



Di-vision: The making of the “Anthropos” and the origins of the Anthropocene

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Abstract

The current geological transition implies the necessity of a paradigm shift in dominant social practices to cope with an emerging unstable global socio-ecological complex, which is being shaped by comprehensive, irreversible and uncertain human agency. Along with sustainability, issues of justice are crucial in this context including climate justice, which addresses the most notorious phenomenon of the transition to the Anthropocene, i.e. climate change. Such a paradigm shift implies the need to go beyond established practices in research and exploring new narratives. This paper develops a possible narrative of the civilizational patterns that led to the human transformation of the planet, and shows the limits of business-as-usual responses to confronting the global crisis brought about by the geological transition, and consequently their limited ability to achieve sustainability and justice in the Anthropocene. The narrative deployed here highlights the centrality of a particular form of vision in Modernity and its contribution to the establishment of hierarchies through the di-vision between the in-di-vidual and the external world, i.e. nature, which is untenable in the Anthropocene.

Key words

Anthropocene; capitalism; technoscience; rule of law

Resumen

La actual transición geológica implica la necesidad de un cambio de paradigma en las prácticas sociales dominantes para hacer frente a la inestabilidad del complejo socioecológico global emergente, configurado por una agencia humana integral, irreversible e incierta. Junto con la sostenibilidad, las cuestiones de justicia son cruciales

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en este contexto, incluida la justicia climática, que aborda el fenómeno más notorio de la transición al Antropoceno, es decir, el cambio climático. Tal cambio de paradigma implica la necesidad de ir más allá de las prácticas establecidas en la investigación y explorar nuevas narrativas. Este artículo desarrolla un posible relato alrededor de los patrones de civilización que han llevado a la transformación humana del planeta y muestra los límites de las respuestas habituales para enfrentar la crisis global provocada por la transición geológica y, en consecuencia, su limitada capacidad para lograr sostenibilidad y justicia en el Antropoceno. La narrativa aquí desplegada destaca la centralidad de una forma particular de visión en la Modernidad y su contribución al establecimiento de jerarquías a través de la di-visión entre el in-di-viduo y el mundo exterior, es decir, la naturaleza, que es insostenible en el Antropoceno.

Palabras clave

Antropoceno; tecnociencia; capitalismo; estado de derecho

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1. The programme

Climate justice is emerging as a governance pattern (and perhaps as a significant legal principle) in the context of human-induced climate change, which is the most salient phenomenon of the geological transition described in the narrative of the Anthropocene (Ribot 2014). The new geo-social scenario suggested by this narrative seems to demand a comprehensive reflection upon social practices to establish how the geological crisis is caused (in social as well as in physical terms) and how humanity as a whole should react, given the fact that the geological transition addresses the whole species as an actor/patient.

The concept of Anthropocene, although used in a rather informal way since the eighties, has gained traction with the new millennium to become the crux of the concept of global change, defining particularly the perspective of the community of Earth System Science and reaching a wide social acceptance as a narrative of the present in different domains, giving way to notorious cross-fertilization and exchange. Particularly, this concept helps to frame climate change as a global process and is needed to interpret the implications of climate justice.

In order to incorporate the justice issue, it is necessary to conceptualize the development of a socio-ecological complex of global dimension, according with the narrative of the Anthropocene. Here, the concept of social metabolism is very useful providing a pattern for the exchange relations between society and nature, consisting in the “material input, processing releases of societies and the corresponding turnover” (Fischer-Kowalski and Haberl 1998, p. 573; see also Fischer-Kowalski 1998, Fischer-Kowalski and Hüttler 1998, and Weisz 2007). In this way, the transition from the Holocene to the Anthropocene would be defined by the progressive growth of the social metabolism of capitalism, which expands beyond biosphere, using non-renewal resources at a planetary scale (Fischer-Kowalski and Haberl 1998, p. 574).

This powerful and expanding social metabolism has finally an impact of geological dimension, projecting human agency into the geohistory, which implies an “integrated approach [underpinning] new understandings of the way that variability in the conditions at the earth’s surface – in the envelope that includes all living things – is systematically connected with strata-forming processes” (Clark 2017, p. 214). Accordingly, we are situated in a “threshold transition scenario”, where human agency is entangled with geological strata, entering in geohistory as well as dissolving into a socio-ecological complex where social and human are no more independent dimensions of reality (Clark 2017, p. 215). The fact that social metabolism is melting into geological evolution implies the overcome of social, political and legal assumptions during the Modernity calling for “a new geopolitics that considers geophysical activity, linked with human creativity” (Last 2017, p. 148).

