relies on a specialized bureaucracy and a rational law, which “can be calculated like a machine.”¹⁰⁰ Today, and in almost any state, everything can be attributed a value. Thus, a homogeneous capitalism has generated a uniform constitutionalism and the consequent elaboration of norms that are little differentiated. This is causing the transformation of societies towards the same direction, as well as the disappearance of juridical and therefore cultural pluralism.

2.4. The construction of the subject

By addressing the cultural foundations of the capitalist world-economy, we must start from the premise of the hegemonic political community: the concept of the individual. It is configured as a fundamental element of society; he is a rational and autonomous subject. This allows the incorporation of an individual perspective on the world and overcoming the conception of community. Consequently, those community realities that do not turn around the individual (such as indigenous peoples) are denied. And thus, a social homogenization is legitimized on the basis of a set of individuals, promoting the rupture of traditional ties and allowing the mobility of both capital and labour. In fact, it promotes the emancipation of the community and the well-being of the individual, conceived in terms of appropriation of resources as the justification element of the community itself. Or, to put it bluntly, possessive individualism becomes central.

¹⁰⁰ Weber (n 57).

The dominant legal and economic ideas in most of the world are white, bourgeois and masculine, and they are what, in my opinion, are accelerating the Anthropocene. These ideas are characterized by abusive appropriation practices and the concentration of power. The so-called possessive individualism believes in an unlimited and controllable nature as a basis. Nature is capable of indefinitely satisfying what we can call the “bourgeois ethos,”¹⁰¹ prone to the white, male and wealthy cultural pattern. Because above all, what defines the welfare of the rich white man is abundance, in all senses, through the accumulation of resources.

The first report sponsored by the Club of Rome in 1972 showed that there were natural and environmental barriers to the spread of industrialism and mass consumption that should not be ignored if the future of social life on our planet was to be preserved. Since then, paradoxically, the prevailing consumerist ideology has redoubled the promotion of possessive individualism, which reduces citizen relations in our democracies to a personal and interested calculation. Such practices point institutionally to the annihilation of the social model based on the Welfare State that, for many people, implied an authentic civilizing milestone of the 20th century in Europe.¹⁰²

In this context, the paradigm of rights is intended to be universal and makes possible to maintain confidence in development, since it incorporates utopian elements, promising that in the future everything will be better. Law, then, feeds back this possessive individualism, by consolidating the basic elements of the axiological nucleus of law, namely, the constitutional foundations. Simultaneously, money, as an instrument at the service of the mercantile capitalism, favours this unlimited accumulation of resources, where it is never too much.

Just like we were saying, the capitalist model is focused on the individual as the main subject and superior to the group.¹⁰³ Especially in the West, the value is given to concepts as individual freedom, choice, self-realization, property... Ideology focuses on quantitative elements and individual competition, above social cooperation. The separation of the state and the economy is not casual, but a premise that capitalism is

¹⁰¹ Jaria i Manzano (n 7).

¹⁰² Luis Moreno and Daniele Conversi, ‘Modelo social y límites al crecimiento en el antropoceno’ (2017) 12 *Eunomía* 310.

¹⁰³ Following the line of Richard M Salsman, ‘Individual Rights and the Essential Nature of Capitalism’ (*Capitalism Magazine*, 22th December 1999) <<https://www.capitalismmagazine.com/1999/12/individual-rights-and-the-essential-nature-of-capitalism/>> accessed 20th April 2019.

based upon: the doctrine of individual rights. It recognizes that each and every person is the owner of his own life, and has the right to live his life in any manner he chooses as long as he does not violate the rights of others.¹⁰⁴ This individual exaltation to the highest summit is the mechanism that capitalist society uses to exacerbate and maximize individualism in people.¹⁰⁵

The vast majority of people in the world, rich or poor, men or women, black or white, young or old, able or disabled, educated or uneducated, secular or religious... see that generic globalization could serve their own best interests, even if, in a system dominated by capitalist globalization, it is not necessarily serving their best interests at present.¹⁰⁶ Individual freedom seems to be above all and justifies means that, in my opinion, border on selfishness and collide with other individuals' freedoms. Given this, we face the challenge of redefining our individual and collective freedom. Although in the prevailing world-system, there is a tension between private and collective property rights in the appropriation of land and its resources, the private does not exist without a collective form of ownership, and the legal regulation of the first always has implications for the second. Private property cannot exist outside the collective and is always limited in very specific ways by that fact.¹⁰⁷

Moreover, the contemporary hegemonic model, based on certain power relations and hierarchies, generates a social metabolism where the relationship between society and nature is understood only in terms of exploitation of natural resources,¹⁰⁸ through their manipulation and transformation into capital, capable of satisfying human needs. This would only imply subsistence (food and supplies), protection or jobs, but not affection, understanding, participation, creation, leisure or identity, which, like Max-Neef proposes, should also be considered basic human needs.¹⁰⁹

¹⁰⁴ 'Capitalism: Frequently Asked Questions' (*Harper College*) <<http://www2.harpercollege.edu/mhealy/eco211f/lectures/captism...>> accessed 20th April 2019.

¹⁰⁵ Henry Rosemont Jr, 'Capitalist Ideology And The Myth Of The Individual Self, Part 1: Competing Autonomous Individual Agents' (2016) *Huffpost*.

¹⁰⁶ Sklair (n 68).

¹⁰⁷ Celia Deane-Drummond, Sigurd Bergmann and Markus Vogt, *Religion in the anthropocene* (Foreword by Heinrich Bedford Strohm, Cascade books, 2017).

¹⁰⁸ Weber (n 57).

¹⁰⁹ Manfred Max-Neef, *Human Scale Development: An Option for the Future* (The Apex Press 1991).

Max-Neef identified nine basic human needs and linked them with its own *satisfiers*¹¹⁰: subsistence (health, food, lodging, clothing), protection (attention, solidarity, work), affection (self-esteem, love, attention, solidarity), understanding (critical conscience, knowledge, analysis), participation (affiliation to organizations, cooperation, responsibilities, work), idleness (curiosity, imagination, sense of humour, recklessness), creation (skills, interpretation, intuition), identity (sense of belonging, differentiation) and freedom (autonomy, self-determination, passion). The ways and means to achieve these human needs would vary depending on the culture, the region and the historical conditions.

However, the predominant satisfiers are those of industrial capitalism, conditioned by the production of economic goods together with the system to distribute them. In developed societies, the nine needs are covered almost exclusively through the market. Nonetheless, many times it is not about satisfiers, but ‘pseudosatisfiers,’ that in the long run do not offer any satisfaction. For example, in industrialized societies where self-esteem has been related to physical appearance, the purchase of new clothing or cosmetics, it often does not end up satisfying this self-esteem. Neither does the manufacture of weapons end up providing protection or freedom. And, generally speaking, the number of goods acquired is neither a reflection nor a proportion—direct or indirect—of the happiness that all people aspire to.

Moreover, under the promise of satisfying the needs we allegedly have as quickly and as much as possible, nature becomes a set of natural resources that feed the capitalist social metabolism. This allows a progressive, or better said, vertiginous, economic growth, with no regard for the environment, which promotes the massive consumption of goods and services, consolidates the predatory and unsustainable dynamics, and actually causes deficits of sustainability and inequity that threaten the well-being that is said to be pursued.

¹¹⁰ *Satisfier*: it is necessary to understand it as every good of consumption that covers needs for the human being. They are the material elements that make life easier. In economics, we talk about satisfiers whenever there is a need to comply, and may be the most basic needs (water, air, food) and additional (housing, clothing).

2.5. Endless accumulation of capital?

The socio-economic system that has colonized the entire world and caused the geological transition depends on the assumption of an endless growth and accumulation of capital. Indeed, we tend to believe in the inevitability of economic growth till something that approaches a religion. It is unquestionable and absolutely expected.¹¹¹ However, this assumption is fallacious and in addition, the imperative for continued growth is the foundation for current and continued deteriorating indicators of social and ecological well-being. Endless accumulation of capital means that people and corporations are accumulating capital in order to accumulate still more capital, a process that is continual and endless.¹¹² By saying that a system ‘gives priority’ to this endless accumulation, I mean that there exist structural mechanisms by which those who act with other motivations—like those living in a subsistence economy or other forms of life that do not involve consuming more than they really need—are penalized in some way, and are eventually eliminated from the social scene. Meanwhile, those who act with the appropriate motivations are rewarded and, if successful, enriched.¹¹³

The past two hundred years have been shaped by relations privileging the endless accumulation of capital; the impulse towards environmental unsustainability on the part of capitalism can be seen as already inherent in the organization of labour aimed at unlimited accumulation. Certain elements of the Earth System are appropriated and deteriorated for the sake of promoting their exploitation, in order to provide resources for a growing social metabolism, with which there is a serious lack in the sense of biological accounting. The capitalist economic system imposes, as a guiding principle, the unlimited market and expansive growth, incompatible with sustainability. This principle must be understood here in a broad way, as the ability to reproduce indefinitely the conditions that allow the continuity of life in the Earth System and, in particular, the survival of the human species in accordance with minimum parameters of dignity.¹¹⁴

The internationally accepted system for presenting the economic accounting of a state, the so-called Gross Domestic Product (GDP), correctly evaluates the deterioration of the

¹¹¹ William Strauss, *The Myth of Endless Growth: Exposing Capitalism's Insustainability* (Lulu Press 2010).

¹¹² Wallerstein (n 59).

¹¹³ Ibid.

¹¹⁴ Jaria i Manzano (n 7).

factories, but does not consider the deterioration of natural capital, as is the case of soil loss due to erosion, the destruction of the forests by acid rain or the reduction of the ozone layer.¹¹⁵ However, ecological sustainability imposes limitations on future economic growth, which actually implies a restriction of the very existence of capitalism. As a result, capitalism and sustainability are mutually exclusive.

The categories of ‘society’ and ‘nature’ conform a relevant dualism in the Anthropocene—society without nature, nature without humans—but also are part of the problem, intellectually and politically. Nature/Society dualism is directly implicated in the modern world’s colossal violence, inequality, and oppression. In this line, capitalism rests upon an audacious accumulation strategy: what Moore calls “Cheap Nature.”¹¹⁶ For capitalism, nature is “cheap” in a double sense: to make nature’s elements “cheap” in price; and also to *cheapen*, to degrade or to render inferior in an ethico-political sense, the better to make nature cheap in price. These two senses would have been entwined in every major capitalist transformation of the past five centuries.