However, the narrative of the Anthropocene seems to suggest a concerted action of the humanity as a whole, as if internal relations were equitable and responsibilities in relation to planetary transformation equivalent (Steffen *et al.* 2007, pp. 619-620). Some authors have shown that this way of telling the story leaves out the profound inequalities in the evolution of global social metabolism and, consequently, does not take into account the differentiated responsibilities and the different consequences that the different human groups they must face in relation to the transition to the Anthropocene

(Malm and Hornborg 2014, Bonneuil and Fressoz 2017, p. 65ff), rather qualified by some of them as “Capitalocene” (Moore 2016, pp. 5-6). In this context, issues of justice and in particular of climate justice are relevant to developing an socio-ecological response to the geological transition, if we assume that it would be unacceptable for there to be substantial differences between people and communities in confronting a crisis which affects humanity as a whole, and reject the irresponsible assumption that the consequences of climate change will be random.

If human induced climate change and the related geological transition (from the Holocene to the Anthropocene) are linked to certain (hegemonic) social practices, a critical analysis of these is necessary if we are to engage in relevant discourse on justice in the global crisis; and particularly on climate justice. This critical analysis should help us to define the cultural substrate of hegemonic social practices and the legal structures which frame them, so that we can detect how they have produced a geological crisis which is threatening human life as we know it and generates profound injustices. Exploring new narratives beyond current fundamental social assumptions is a necessary consequence of such a critical appraisal.

“Transitional times call for transitory imaginations” (Klingan *et al.* 2014, p. 10). Consequently, this paper assumes that it is necessary to go beyond business-as-usual responses and take seriously the social situations which are contributing to the geological crisis we are experiencing. Accordingly, I use a narrative that highlights the centrality of vision in Modernity and its contribution to the establishment of hierarchies through the di-vision of the in-di-vidual from the external world, i.e. nature.¹ Vision is conceived here as the human sense envisaging reality, constructing it as an image and therefore taking a distance from it, marking the human singularity that the Anthropocene is challenging. Vision is essential in developing the paradigm of technoscience regarding the politics of truth as well as the capitalist world economy and the nation-state idea. After describing these three civilizational patterns and showing their links to the Anthropocene, the paper concludes by suggesting that the reproduction of such patterns is an inadequate response to the geological crisis.

The centrality of vision in defining the human agency boosting geological transformation and the need to explore new (legal) narratives in order to go beyond a business-as-usual attitude have suggested me the idea of building this paper as an opera, beginning with a hand programme to help the reader to follow the discussion, and then an overture introducing the Leitmotiv and five acts with variations on it. Obviously, the setting is invoking the imagination of the reader, beginning with the missing music, but opera as a theatrical as well as musical genre is particularly significant as it is conceived

¹ Modernity is understood in this paper as is a certain way of being in the world, which is based on certain matrices of interpretation of what must be understood as human being and nature, as well as the relationship between both. At the same time, it implies a certain social organization that supports these hermeneutical matrices, understands itself through them and unfolds from them. In my opinion, the image of the world of Modernity begins to have a significant impact on Europe in the sixteenth century, seems to reach the climax of historical success during the nineteenth and early twentieth centuries, and begins to enter into crisis in the period between two world wars and, especially, since the end of World War II. This image of the world is based on the understanding of the human being as a rational subject radically differentiated from its environment, which can be appropriated through scientific-technological development in the context of a capitalist economy (see Jaria Manzano 2011, 17ff).

as a spectacle to be seen, separating the public from the stage, avoiding participation, and making music a visual experience to be enjoyed from the distance.

Accordingly, my purpose here is not to study law in (or on) the opera (as Annunziata and Colombo 2018) but reversely, to use opera as a narrative structure to explore the vision as core of the Modernity. Opera is conceived here as seen music as well as a stylized narrative, where a limited number of musical scenes should tell a story in a way more restricted than modern theatre, novel or cinema. Moreover, opera appears as a dramatic/musical genre at the beginning of the Modernity, in Italy during the sixteenth century connecting with the cultural processes that launch the narrative of Modernity deployed in this paper.² To some extent, opera is a particularly significant form of desacralization of the art showing the transition to Modernity, according to the idea of *Entzauberung* (Weber 1922) which Thomas Mann reinterpreted regarding aesthetics in his *Doktor Faustus* (Mann 1992, pp. 72-72).