In this context, the Anthropocene’s narrative shows this Nature/Society dualism at its highest stage of development, where society depends on its own action at a global level to maintain the physical conditions of its existence. Therefore, it must be weighed how society should operate to guarantee its sustainability, which is also the one of its biophysical basis. Now that the environmental crisis is more than confirmed, the narrative of the Anthropocene defines an appropriate framework to formulate the concern for sustainability. At the same time, a global challenge is posed, which forces us to rethink the legal ideas received, particularly in the field of public law.

Because, by hook or by crook, in this interaction between society and nature, law plays a disciplinary role, as an institutional mechanism. However, the account of the Anthropocene demands a panoramic conception of the social response, in which the construction of a constitutional matrix is crucial, that allows to open ways to articulate the transition. Because, indeed, constitutional law plays an important role, in the measure that the constitutional language is articulated as the core of law, as we will see next.

¹¹⁵ De Siqueira (n 52)

¹¹⁶ Moore (n 41).

3. LAW IN THE ANTHROPOCENE

After establishing an operational concept of the Anthropocene and describing the social processes that have caused it, we need to address the legal challenges that must be faced in this new era, being law our field of research. The hypothesis that the main cause of this geological transition is the growth of global social metabolism, promoted by the capitalist-world economy, is the strongest one, given the links between economic evolution and geological transition, as explained in the previous section. In this context, law plays a fundamental role, as the institutional system that allows the developing of capitalism as the hegemonic social system at a global level. However, first, we ought to see the impact of the narrative of the Anthropocene in the legal discourse, accepting the fundamental role of law as a regulating framework of social metabolism.

3.1. The impact of the Anthropocene's narrative into the concept of law

We could say that law serves capitalism—the social dynamic that causes the Anthropocene — providing it the necessary legitimacy, care and power to consolidate itself. In the same way, it seems clear that the interpretative discourse of reality that defends we have entered the new era of the Anthropocene, impacts on the hegemonic ideas we have received of law. The proposal of the Anthropocene is consolidating as a comprehensive narrative of the present,¹¹⁷ and this implies fundamental challenges in the organization of human societies, including an impact on the very concept of law, as the most recent literature shows.¹¹⁸ From now on, this is what I am going to call the law in the Anthropocene. In this first subsection, I will expose the incidence that the Anthropocene's narrative has on the concept of law and, in the same way, the influence this discourse can have on an eventual reconstruction of law. Subsequently, in the following subsection, I will explain how law itself, as an institutional system, allows and contributes to the capitalist social metabolism that is mainly characterizing the Anthropocene.

¹¹⁷ Ibid.

¹¹⁸ For instance: Eric Biber. 'Law in the Anthropocene Epoch' (2017), 106 *Geo. L. J.* 1; Yayo Herrero, 'Organizar la vida en común en el Antropoceno – Por una nueva constitución' (2018) 196 *Revista Contexto (ctxt)*; Nicholas A. Robinson, 'Fundamental Principles of Law for the Anthropocene?' (2014) 44 *Envtl. Pol'y & L.* 13; Teresa Vicente Giménez (Ed), *Justicia Ecológica en la era del Antropoceno* (1st. edition, Trotta, 2016); Davor Vidas, et al., 'International law for the Anthropocene? Shifting perspectives in regulation of the oceans, environment and genetic resources' (2015) 9 *Anthropocene* 1.

In some way, law and the Anthropocene feed off each other, legitimizing and providing each other with the necessary strength to grow and adapt to the needs of the social metabolism. On the one hand, the Anthropocene is caused by the predatory actions of the human being. On the other hand, law delimits the reaction strategies of the human community to the geological transition, thus affecting the way to manage it. Law is a substantial element in the legitimacy and operability of the social processes that generate the Anthropocene. Then, as I conceive it, if these processes have to be modified to make the global society sustainable and equitable, confronting the Anthropocene demands to develop appropriate law. Humans will inevitably have to react to the Anthropocene, today or tomorrow, if only to adapt to the significant changes in oceans, climate, biodiversity, and other critical functions upon which society depends. These responses ineluctably lead to greater government involvement in a wide range of human activities and the constant updating of government laws and regulations to respond to new challenges.¹¹⁹

It seems quite evident that the dynamics of capitalism together with the geological transition entail legal changes. The Anthropocene is bringing new emerging harms and their impacts have to be understood. Therefore, it seems that the Anthropocene will require changes in legal systems. Accordingly, the greater the consequences of human impairments of global systems, the greater the legal system will need to develop. What is likely to be novel in the Anthropocene is the rate at which these legal changes will be developed: an increased rate of change which, as we shall see, has to put pressure on existing legal doctrines.¹²⁰

As we were saying, one reason to predict that the Anthropocene will produce significant legal changes is that these are not completely new either. Actually, it has already induced some. The legal systems have responded to substantial economic and social changes throughout the history of humankind, and especially during the last decades. Many of those economic and social changes have analogies to the changes that we will see in the development of the Anthropocene: increasing interconnectedness in the growth of the national, industrial economies, increasing rapidity of technological innovation, and increasing changes provoked by industrialization that have impacts on individuals beyond their control.

¹¹⁹ Biber (n 118).

¹²⁰ Ibid.

However, not all possible changes produced by the Anthropocene can be accepted as valid. Some changes can lead to a “refeudalization”, others to a more equal and inclusive society. In the first case, we would return to a society in which the most privileged obtain the resources for adaptation, while the least privileged (a large majority) are abandoned. In the second case, we would be in a position to achieve a less hierarchical society.

This induces the developments that some states are witnessing with the dawn of the Anthropocene: in some cases, increased use of delegation to administrative institutions; in other cases, greater regulatory authority by government agencies over economic activity, or also the creation of new institutions.¹²¹ And just as these changes, in the past produced political upheaval, as legal changes collided with entrenched political norms, the legal changes in the Anthropocene will also challenge important norms in the political systems.¹²² Managing these tensions will be a huge task for the legal system in this century.

Nonetheless, it is necessary to see if even these examples of legal changes are producing the positive effects against the dynamics of capitalism and the ecological transition. Of course, we can find many different answers, however, it seems quite unquestionable that we do not have much time to do essays. Therefore, the track for the most desirable answer, for now, is not doing what we have done so far. Within the possible scenarios, the principles of equity and sustainability must be taken into account. It is the only way to make human life possible in the whole planet, without producing inequalities or a greater degradation of the planet.

In many ways, one of the central challenges for the law in the upcoming century will be how to manage the pressures created by the Anthropocene while remaining committed to the social values of the political systems. The states will have to make legal choices about whether we will prioritize reducing the impairment that our actions cause on global systems or reacting and adapting to the social and ecological impacts that those actions cause. There will be legal choices about who will lose most and who will lose less from the transition to the Anthropocene. And in this context, we will have to make social and political choices about how proactive we should be in responding to the Anthropocene,

¹²¹ Ibid.

¹²² Ibid.

putting even greater pressures on our legal, social, political, and economical systems. Whatever choice we make, the legal landscape will never be the same.¹²³

Moreover, the Anthropocene, as a planetary phenomenon, forces to rethink the idea of law within the nation-states, as we will see later. Broadly, the Anthropocene is eroding fundamental distinctions between what is global and local. Remembering the common refrain of environmental activists “think global, act local,” it seems plausible that the governments start justifying strict regulations of local land-use decisions, the prohibition or increasing prices in the consumption of certain types of products or the promotion of others.

Going further, the point of consensus to address the Anthropocene is the need of some sort of international agreement that will be required at some point.¹²⁴ But, seemingly, an even more complex issue is to define the actors agreeing on these minimum premises. I have the impression that we may not be talking about an international treaty with one vote per state, as they currently have no incentive to arrive at common premises. It rather seems to me that these agreements must be built through complex social processes in which social movements, courts, governments, as well as companies, take action.

In today’s industrial society, it is hard to find activities that do not contribute in some way to climate change.¹²⁵ In this context, where is the line between activities properly within the scope of the state or local power, because they are connected to international relations, and activities properly within the scope of international law? How does international law—for instance law of the sea, environmental law, and rules governing genetic resources—relate, and might respond, to the challenges likely to appear with the shift from the Holocene to the Anthropocene?¹²⁶ Maybe we’re not asking the right questions.

Over the last century, international law has attempted to address almost every area of global significance—armed conflict, international trade, environmental protection—and as a result it has been cleaved into a range of specific fields. International environmental

¹²³ Ibid.

¹²⁴ Elinor Ostrom, *Governing the commons: The Evolution of Institutions for Collective Action* (Reissue, Cambridge University Press, Canto classics edition 2015). 1st edition: 1990.

¹²⁵ Ibid.

¹²⁶ Vidas (n 118).

law has been one such specialized area.¹²⁷ We have seen that the primary dimension of the Anthropocene has not to do with the world divided into territories of sovereign states, as in the traditional Westphalian system, but with the Earth as a whole, seen as a unique, single natural system.¹²⁸ The change introduced in the transition from the Holocene to the Anthropocene involves the element of stability—which on the contrary seems to fade—and contains the potential for an unprecedented type of tension in relations between states. The tensions between the territorial integrity of states and territorial claims must be taken into account, and the existing geopolitical differences cannot be forgotten either. It is true that the sovereign equality of states was the founding postulate of international law. However, the new context in which international law must operate, forces us to deduce that the search for stability cannot be achieved with the current legal axioms, by analogy or precedent. Resort to the previous situation seems no longer to be valid.

3.2. Law as an institutional system that frames the capitalist social metabolism

The starting point of this section is that the underlying assumption that law is a politically neutral endowment is false;¹²⁹ as it is obviously a product of human interaction. The classically pretended juridical positivism, and its methodological assumptions, have been the dominant juridical idea for a long time, but it seems quite clear that law and morality cannot be completely separated. Especially in the West in the last century, nation-states, which have so far held sovereignty, have actively intervened in the lives of individuals, albeit under the euphemism of liberal states. They have determined what were the most valuable forms of life, what were the social forms that these types of life required. Through their legal norms and policies, they have been convincing their citizens of what was best for them. Indeed, the nation-states have not remained neutral before the conceptions of ‘good life.’¹³⁰

¹²⁷ Tim Stephens, ‘International law and the anthropocene. Can international law find a new, holistic, way to approach environmental issues through Earth Systems Science?’ (2014) Sydney Environment Institute.

¹²⁸ Vidas (n 118).

¹²⁹ Curtis J. Milhaupt and Katharina Pistor, *Law and Capitalism. What Corporate Crises Reveal about Legal Systems and Economic Development around the World* (Chicago Press 2008).

¹³⁰ Hugo Omar Seleme, *Enciclopedia de Filosofía y Teoría del Derecho*, vol 2, ch 34 ‘La neutralidad del derecho’ (Universidad Nacional Autónoma de México, Instituto de Investigaciones Jurídicas 2015).

Moreover, law, as the structural basis of social reproduction, is a historically powerful weapon, however it has not always been correctly used. Its unfortunate side has shown how, throughout the history of humankind, it has favoured the establishment of hierarchies of all kinds (for reasons of gender, race, religion, social class, etc.). These forms of domination ultimately have determined the rules for the appropriation and distribution of resources, generating the inequalities that exist throughout the world, in the structurally hierarchical context of the capitalist economy. Definitely, law determines the structures of power, and generates the conditions for the exclusion of broad layers of the planetary population, providing the institutional framework, legitimization and the adequate structure to advance in the appropriation strategies of natural resources.

In this way, then, law contributes to economic, social and political performances, in the same way that it has a direct impact on the environment. Therefore, as Weber already stated, the rule of law may be put in place as a precondition of economic growth, and thus it becomes the explanatory variable of many analyses.¹³¹ As we can see, law of the present does not allow us to advance towards inclusive and sustainable social processes in the context of the Anthropocene. Moreover, law is a structure whose modification affects the hegemonic social practices, eventually causing its evolution, in a positive or negative way. Thus, law in the Anthropocene is emerging after the crisis of sustainability and equity—in fact, it is still in process of development¹³²—and the achievement of a global legal system respectful of nature has not yet arrived.

In parallel, international law, even international environmental law, has generally failed to halt the rapid deterioration of the planet Earth. The reason is that, actually, international environmental law also responds to dominant socio-economic dynamics, and therefore, the maintenance of the capitalist system is a priority in relation to ecological sustainability and social justice. International law has not been successful either because the changes made have been circumstantial and superficial. They have not questioned the fundamental

¹³¹ Ibid. This perspective on law is indebted to Max Weber, who famously stated that “a rational legal system is a precondition of the emergence of capitalism.”

¹³² For instance, the Earth System Governance Project is a long-term, interdisciplinary social science research programme originally developed under the auspices of the International Human Dimensions Programme on Global Environmental Change, which started in January 2009 and is hosted at Lund University, Sweden. The project has evolved into the largest social science research network in the area of governance and global environmental change. For more information, see <http://www.earthsystemgovernance.org/>.

elements of the capitalist accumulation process, its hierarchies and the distribution of the resources that it promotes.

Moreover, the difficulties in building international consensus are very significant. Proof of it is that conflicts between the global core and the global periphery—and also semiperiphery—, grounded in colonial and post-colonial political and economic relations, have frequently paralyzed international law-making, resulting in impasses in environmental treaty negotiations and agreements marred by ambiguity, lack of ambition, inadequate compliance and enforcement mechanisms.¹³³ While core countries focus on the call for collective action to protect the environment, peripheral countries increase their demand for social and ecological justice.

In order to respond to the crisis of equity and sustainability, law in the Anthropocene should be normatively grounded in respect for nature and in the quest for social, economic, and environmental justice within as well as between countries. Currently, it seems we should take the principles of international environmental law more into account: the precautionary, preventive and foresight principles, the solidarity principle, the common but differentiated responsibilities, the non-regression principle... The precautionary principle, for instance, is presented as a pattern to control the Anthropocene, expressing the limitation and vulnerability of the biophysical basis of social reproduction, as well as the uncertain and irreversible nature of human action on it.¹³⁴ It also works to improve resilience, a quality considered as a human instinct.¹³⁵

Following the principle of precaution, some systematic legal regimes for nature conservation and environmental protection can be put in place. It is an important principle for the Anthropocene, insofar as it makes it possible to anticipate and avoid environmental damage. The duty to anticipate the needs of future generations tacitly recognizes this principle. Planning to maintain public health programmes, preventing the degradation of natural resources and building transport systems and other socio-economic infrastructure derive from this evolved standard of predictability¹³⁶. On the other hand, the principle of responsibility should make it possible to limit the sphere of autonomy in order to maintain

¹³³ Sumudu Atapattu et al, *International Environmental Law and the Global South* (Cambridge University Press 2015) 632.

¹³⁴ Jaria i Manzano (n 7).

¹³⁵ Robinson (118).

¹³⁶ Ibid.

equity and guarantee sustainability. There is also a lack of transparency in the processes of all social actors, public and private. To end this, it seems essential to create more participation mechanisms and decision-making spaces, in order to achieve the principle of cooperation, as a manifestation of the democratic principle in a complex context.¹³⁷

But even taking environmental principles more seriously, it is not enough. Law should also challenge the dominant growth oriented economic paradigm, rather than merely mitigate its excesses.¹³⁸ In the previous section, I began by exposing two perspectives of law: as a legitimating discipline of the Anthropocene and as an institutional structure of social reproduction. That is to say, law can be seen as a weakness that feeds the Anthropocene, or as a fortress to reconstruct the narrative for overcoming the Anthropocene. Law can continue to maintain the social structures that have contributed to boost the geological transition, and therefore, forget addressing issues related to sustainability and justice, or change in a relevant way instead, in a totally new direction. Because we already know the effects of inequality and unsustainability, I think it is time to choose the second option.

To understand the role of law in the Anthropocene, a task for today's lawyers should also be looking more widely at the laws that contribute to the social metabolism, such as the ones shaping industrial organization, working conditions, trade and investment, taxation and wealth distribution, or the very organization of the nation-state system.¹³⁹ Lawyers should look at law as one of the major instruments accounting for the Anthropocene. It is important to understand the way in which nation-states or corporations or trade, investment and financial systems are organized. The structures that support them are the basis for the operation of energy, agriculture, chemicals, building, transportation, etc.

At the same time, it is true that society is evolving. However, maybe we should question ourselves whether it is positive that all societies are evolving in the same direction. In my opinion, I find it rather alarming. What we observe is a progressive disappearance of legal, and therefore cultural, pluralism. Peripheral states have also taken root in the ideas of individualism, property and economic growth, something that has induced the incorporation of natural resources and people into the process of capitalist accumulation.

¹³⁷ Jaria i Manzano (n 7).

¹³⁸ González (n 51).

¹³⁹ Viñuales (n 63).

However, in the same way that capitalism is homogeneous, perhaps one of the consequences is that the legal basis for its overthrow is also uniform.

In this complex process of deconstruction, we ought to base on international, common, global premises. Actually, national institutions and processes have given rise, to a large extent, to the consolidation of the capitalist world-economy, and a massive expansion of social metabolism where it is never too much. Perhaps these institutions are not the best to stand sustainable alternative patterns. We observe, therefore, a clash between the need for humanity to move towards the same objective, while preserving legal and cultural pluralism. There is a very fine thread between the compatibility or contradiction of these two ideas.

3.3. The subject of rights in the capitalist Anthropocene

In relation to the institutional structures that end up causing capitalism and the consequent crisis of sustainability and justice, we could say that there are two facets that define the majority legal culture. On the one hand, the current atomistic, individualistic perspective of things. In contrast, we would find a holistic conception, in which we could situate, for example, Earth System science and Earth System law. On the other hand, but not less important, we must characterize the current law by its abstraction; it is not about concrete individuals but an abstract figure, the subject, which can be captured by corporate interests. The liberal juridical thinking has tended to characterize the legal actor as a rational, universalized, unitary subject—a subject constructed as a homologous abstract individual.

In subheading 2.4, we have talked about the construction of the subject, by discussing the doctrine of the individual that prevails in the current global context. We have seen how possessive individualism becomes a central element of the capitalist world-economy, in which the individual is configured as the main subject of the group: he is a intendedly rational and autonomous subject. As it is known, possessive individualism gravitates around the right to property, which allows the exploitation of natural resources within the framework of a capitalist economy.

The predominant ideologies are focused on quantitative elements, and in individual competition, above social cooperation. Furthermore, the law of a concrete state is responding to a certain specific historical context. As an example, western civil codes

translate some pretensions. It cannot be denied that such aspirations respond to certain moments of economic progress and relative peace, and they have for this reason the tonic of a conservative liberalism and of a tempered individualism, which is especially evident in the regulation of institutions such as ownership, inheritance or contractual freedom. It has been said that natural law and rationalism led to conceive the legal order in terms of the individual and to consider it as the set of all rights belonging to him.

In this way, it turns out that the juridical system is vivified by the presence of the man, of the individual, and everything is reduced to the simple recognition of the attributes of such an individual.¹⁴⁰ The central and essential position that the individual occupies in the codified civil law system—private law in general—allows to affirm that this law appears, totally and exclusively, as the statute of individuals in the orbit of the legal system.¹⁴¹ Constitutions also turn around an abstract individual. At a certain historical moment, the liberal idea of constitution appeared, based on the recognition of individual rights, limited to guarantee survival of the global order.

This order, however, has been conceived as a simple aggregate of individuals. Liberal legal justice is conceived in the liberal, western constitutions as abstract, general, universal, relatively ‘blind’ to concrete particularities. Indeed, liberal rights theory severs itself from the physical body, precisely because legal justice is achieved through a formal equality in a universalism addressing legal subjects as abstract wills or personalities. This is what Anna Grear calls quasi-disembodiment.¹⁴²

Accordingly, the rights not only seem quasi-disembodied of its liberal subject, but appear to be inseparable from the possessive individualism, a particularly dominant strand of liberalism articulated in the context of the emergent capitalism. Thus, it is possible to conclude that the concept of legal personality “fairly systematically helps to support a

¹⁴⁰ Riccardo Orestano, *Diritti soggettivi e diritti senza soggetto (Linee di una vicenda concettuale)* (La Biblioteca Giuridica 1960) in Carlos Rogel Vide, *Derecho civil, método y concepto* (Editorial Reus 2010).

¹⁴¹ Michele Giorgianni, *Il diritto privato e i suoi attuali confine* (La Biblioteca Giuridica 1961) in Torralba Soriano, ‘El Derecho civil desde la Codificación hasta el tiempo presente’ (Revista General de Legislación y Jurisprudencia 1975).

¹⁴² Anna Grear, *Redirecting human rights. Facing the Challenge of Corporate Legal Humanity* (Global Ethics Series, Palgrave MacMillan 2010).

quite particular interpretation of the person, and one which has an intimate connection with its companion concept, property.”¹⁴³

This argument of the disembodiment of rights leads us to a second reasoning, which suggests that law’s tendency towards abstraction and disembodiment, combined with its ideological elevation of property, means that law is better suited, in structural and ideological terms, to the corporation than to the human being. All this structure has generated, in the last couple of centuries, the cultural bases for the disproportionate appropriation of natural resources by a part of humanity.¹⁴⁴ This puts into discussion the fundamental patterns of legal thought and poses a challenge in the construction of constitutional frameworks of governance for the Anthropocene.

With the emergence of post-modernity in Europe and of communitarianism in the United States, human rights undergo a profound critique, describing them as merely liberal rights, since they correspond to an individualist mentality and an atomistic conception of society, both characteristics of the Western liberal thinking. For this reason, we need to rethink the way in which rights are articulated, and to strip human rights of its liberal envelope.¹⁴⁵ Clearly, some fundamental legal categories need to be reviewed. Terms such as ‘causality’, ‘subject’, ‘obligation’, ‘property’, ‘responsibility’, ‘legal personality’, ‘corporation’, ‘constitution’, ‘sovereignty’ may have played a role in prompting and sustaining the Anthropocene. But maybe they need to be adjusted, or perhaps replaced, in a law for more resilient and more respectful human societies.¹⁴⁶

Even economic, social and cultural rights end up being of individual enjoyment, as the holder is not the group but the individual person, and they protect, above all, individual interests or needs. For instance, in the European constitutional legal tradition, health is at last personal and of each one, education focuses on the development of human personality, food protects the right of every human being to feed himself with dignity, either by producing his own food or by acquiring it...

In addition, another aspect must be considered in this analysis. European legal culture has been classifying ownership of goods in private and public. However, the adequacy of this

¹⁴³ Ngaire Naffine, ‘Who are Law’s Persons? From Cheshire Cats to Responsible Subjects’ (2003) 66 *Modern Law Review* 346.

¹⁴⁴ Jaria i Manzano (n 7).

¹⁴⁵ José Rubio-Carracedo. ‘¿Derechos Humanos o Derechos Liberales?’ (1998) 21 (2) *Doxa* 421.

¹⁴⁶ Viñuales (n 63).

structure can be questioned: does it respond to the social challenges of the Anthropocene? Leaving the privately-owned goods to one side, one could ask whether public (or collective) goods coincide conceptually with common goods, a category to which nature as a whole seems to fit, but also the atmosphere or the oceans. In this way, a distinction could be made between the goods that belong to everyone, or public, and the common goods, which would not belong to anyone.

Following this conceptual line, and in the context of the Anthropocene, on such common goods there would be no dominant relationship, but a duty of care.¹⁴⁷ In this context, legal protection of common goods becomes one of the most relevant environmental challenges we will face in the future.¹⁴⁸ Definitely, the culture of rights around the idea of a subject creates the conditions for the appropriation of nature, generates hierarchies and produces a banalisation of cultural diversity. In this sense, this culture becomes a crucial factor in the conceptual apparatus that generates the social processes who, at the same time, cause the geological transition. For this reason, it must be re-evaluated.

3.4. Human Rights under pressure

There is no doubt that the Universal Declaration of Human Rights (UDHR) is one of the fundamental milestones in our history. Not in vain, we speak of an unprecedented document that recognized the natural rights of human dignity, those that every woman and every man should be able to enjoy, regardless of where in the world they lived or were born. The international human rights regime is built around the UDHR, proclaimed by the United Nations in Paris in 1948, and its two related covenants, the International Covenant of Civil and Political Rights (ICCPR) and the International Covenant of Economic, Social and Cultural Rights (ICESCR). Essentially, the UDHR paradigm produced the invocation of an “international consensus on substantive norms with high moral voltage”¹⁴⁹ and a re-conceptualisation of national human rights violations, which transposed them into matters of international concern. In short, the UDHR sought to be the lighthouse guiding the steps of humanity.

¹⁴⁷ Jaria i Manzano (n 7).

¹⁴⁸ Ibid.

¹⁴⁹ Boaventura de Sousa Santos, *Toward a New Legal Common Sense* (2nd edition, Cambridge University Press 2002)

However, more than seventy years later, it seems that the light of that lighthouse is still far from our steps. The recognized universal rights regime was characterized by a strong commitment to state sovereignty, yet with very weak mechanisms of application. Even today, we are still confident in the creation of strong application and compliance practices. Originally, human rights were designed for the attainment of dignity and well-being of human beings and for enhancing the security and well-being of socially, economically and civilizationaly vulnerable peoples and communities. But the emergent paradigm insists upon the promotion and the protection of the collective human rights of global capital.¹⁵⁰ Consequently, human rights are the result of the imposition of Western legal culture, in the context of global capitalist expansion. It is true that, in this sense, they can be a colonial strategy. At the same time, however, they can be redesigned as a space for the protection of vulnerability.

At this point, we ought to confront two problems in relation to the human rights paradigm. The first one is the appropriation of human rights by corporations, and the second, state-centrism. As we have previously glimpsed, the discourse of international human rights seems to be in favour of corporations, which beneficially appropriate human rights. Especially transnational corporations, which in the globalised context, have enormous economic and political power. Corporations' rights are widely protected, to the extent that the protection of some of the most valuable contemporary human rights is only possible when the order of rights for global capital is fully recognized. In the context of complex contemporary globalization, human rights now exist only thanks to a market-friendly trade paradigm.¹⁵¹

I will use the examples provided by Baxi to point out the shortcomings of the current system of human rights. For example, the war against hunger, framed by the 1998 Rome Declaration on the Right to Food, becomes implemented as an integrated food security system dominated by a small group of multinational food corporations. For its part, the struggle against homelessness, at the 1998 UN Social Summit, becomes a set of mandates that authorize construction industries and urban developers to a whole series of practices that violate human rights. Meanwhile, the Global Fund for Sustainable Development inspired by the United Nations Development Programme (UNDP) receives money

¹⁵⁰ Upendra Baxi, *The Future of Human Rights* (2nd edition, Oxford University Press 2006).

¹⁵¹ *Ibid.*

support from “some of the most egregious violators of the human rights of multinational corporations.” At the same time, transnational corporations infiltrate the human rights discourse by seeking to have their rights inserted into treaties, such as the World Trade Organization (WTO) agreement and the Trade-Related Aspects of Intellectual Property Rights agreement (TRIPS).¹⁵²

The second problem is the so-called state-centrism.¹⁵³ That is, the abuses exercised by nation-states, by exploiting the language of human rights in the service of its own interests. When the interests of the nation-state appear to require the violation of human rights, then the apparent normative consensus around human rights tends to collapse. This is the case, for example, when national interest or national security are invoked, a trend that was dramatically exacerbated after the September 11th attacks.¹⁵⁴ It should not be forgotten that this problem intrinsically involves another conflict: the tension between freedom and security.

Moreover, such concepts of national interest and national security are bound to the whims of the dominant global economy. Thus, state-centrism is a problematic defect, in a context in which the modern state is the subject and agent of the forces and logic of global capitalism. Not only is national sovereignty vigorously defended and linked to weak human rights enforcement mechanisms, but state justifications for human rights violations are increasingly at the service of economic globalization. This makes human rights clash with these imperatives, and therefore, they become even more vulnerable.¹⁵⁵

Furthermore, we must take into account how globalization has boosted a transformation in the characterization of what Anna Grear calls ‘soft state’.¹⁵⁶ The ‘soft state’ was previously characterized as a state unable to fulfil its disciplinary role in relation to welfare, the control of corrupt political practices, and its lack of a civic culture. This could now be re-conceptualized as a state that fails to provide adequate spaces for capital. The ‘progressive’ state would be the one that provides a stable, governance-centred location for global capital.

¹⁵² Baxi (n 165).

¹⁵³ Grear (n 142).

¹⁵⁴ See *Ibid* (n 142). For a timely discussion of the historical significance of the state of exception and its contemporary status, see G. Agamben, *State of Exception* (K. Attell (trans)) (Chicago and London: University of Chicago Press, 2005).

¹⁵⁵ *Ibid*.

¹⁵⁶ *Ibid*.

At the same time, Stephen Gill has been talking about a ‘new constitutionalism’, on the base that deepening global inequalities have coincided with a redefinition of the political on a global scale.¹⁵⁷ This process would have implied the ‘softening’ of traditional political restrictions and the production of frameworks specifically designed to guarantee a long-term commitment to the neoliberal path of development. Actually, new constitutionalism began to be discussed in the early 1990s. The end of the Cold War represented an ideological change and the need for transformation, and this coincided with a growing world order and the “world market revolution.”¹⁵⁸

New constitutionalism derives from the classical neo-liberalism framework and represents a set of political policies that promote a new global order.¹⁵⁹ Its goal is to separate the democratic and economic practices by shifting economic aims from the regional and national level to the global level through a constitutional framework.¹⁶⁰ One of the main purposes of new constitutionalism would be the establishment of a capitalist base so that the governments do not break the commitments with the neoliberal pattern of accumulation.¹⁶¹

Therefore, new constitutionalism is not free from criticism. This ‘recipe’ to achieve democracy and a new rule of law, although is situated beyond liberalism, does not exclude capitalism from the list of ingredients. In addition, new constitutionalism provides power to the private sphere and limits the power of state government and public corporations, and consequently, it necessarily involves the accumulation of capital. Be that as it may, states, in general, keep serving the imperatives of global economic institutions, and transnational corporations continue to exert a decisive influence in the world. The form of constitutionalism identified by Gill, however, helps us connect with the idea of the emerging need for a new human rights paradigm.

¹⁵⁷ Stephen Gill, ‘Constitutionalizing Inequality and the Clash of Globalizations’ (2002) 4(2) *International Studies Review* 47.

¹⁵⁸ Stephen Gill and A. Claire Cutler, *New Constitutionalism and World Order* (Cambridge University Press 2014).

¹⁵⁹ Sacha Dierckx, ‘After the Crisis and Beyond the New Constitutionalism? The Case of the Free Movement of Capital’ (2013) 10(6) *Globalizations* 803.

¹⁶⁰ Stephen Gill, ‘New constitutionalism, democratisation and global political economy’ (1998) 10(1) *Pacifica Review: Peace, Security & Global Change*

¹⁶¹ Gear (n 142).

New constitutionalism identified parameters to redefine a new archetype of human rights. The Universal Declaration of Human Rights assigned to states the principal responsibility of upholding human rights standards and meeting the basic needs of human beings. The so-called ‘progressive’ state remains, in short, a good host state for global capital.¹⁶² And so, the neoliberal ideology that characterizes the civil and political rights continues to prevail, such as freedom of individual action, interference in the private sphere of the economy, the right to property and access to property and, in general, the liberal principle of “*laissez faire, laissez passer, le monde va de lui même.*”¹⁶³

Clearly, the rights for global capital have been having destructive impacts on the human rights.¹⁶⁴ These damages include the corruption of the national regimes by corporations, even those who aimed social and human development. Corporations have also influenced law, medicine, media, science and education. They have created “human, bio, eco and genetic hazards, without undue obligation for reparation, restitution and rehabilitation.”¹⁶⁵

Furthermore, a significant part of humanity only considers those aspects that affect the human being as such, in an eminently anthropogenic vision. The protection of the environment is therefore linked to the sphere of self-determination of the individual in the social rule of law. In this way, the environment is presented as an instrumental legal asset oriented towards the protection of the individual person and the guarantee of its well-being. In short, when environmental damage occurs, the enjoyment of rights is in danger. Indeed, the environment must not deteriorate to the extent that the right to life, the right to health, the right to privacy or even the right to property, among others, are seriously affected. Therefore, from the outset, the environmental crisis is interpreted and assimilated, in the context of the constitutional tradition, according to the pattern of rights.¹⁶⁶ Which are, again, capital rights in the new constitutionalism.

¹⁶² Baxi (n 165).

¹⁶³ Remember the famous quote “*Laissez faire et laissez passer, le monde va de lui même!*” (“Let do and let pass, the world goes on by itself!”) that was used for the first time by Vincent de Gournay, physiocrat of the eighteenth century, against government interventionism in the economy. In fact, the ‘*laissez faire*’ keeps defining an economic system in which transactions between private parties are free from government intervention such as regulation, privileges, tariffs, and subsidies.

¹⁶⁴ Baxi (n 165).

¹⁶⁵ Ibid.

¹⁶⁶ Jaria i Manzano (n 7).

So, perhaps, I think it is time that human rights gain in prominence and be redefined, adapted to the Anthropocene that already lurks the world. Most likely, human rights have to find, again, news forms of international law subjectivity. The initial examination of those questions in the academic international law debate has only started: in the literature, in research projects, and in the activity of academic societies like the International Law Association.¹⁶⁷

A starting point to rebuild the new human rights paradigm in the law in the Anthropocene has been reacting through the culture of human rights. In the process of transition from ethnocentrism to biocentrism, the first step as a bridge has been to consider the human right to the environment. It would serve, in the meantime, to prevent damage to nature, but the reality is that this starting process is still very weak. The human right to the environment must guarantee subsistence, avoid extreme poverty and get rid of capitalism. It is necessary to rethink the concept of private property, reformulate private goods and delimit them. On the contrary, without limits, we do not have the resources to satisfy basic needs. Thus, Rousseau's idea of the General Will (*volonté générale*) may not be far-fetched at all.¹⁶⁸ Resources should be oriented towards the benefit or use of the community, for example, with public goods. This therefore requires institutional strength.

Next step is assuming that the human being is an integral part of the natural environment and recognizing that nature has also rights. This goes through the humankind's dispossession of so much ego, in order to assume that nature is not an instrument, but that it must also be respected. This is in the hands of human being, including the hands of the legal sciences. Only then, the role of law in contemporary and future societies will make sense. That includes a profound revision of the traditional conceptions on the structure, function and essential characteristics of law to reach sense and coherence which, from my vision, goes through a reformulation of human rights.

¹⁶⁷ Vidas (n 118).

¹⁶⁸ The theory of the general will of Rousseau determines that "Finally, each man, in giving himself to all, gives himself to nobody; and as there is no associate over whom he does not acquire the same right as he yields others over himself, he gains an equivalent for everything he loses." (Jean-Jacques Rousseau, *Social Contract* (1770) Part 3: The total alienation of oneself and all one's rights to the community). Thus, when men can no longer overcome the obstacles of the natural state, they unite all the forces to survive, and then society is born in conjunction with the pact.

3.5. Constitutional Law as the axiological core of the legal system

Before addressing global constitutionalism—that is, a process in which public international law is constitutionalized—we must first focus on national constitutional law, defining the axiological core of state law. Primarily, the constitution, in a formal sense, is built as a solemn, codified and written legal document, identified as the supreme law in a particular system, and amendable only through a special procedure, defining the scope of political power, by establishing procedures and limits. In a material sense, and no less important, it should be understood as the normative compound constituting the nucleus of legitimacy and the legality pattern of a community system, that determines the legal validity of the norms in a given system, as well as grounds the legitimacy of political power.

Classical constitutional law starts from the idea of the original pact that founds a self-sufficient community. The so-called constituent power creates structures that make sovereign decisions within their social space, in an agreement of wills that starts from the mutual recognition of sovereign power. The constitution, thus, is resolved in a founding text that aims to order the life of the political community (code) from the confluence of individual wills that are subject to change of respect for their individual rights (contract).¹⁶⁹ Thus, the substantive fundamental elements of the system become the sovereignty of the state and rights.

All this construction undergoes a profound crisis within the narrative framework of the Anthropocene. This is so, on the one hand, because of the fall of the myth of the *pouvoir constituant*, since the sovereign and self-sufficient character of the power of the state is questioned. On the other hand, because of the crisis posed by the utopian aspirations of the culture of rights, in relation to a limited and vulnerable Earth System.

A significant number of constitutions, predominantly those belonging to the core countries, continue to perpetuate the possessive individualism and the bourgeois ethos. Certainly, they have not managed to break with the legacy of liberal constitutionalism and the dominant anthropocentric conception, but have added an environmental dimension, within the logic of existential constitutionalism. Thus, the utopian ideal of early constitutionalism has attempted to materialize through the horizon of the social

¹⁶⁹ Jordi Jaria i Manzano and Endrius Cocciolo, *Informe núm.1. El constitucionalismo global: fundamentos y desarrollo* (2017-2019 period, CONCLIMA, DER2016-80011-P).

extension of welfare. Nevertheless, it has not managed to escape from possessive individualism as a more or less explicit ideological matrix.¹⁷⁰

Modern constitutional systems, especially in the core states, are barely based on an understanding of human agency that is challenged by the Anthropocene narrative. The modern conceptions of liberty and equality—by now mostly captured by the neoliberal discourse—and the articulation between these two fundamental values are based on a culture of ‘progress’, understood as the human ability to increasingly push back natural constraints. This is accompanied by the attempt to emancipate this nature and the belief that abundance has no impact on it. In so doing, the states themselves legitimate the power of capital.

To face the challenge of a legal analysis of the constitutional framework—which acquires a supranational dimension—in which the transition to the Anthropocene takes place, it is needed to unveil the hidden power relations in the rules and, particularly, in the own national constitutions. Several significant contributions have been made to highlight the anthropocentric underpinnings of modern constitutions as well as to reformulate constitutionalism from an environmental perspective.¹⁷¹ The previous work on environmental constitutionalism states that constitutional intervention for environmental protection is seen as the most effective—because the most fundamental—form of legal intervention.¹⁷²

Here, I think it is very interesting to take into account Louis Kotzé’s contribution¹⁷³ to the investigation of the implications of the Anthropocene narrative for understanding constitutional law in a comparative and international perspective. At the constitutional level, the relations between humans and nature can be fairly redefined from a normative perspective. Kotzé does a review of the different dimensions of constitutionalism, such as the rule of law, separation of powers, judicial review, constitutional supremacy, democratic rule and constitutional rights. His fundamental premise seems to remain that

¹⁷⁰ Jean Baudrillard, *La sociedad de consumo. Sus mitos, sus estructuras* (Siglo XXI, 2009), in *ibid.*

¹⁷¹ See for instance the cited works in *Viñuales* (63): R. Steinberg, *Der ökologische Verfassungsstaat* (Frankfurt am Main: Suhrkamp, 1988); K. Bosselmann, *Im Namen der Natur: Der Weg zum ökologischen Rechtsstaat* (Bern: Scherz, 1992); D. R. Boyd, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights, and the Environment* (Vancouver: UBC Press, 2012); J. R. May, E. Daly, *Global Environmental Constitutionalism* (Cambridge University Press, 2014); C. Stone, ‘Should Trees have Standing? Towards Legal Rights for Natural Objects’ (1972) 45 *California Law Review* 450.

¹⁷² *Viñuales* (n 63).

¹⁷³ Kotzé (n 5).

an environmental reformulation of constitutional law, and its possible generalization at the international level, are the best legal means to rise to the unprecedented challenge posed by the Anthropocene.

And this leads us, once again, to question the international legal frameworks that organize the extensive international flows of goods, services, capital, people, as well as waste, resources, knowledge and culture. It seems to be clear that the general legal discourse—especially in the core countries—is based on constitutional concepts impregnated with a dominant and unsustainable ontology of human relations with nature. Let us follow Kotzé’s line. His proposition is that ordinary environmental law will not be enough to confront the challenges implied by the geological transition. Nonetheless, as we have seen, law has promoted and sustained the advent of the Anthropocene in the last centuries, and especially in the last decades.

Therefore, law influences human behaviour at the same time that can manage our new geological era. More than only an exercise of environmental reinterpretation, or a redesign of constitutional law, the change must be, again, through a new global constitutionalism.¹⁷⁴ Furthermore, this constitutionalism might be able to open up a richer and more productive normative debate. We must take the time to review the constitutional dimension and take what is useful for the narrative of the Anthropocene, leaving behind what is already unsustainable.

3.6. The supranational dimension of constitutional law: global constitutionalism

The achievements of international environmental law, though few they would be, cannot be denied—especially by the United Nations—, as well as the constitutional framing of the environmental crisis in the different national laws. They have drawn a horizon for updating the content and scope of human rights, by incorporating new elements such as the right to an adequate environment. However, as in many other social disciplines, the Anthropocene calls for a more general and comprehensive picture of law rather than a narrower approach. It is not through a specialized focus on or even an expansion of ‘environmental law,’ but instead by revisiting law in its entirety to understand its role in

¹⁷⁴ Viñuales (n 63).

the managing of the Anthropocene. We must look at how our new condition is to be read into the very DNA of law.

Turning now to consider the possibility that the constitutional narrative can respond to the challenges of the Anthropocene. That might be feasible if international law is analysed, in a general way, in constitutional terms. This new field of growing interest is what is called ‘global constitutionalism.’ Or, in other words, global constitutionalism is an academic and political agenda that involves the gradual emergence of constitutionalist features in international law.¹⁷⁵ In a certain way, it analyses whether national constitutionalism really serves as an academic approach. Moreover, it questions the constitutionalist discourse in the sense that it can be antipluralist, creates a false legitimacy and promises unrealistic political ends.¹⁷⁶ In relation to the latter, in order to gain acceptance in the political realm, global constitutionalists might highlight the current situation of global interdependence.

Therefore, the application of constitutional principles in the international legal sphere, in order to improve the effectiveness and the fairness of the international legal order, seems to be a natural step in this context. In my opinion, it could actually solve the problems of both constitutional and international law. In the case of constitutional law, we would be rethinking the legal regime of fundamental rights and public liberties, constitutional justice, political decentralization, the organization of the powers of states and constitutional guarantees. In the case of international law, it allows to query again the problems of global security, reach of consensus, effectiveness, minimum international standards of justice... And so, enriching both branches of law could contribute to disciplining and transforming the capitalist world-economy. Global constitutionalism then has a true and necessary critical potential and responsibility. Altogether, the kind of universalism behind the idea of global law goes a step further than the epistemological universalism of comparative law.¹⁷⁷

¹⁷⁵ Anne Peters & Klaus Armingeon, ‘Introduction—Global Constitutionalism from an Interdisciplinary Perspective’ (2009) 16 *Indiana Journal of Global Legal Studies* 385.

¹⁷⁶ Anne Peters, ‘The Merits of Global Constitutionalism’ (2009) 16 (2) *Indiana Journal of Global Legal Studies* 397.

¹⁷⁷ Jaakko Husa, ‘Global constitutionalism – a critical view’ (2016) Maastricht European Private Law Institute Working Paper No. 2016/11 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2885490> accessed 17 March 2019.

Global constitutionalism should frame a new form of production, distribution and consumption. It should make a global control of demand, seek an adapted form of consumption and promote self-sufficiency. And that also implies the redistribution of world wealth at the expense of the reduction of other sectors, such as the exorbitant capital that transnational corporations move. It should be anti-productivist and recognize the structural limits of the Earth System. The entire cycle of metabolism is delimited by the finite nature of the biophysical base where it is developed. The capacity to absorb waste and to produce resources is limited. Therefore, we need laws that stop the unlimited growth and productivity. For this reason, I would say that it is not about an increase in legal production in each nation-state, but a change in the system, a metamorphosis of the constitutional models that we have adopted globally.

Concurrently, global constitutionalism may be oriented towards the care of the common environment, because the human right to the environment cannot be individualized. Like all human rights, the human right to the environment is held individually, but is a right to common goods. And if we want our law investigations to be useful for other disciplines, we need to do it in a way that is intelligible to others, that can light other research lines, whether humanities, social or natural sciences. In any case, in words of Anne Peters, global constitutionalism deploys a constructive, not obstructive, critical potential.¹⁷⁸

However, it must be recognized that global constitutionalism may apparently have certain weaknesses. In a critical sense, we cannot pretend to symbolize a compact and simplified order in a world that is actually complex and unpredictable. Consequently, the myth of the unity of the constitution must be rejected. Notwithstanding the foregoing, the term ‘constitution’ has never been exclusively reserved for state constitutions. Today, the conceptual link between constitution and state has been further loosened in everyday language and in the legal discourse, perhaps thereby broadening the meaning of ‘constitution.’¹⁷⁹ In fact, the approach implied by the global constitutionalism goes beyond the traditional space of constitutionalism centred in the fundamental rules and principles of the nation-states.

¹⁷⁸ Peters (n 176).

¹⁷⁹ Ibid.

3.7. Law in the Anthropocene for the transition to ecological and social justice

The Anthropocene compel us to rethink new forms of organization, through the design of new legal and social instruments. As we have seen, it does not seem useful to make a sectorized and individualized approach to the different elements that make up the environment, but integrated, public and oriented towards the democratic determination of the development model within the framework of environmental law.¹⁸⁰ Or at least, there must be rules that unify the different sectorial normative approximations, so that there are general laws for the protection of the environment.¹⁸¹ We have also observed how law has crossed the borders of nation-states. Likewise, we have detected some of the shortcomings of classical constitutional law and international law, including international environmental law.

Meanwhile, in view with all these problems, the introduction of the idea of sustainable development started gaining strength; it seemed to become the panacea for a more equitable and sustainable world. Gradually, it started becoming the fundamental matrix of international environmental law and, in turn, it penetrated into comparative constitutional law. It seemed suitable as the fundamental pattern of what could be called global environmental constitutional law, or as I prefer to synthesize it, law in the Anthropocene.

Nevertheless, the concept of sustainable development has never been spared from criticism. Since its definition was coined in the report entitled *Our Common Future* in 1987,¹⁸² going then through the *Rio Declaration* in 1992¹⁸³ and finally consolidating in *Rio 2012*,¹⁸⁴ economic efficiency and growth have taken preference over environmental protection and social solidarity. On the one hand, in a logical criticism, the term

¹⁸⁰ Borja Cardelús y Muñoz Seca, 'Principios comunes para la utilización de los recursos del medio físico' (1981) 190 Documentación Administrativa 86.

¹⁸¹ Jesús Jordano Fraga, *La protección del derecho a un medio ambiente adecuado* (José María Bosch Editor 1985).

¹⁸² Also known as the Brundtland Report in recognition of former Norwegian Prime Minister Gro Harlem Brundtland's role as Chair of the World Commission on Environment and Development (WCED), the report was published in 1987 by the United Nations through the Oxford University Press.

¹⁸³ The Rio Declaration on Environment and Development was compiled at the United Nations Conference for Environment and Development in Rio de Janeiro in 1992. It was a set of principles that recognized the importance of preserving the environment and set forth international guidelines for doing so.

¹⁸⁴ The United Nations Conference on Sustainable Development (UNCSD), hosted by Brazil in Rio de Janeiro from 13 to 22 June 2012, also known as Rio 2012 or Rio+20, culminated with a final document, *The future we want*. (Resolution adopted by the General Assembly on 27 July 2012 (A/RES/66/288).

‘sustainable development’ ends up becoming an oxymoron, since the other two essential legs of sustainable development have always lagged behind the other fundamental axis, economic growth. Seemingly, there’s an impossibility of unifying the three vectors of sustainable development. On the other hand, and in a pragmatic criticism, the idea of sustainable development can only be understood, apparently, through technological innovation, which must provide the instruments to continue the process of depredation of natural resources by human beings. Certainly, sustainable development ends up being a concept captured by the hegemonic ideas of capitalism, and, therefore, it does not promote an effective transformation of social practices.

For all these reasons, the same notion of development must be reconsidered, in accordance with the demand for sustainability and justice implicit in the narrative of the Anthropocene. Of course, it is not a question of rejecting technological innovation, but of understanding it in a context of a profound social change.¹⁸⁵ It must be reconfigured, so that it can be understood in a non-dependent future on the massive consumption of resources. In a future that connects with the idea of ‘degrowth,’ which implies an overcoming of the idea of development as it is mainly conceived in the present moment.

Law in the Anthropocene will have to be the expression and foundation of a global vision that goes beyond sectoral policies. This will take time. First, we need to analyse what is useful to us in constitutional and international law. Afterwards, I believe it will be necessary to develop our own object and principles, to have our own legal techniques and a directly involved social substratum. Unfortunately, these elements still do not characterize the law in the Anthropocene.

Be that as it may, a reformulation of international law is very likely to be forthcoming in the face of new challenges in this context of changing circumstances. It is possible that the way society is currently organized does not serve to organize humanity in the era of the Anthropocene; at least it must be different from what we have known so far. Within this broad framework of our needs and purposes as seen in the Anthropocene horizon, the primacy given by international law to the affirmation of sovereign rights over territory may have to be reconsidered, while the emphasis on population and human rights may have to gain prominence and express itself in new forms of subjectivity in international law. Furthermore, to respond to the changes of this new era, there are five primary

¹⁸⁵ Jaria i Manzano (n 7).

management choices: mitigation, adaptation, restoration, substitution, and doing nothing.¹⁸⁶ They are not exclusive of one another but seem to be able to combine.

Mitigation imply efforts like reducing the emissions of greenhouse gases that cause climate change through the decarbonization of electricity production, reducing the destruction of habitats that harms biodiversity. Adaptation involves a process of adjustment to the actual climate and its effects. It seeks to moderate or avoid harm and to exploit beneficial opportunities. Examples of adaptation in the Anthropocene context include constructing higher seawalls to protect coastal cities from increases in sea level and changing agricultural practices to respond to increased droughts and flooding.

Restoration would comprise efforts by society to undo the human damages over global resources and return them to its prior state. For example, extracting greenhouse gases emitted from the atmosphere. This might be through management of natural ecosystems, such as facilitating forest growth to absorb carbon dioxide. It might also include the reintroduction of species to places where they are currently absent. Substitution encompasses the efforts by society to replace the benefits provided by global resources with other tools (whether man-made or natural), such as the dispersion of aerosol particles in the upper atmosphere to reflect sunlight, offsetting the increased insulation of the atmosphere.

In contrast with restoration, substitution would leave the global system in its impaired state and attempt to address the negative effects of the impairment.¹⁸⁷ Both substitution and adaptation seek instead to reduce the negative impacts over the Earth System. But, while substitution seeks to change how the global system works overall to reduce the negative effect, adaptation seeks to reduce those negative impacts on a smaller geographic scale, either by changing human activities and infrastructure, or by managing, protecting, or restoring natural places or processes that help mitigate the negative effects over the Earth System.

Last but not least, the implications of doing nothing are fairly evident. It means simply accepting the negative effects of the Earth System's impairment. As an example, we could imagine the citizens of a large coastal city threatened by sea level rise simply watching the sea level rise and doing nothing at all. However, there is probably no pure version of

¹⁸⁶ Biber (n 118).

¹⁸⁷ Ibid.

doing nothing. Even if the citizens were willing to watch the waves rise onto their front steps, they would eventually be forced to leave their city and that, in and of itself, would be a form of adaptation.¹⁸⁸

Some of the strategies, at a general level, that the law in the Anthropocene should adopt to manage these measures are: direct public action, public regulation, public subsidies and incentives for private action. Although the private cannot exist outside the collective and is always limited in very specific ways by that fact,¹⁸⁹ it is important to redefine property in the narrative of the Anthropocene. In addition, there would exist the purely voluntary private action and the civil organization. Finally, it seems quite obvious that the option of doing nothing has no legal implications.

Moreover, one of the premises from which we must depart for these changes in regulations is in private law systems, such as the institution of property. The Anthropocene drives to constant changes in private and public law, through a range of mechanisms. For instance, judicial reinterpretation and development of jurisprudence might drive many of the changes, but it might also be the result of legislative revisions. Actually, none of these forms of legal change are new.

How policy is articulated is also crucial. It must be a system that adequately defines these commons. There are some axes that, for instance, Eugenia Rodríguez Palop proposes:¹⁹⁰ Firstly, radical democratization is required. It is necessary to articulate mechanisms and channels of citizen participation, to advance towards a deliberative and participative democracy that improves intercommunication. In political terms, this involves a model based on active citizenship. Secondly, the Keynesian, productivist and patriarchal model, where social policies are subsidiary to the productive system, must be overcome. This requires a redistribution of resources, with a political model oriented towards the satisfaction of basic needs and environmental justice. Justice that can only be understood as the equitable distribution of the environmental costs and the benefits of the use of natural resources, both current and for future generations.

¹⁸⁸ Ibid.

¹⁸⁹ Celia Deane-Drummond, Sigurd Bergmann and Markus Vogt, *Religion in the anthropocene* (Foreword by Heinrich Bedford Strohm, Cascade books, 2017).

¹⁹⁰ M. Eugenia Rodríguez Palop, 'The implications of climate change for human rights and migration'. *Climate change: a view from Catalonia. I Catalan congress on environmental law*. Rovira i Virgili University, 18 January 2018.

Decentralization could also make sense in the narrative of the Anthropocene. The commons are global, and it is therefore a fundamental mistake to speak of state ownership. It means following the same patrimonialist logic of resources, no matter how democratized those states may be. Both infra-state and supra-state instances are required. Municipalism should be revised, so that it becomes a movement to appeal to the common; it should be integrative, participative and with a federative vocation. Meanwhile, at the supra-state level, internationalization is required, which cannot be confused with hierarchization. And it requires active, multilateral and concentric citizenship, without being linked to nationality.

In addition, against this capitalist, modern background, maybe we will have to redesign the artefact of money. It is difficult, but not impossible, for a sufficient number of people to end up seeing the potential benefits of changing the current rules of the game. We must be able to invent other means of daily payment, which do not contribute to the impoverishment and degradation of populations or of nature. From my point of view, it is not possible to imagine a non-capitalist world if we do not eliminate the logic inherent to the conventional currency. We must reach a democratic agreement to restrict the functioning of money and rethink other economic ways of obtaining the necessary goods to live, and thus curb the polarization and flows of asymmetric resources orchestrated by the world market and the destruction of the Earth System.

And now, if we take the unequal distribution and the crisis of traditional property categories, I think the need for a paradigm shift is clear. A change of social paradigm would imply moving into community spaces, around the principles of responsibility and cooperation. The common goods, for example, are not only susceptible to appropriation in the sense of privatization, but also do not respond to the idea of public goods, that is, of collective ownership, based on the distinction between public and private. Common goods, which would not belong to anyone, allow to evade the notion of ownership, implicit in the paradigm of appropriation of resources, and introduce values such as cooperation. Moreover, if there are common goods, mercantile capitalism is not possible, since the primacy of the individual configured by Adam Smith ceases to constitute the central idea. The definition and legal protection of common property is presented, then, as one of the most important challenges for the legal culture of the present.

3.8. Dismantling the myth of the Good Anthropocene: are we humans actually indestructible?

For completing the approach here presented, it is necessary to address the so-called ‘Good Anthropocene.’¹⁹¹ In general terms, this expression has been used to defend that there are no planetary boundaries that limit the continuous growth in human populations and the economic advance. Because ‘human systems’ can adapt and, in fact, thrive in a warmer world, because history proves our flexibility¹⁹² and the current circumstances present opportunities and possibilities for a thriving future for humanity.

For instance, self-appointed ‘ecomodernists’ welcome the Anthropocene as a sign of human capacity for transforming and controlling nature. The recently published “Ecomodernist Manifesto” of the Breakthrough Institute¹⁹³ attempts to encourage a debate about the good Anthropocene introduced by Earl Ellis, now amplified into the idea of the ‘great Anthropocene.’ They do not blame global capitalism nor humankind’s short-sighted.

Following this approach, as we enter the Anthropocene, we do not need to fear the transgression of natural limits, as the only barrier to this grand new era is self-doubt. Ellis, for his part, urges us to see the Anthropocene not as a crisis but as “the beginning of a new geological epoch ripe with human-directed opportunity.”¹⁹⁴ Without fear of placing ‘good’ next to ‘Anthropocene,’ he believes “we will be proud of the planet we create in the Anthropocene” and is fond of quoting Stewart Brand: “We are as gods, so we may as well get good at it.”¹⁹⁵

¹⁹¹ I consider that the main thruster of the Good Anthropocene is Erle Ellis. He is an American environmental scientist, who investigates at the University of Maryland (Baltimore) the causes and consequences of long-term ecological changes caused by humans at local to global scales, including those related to the Anthropocene. Therefore, I have based mainly on their contributions. On the other hand, I think the critical tone used by Clive Hamilton is very important. Hamilton researches in the Centre for Applied Philosophy and Public Ethics, Charles Sturt University (Australia).

¹⁹² Clive Hamilton, ‘The Theodicy of the “Good Anthropocene” (2015) 7 *Environmental Humanities* 233.

¹⁹³ John Asafu-Adjaye, Linus Blomqvist, Stewart Brand, Barry Brook, Ruth de Fries, Erle Ellis, Christopher Foreman, David Keith, Martin Lewis, Mark Lynas, Ted Nordhaus, Roger Pielke Jr., Rachel Pritzker, Joyashree Roy, Mark Sagoff, Michael Shellenberger, Robert Stone, and Peter Teague, ‘An Ecomodernist Manifesto’ (2015), <<http://www.ecomodernism.org/manifesto>> accessed 17 March 2019.

¹⁹⁴ Erle Ellis, ‘The Planet of no Return. Human Resilience on an Artificial Earth’ (2011) 2 *Breakthrough Journal* 37.

¹⁹⁵ Erle Ellis, ‘Neither Good nor Bad,’ (2011) *New York Times*.

In the Good Anthropocene, climate change is considered as a treatable side effect of the modernization process—a growing pain that the growth process itself will resolve. For Ellis, “humans appear fully capable of continuing to support a burgeoning population by engineering and transforming the planet.”¹⁹⁶ Inside the inherent dynamic of progress, the negativity of ecological damage is assimilated into a positive force for change. In practice, nature is not a power that rules over humanity; there is not even a synergy or an equal position between humanity and nature, but the tables are turned, and the human being rules over nature.

Although I have made a big effort to understand this hypothesis, I have not been able to empathize with it. On the contrary, I find it lacking of interest, somehow even dangerous. First, because actually, the Good Anthropocene is defending a planned and even more intense intervention in the design of the Earth System. The fact is that through tools such as geoengineering, the dynamics of domination would be prolonging that narrative of the critical Anthropocene.

Secondly, this thought presents a clearly anthropocentric view of the order of things, where the human being remains in the centre of the Earth System. Moreover, it seems that the human being has always existed, since the genesis of the planet Earth. And therefore, we would be supposing that since the zero minute, the human being has known how to deal with nature, no matter how wild, because it is coetaneous to the Earth. Furthermore, it seems to me that this is a very nice, but too optimistic version of the Anthropocene. Human beings have not been able to recognize our limitations. We may have dealt with a wide range of situations, but I do not think this is going to be like that forever.

For instance, the pillars of the Earth that sustain globality, such as free trade, agroindustry, consumerism and automobility, are unthinkable without fossil fuels. However, at least for the moment, there does not seem to be a viable technological alternative that replaces fossil energy. At the moment, governments are incapable of facing climate change, and they do not present convincing alternatives. This makes me think that perhaps, we can find solutions not looking forward but, somehow, looking backwards.

¹⁹⁶ Ellis (n 194).

Finally, it could be argued against the good Anthropocene that we cannot know the ultimate outcome of the Anthropocene, as it is beyond our capacity to guess the Earth system's behaviour and to control it. Moreover, throughout the history of humanity—I dare not say throughout the history of our planet—there have always been unpredictable forces, impossible to regulate or confront. It's clear we have a tendency to think we, the humans, are magnificent and indestructible, but... are we really eternal?

4. FUTURE RESEARCH LINES: GENDER EQUALITY IN THE CONTEXT OF THE ANTHROPOCENE

The research done so far is conceived as a preliminary theoretical exploration to what my future PhD thesis will be. My purpose has been acquiring a basic notion of what the Anthropocene entails and what its narrative is about. Which, later, will help me to start a construction of a global constitutional account, from a point of view that disconnects and surpasses capitalism. After this preliminary investigation in my master's thesis, I find these lines of research even more interesting. I will try to present them clearly and briefly, since I do not pretend to resolve them here, but in a future thesis.

In the context of the Anthropocene narrative, we have been discovering the inequalities that the social metabolism of the global economy produces. We have seen ways of appropriating resources, which generate hierarchical and unequal structures between human beings and nature, between human and non-human beings, as well as between human beings themselves. Within the hierarchical structures among humans that dominate the world, I am certainly struck by a particularly oppressive form of domination, which astonishingly oppresses half of the humankind: patriarchy.

I find it puzzling how, after having advanced in so many things, the male-female hierarchy not only remains in almost all the social communities of the world, but it has undergone a metamorphosis. While it is true that the oppression of the feminine seems to have born with the very existence of humanity, what seems important to me is the exploration of the hierarchy male-female in the concrete context of the Anthropocene. Since the Industrial Revolution onwards, from the structuring of the labour force, new forms of patriarchal oppression have emerged, and I am interested in studying how and why they were born.

In particular, I would like to pay special attention to the capitalist heteropatriarchy, a specific form of patriarchy that not only extols the male-female hierarchy, but also excludes everything that does not conform to the dominant hegemonic pattern, consisting of the white, heterosexual, oppressive and well-off man. Capitalism as a peculiar form of patriarchy has provoked a planetary change of geological dimension. Moreover, a difference that arises from capitalism in relation to the male-female domination, is the situation of the concept of the individual as a basis, which has caused changes at the planetary level. It seems that the actor promoted by the Anthropocene cannot be

possessed; he is self-reliant, impulsive, rational and individualistic. Certainly, he is never pregnant, for this would threaten his physical integrity.¹⁹⁷

Another question that constantly comes to my mind, is what kind of participation women are having in the implementation of this machine of profound changes that characterize the Anthropocene. I do not think it was them who promoted the structure of female submission that makes such changes possible. I do not think it was them who pushed for their exclusion from political life, for their limited access to education or for their unpaid housewife and caretaker tasks, for most of our history.¹⁹⁸ Certainly, western knowledge systems since the Enlightenment have been based on an idea of nature that not only opposes culture or reason, but is also placed beneath it in a hierarchy. The dualistic thinking that diminishes and depoliticises nature also diminishes and depoliticises women, because of the way their actions and work have historically been included in nature.¹⁹⁹

The hierarchical binaries between ‘human’ and ‘nature,’ characteristic of western Modernity and settled in a relationship based on separation and domination, are simply repeated in the Anthropocene. In the first concept, we would find the masculine, the cultural, in short, the man. Meanwhile, associated with nature, we would find the passive, non-agent and non-subject, as well as the ‘environment’ or the invisible background conditions with which the achievements of ‘reason’ or ‘culture’ are carried out (typically provided by the white, western, male expert or entrepreneur).²⁰⁰ In their claims of an exceptional capacity to alter the planet, the agency is denied to those considered ‘nature’ and, paradoxically, the masculine power is reaffirmed. In this sense, the Anthropocene threatens to undo decades of feminist and anti-colonial work, but also opens new horizons for thinking about time, space, politics and the environment. This double bond is what is at stake in the possibility of a feminist Anthropocene.²⁰¹

¹⁹⁷ Naffine (n 143).

¹⁹⁸ Val Plumwood, *Feminism and the Mastery of Nature* (Routledge – Feminism for Today 2003) 1st edition 1993.

¹⁹⁹ Kate Lewis Hood, ‘Whose Anthropocene? ‘Anthropocene Feminism’, Edited by Richard Grusin’ (*Glasgow Review of Books*, 22 January 2018) <https://glasgowreviewofbooks.com/2018/01/22/whose-anthropocene-anthropocene-feminism-edited-by-richard-grusin/#_edn1> accessed 9 April 2019.

²⁰⁰ Ibid.

²⁰¹ Ibid.

So, my questions for a possible future thesis would be: How can a feminist framing of the Anthropocene narrative be? How does the Anthropocene narrative fit into contemporary feminism? But also, what should the feminist discourse be like, in the Anthropocene era, to overcome the hierarchical and unequal structures and to move towards a more sustainable and equitable world? We must find answers against the masculinist approach of the Anthropocene that is so often adopted by technoscientists, artists, humanists and social scientists.²⁰² There are alternatives that feminism can offer to think about the Anthropocene. Consequently, I would like to explore not only what the Anthropocene might mean for feminism, but also the contributions that the feminist theory may have in the techno-scientific understanding of Anthropocene.

At the same time, as we have seen, the development of heteropatriarchal capitalism as a modern patriarchal form is supported by an institutional system that plays a fundamental role: law. Law fixes the power structures, and generates the conditions, in general, for the exclusion of women in the appropriation of resources. Because the hegemonic legal forms privilege the male, property-owning, hyper-rational classical contractor, and intimately related to its private property construct.²⁰³ In this sense, it is necessary to reveal the patriarchal aspects that we find in the current formulation of human rights and fundamental institutional texts. There is a need for alternative legal proposals that can alter hegemonies.

As I have already pointed out, my research is aimed at building a global constitutional account from a point of view that discusses and overcomes capitalism. The approach I will explore starts from the conception of constitutional law as the axiological nucleus of the system. It might allow us to transcend the current equality policies, which are still centred on an atomistic and androcentric pattern. Some of the strategic proposals go through a reconsideration of the way in which law configures access to resources and property, the conception of the individual towards the community, as well as the prevailing economic systems. But all this is only achievable through a constitutionalization of public international law.

Nevertheless, not only legal changes—in a formal sense—are required. The alternative necessarily involves strong cultural changes and the evolution of social practices. One of

²⁰² Richard Grusin (Ed.), *Anthropocene Feminism* (1st edition, University of Minnesota Press 2017)

²⁰³ Gear (n 142).

the proposals I am sure that can substantially contribute to overcoming the Anthropocene is ecofeminism. Or rather, the ecofeminist theories, conceived as an option to overcome the shortcomings of environmentalism and feminism. They might entail a contribution to the global understanding of the world, which can be enriched by other sources with different points of view. Ecofeminist theories, then, can constitute not a method, but a theoretical approximation that allows to point out the mechanisms of domination that define the capitalist world-system. At the same time, ecofeminisms function as a regulating ideal within the critical horizon of the transformation and overcoming of the Anthropocene.

In short, the analysis I propose seeks to incorporate the gender perspective in the changes that law and society have to face in the context of the transition to the Anthropocene, to ensure that the discussions of global ecological change include several voices. Not only for reasons of social justice, but also for the sake of institutional effectiveness, so as to address the crisis of sustainability and equity that humanity is experiencing today.

5. CONCLUSIONS

1. *The term 'Anthropocene' provides a useful narrative to confront the fundamental challenges of the global society.* The word was coined two decades ago, and today more than ever the term makes sense, as a comprehensive narrative of the present. The 'Anthropocene' defines a new geological era, and conceives the biophysical basis of social reproduction as the result of anthropic action. The term is broad enough to describe a great multitude of events coming from the same actor.

It has been discussed by a wide variety of branches of knowledge, since both natural sciences, social sciences and humanities have an impact on its narrative, contributing to the concepts of time, space, production of evidence and interpretation. The concept 'Anthropocene' has also not been free from criticism, and alternative terms have been proposed. However, it is the one that offers an integrative structure; it assimilates the current capitalist accumulation, the male/female hierarchy, the degradation of the planet and the rest of the domination forms and oppressive structures over society and the environment.

2. *Capitalism, as a comprehensive system of social reproduction, has been the main contributing factor to the Anthropocene.* Despite not being the only existing domination paradigm, it is the hegemonic system of social reproduction, and therefore, the main and most significant social process that has contributed on the transition to the Anthropocene. As we have seen, late capitalism develops itself in the context of a world-economy. It is neoliberal, technological, both productive and speculative, exploitative, plutocratic, patriarchal, patrimonialist, based on the economic growth and the possessive individualism. In today's capitalism, the concentration of capital has become global, developing on a planetary scale. All these characteristics have provoked a crisis in the traditional categories of property ownership, as well as the accentuation of all forms of oppression.
3. *Law, as we conceive it, has become a substantial factor in the articulation of capitalism and, therefore, in the causation of the geological transition.* In the narrative of the Anthropocene, law plays a fundamental role, as the institutional system that legitimates the developing of capitalism at a global level. Law is not neutral, as it is a product of human interaction. Moreover, the nation-states have intervened in the lives of individuals, by determining which the most valuable forms of life were. Law has favoured the

establishment of hierarchies of all kinds (for reasons of gender, race, religion, social class, etc.). These forms of domination have determined the rules for the appropriation and distribution of resources, generating the inequalities that exist throughout the world. Definitely, law determines the structures of power, providing the institutional framework, legitimization and the adequate structure to advance in the appropriation strategies of natural resources.

4. *Law in the Anthropocene faces a significant challenge: the transition to ecological and social justice.* Law can also be handled as a discipline to face big changes. For this, there is a need to transform law into the process of adaptation to the geological transformation. Some fundamental legal categories need to be reviewed, and also the paradigm of human rights, which is currently appropriated by corporations and state-centrism. There is a need to rethink new forms of organization, through the design of new legal and social instruments. Law in the Anthropocene will have to be the expression and foundation of a global vision that goes beyond sectoral policies. To make it happen, we will have to develop a new object and new principles, to have new legal techniques and a directly involved social substratum.
5. *This transformation must be deployed from the axiological core of law, that is, constitutional law, in a broad and material conception.* It has to be assumed both that the human being is an integral part of the natural environment, as well as that nature has also rights. The relations between humans and nature can be fairly redefined from a normative perspective, by reviewing the different dimensions of constitutionalism, such as the rule of law, separation of powers, judicial review, constitutional supremacy, democratic rule and constitutional rights.

The main premise seems to be an environmental reformulation of constitutional law and its possible generalization at the international level. For that purpose, global constitutionalization could compensate constitutionalist deficits at national level, by framing a new form of production, distribution and consumption, oriented towards the care of the common environment. Likewise, a constitutionalist reading of international law could serve as a hermeneutical tool, uncovering the legitimacy deficits of international law. These might be the real means to rise to the unprecedented challenge posed by the Anthropocene.

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