Reflecting upon emblems in early modern legal literature, Peter Goodrich underlines the importance of the theatrical in law (Goodrich 2014, xvii). In this vein, opera seems to me the most modern theatrical genre, moving the theatre from shared ritual to a bourgeois spectacle. In fact, the ritualization of the law in the Modernity has some of theatrical (Goodrich 2014, p. 247), and opera, as a representation, is used here as a dramatization of the deep foundations where modern law is rooted to open the way to explore the limits of (climate) justice in the current legal universe.

However, his study is more focused in image, conceived as a visible representation of law or power, than in vision, an active capacity of the individual to represent the world. On the contrary, I will concentrate in the particular link between vision and individual, as it constructs the fundamental features of social action causing the Anthropocene, through the politics of truth, the design of social metabolism and the institutional arrangements of Modernity. I address this “scopocentrism” through an operatic narrative.³ Hence, the paper begins with an overture, where I present the principal theme, and then this theme is developed in five acts, where relevant scenes are intended to represent three fundamental “scopocentric” traits of Modernity (technoscience, capitalism and constitutionalism), then being projected into the generation of geological change and, finally, confronted to a non-vision scenario.

2. Overture: Et vix unius cubiti altitudo visa est pre altitudine contemplationis humane

On 26 April, 1336, Francesco Petrarca, known in English as Petrarch, supposedly ascended Mount Ventoux, the highest mountain in Provence at 1,909 meters. His climb is described in a famous letter he wrote to Dionisio da Borgo San Sepolcro contained in

² Opera as we know it develops during the first half of the Sixteenth Century in Northern Italy, evolving from a court setting to a modern theatre during the life of its first great author, Claudio Monteverdi, who premieres its *Orfeo* in the Ducal Palace of Mantua in 1607 and its *Ullisse* in the Theatre San Cassiano, in Venice, in 1640 (Fath 2017, 9ff).

³ I understand by “scopocentrism” a civilizational complex where vision occupies a central role in defining the experience and the behaviour, which, I argue here, is the case of Modernity.

his *Epistolae familiares* (IV, 1).⁴ The text has been said to describe the birth of Modernity. It has two fundamental features which support this contention.

First, Petrarch was encouraged to undertake the ascent by a spirit of personal adventure and a desire to see the view from the famous high point of the region: “*sola videndi insignem loci altitudinem cupiditate ductus*” [My only motive was the wish to see what so great an elevation had to offer] (Robinson 1898, p. 308). In this sense, Petrarch advances the importance of vision as a central feature of modern culture directly linked to a point of view and the idea of the conquest or dominance of the view (“what so great an elevation had to offer”). Thus, the final goal of the expedition is to reach a position of dominance of the reality through the vision, which places the human individual in a place reserved until then to God, separating him (not yet her) from the reality, setting the cultural foundations for Modernity.

The Petrarchan experience points also to the second fundamental characteristic of Modernity, the link between vision and individualism. Vision creates a divide between the observer and the observed and implies the existence of a point of view. After climbing the peak and seeing the view, the poet states that the summit of the mountain “seemed scarcely a cubit high compared with the range of human contemplation” [*et vix unius cubiti altitudo visa est pre altitudine contemplationis humane*] (Robinson 1898, p. 318). The human soul, having possessed the vision, is ultimately its source, and is consequently most important and should therefore be protected from “those appetites which spring from earthly impulses” [*elatos terrenis impulsibus appetitus*] (Robinson 1898, p. 319). The divide between the individual (the soul) and the reality (the earthly impulses, the world) is not only physical but also moral, establishing the superiority of human individuals regarding nature.

The combination of a vision from the summit with a heroic masculine *epos* has informed the ongoing cultural continuum of Modernity since the Renaissance, with the man-at-the-top *topos* operating as a subtext in the dominant narratives of the period.⁵ This *topos* is strongly linked to the predominance of vision, underlining the centrality of the individual and the establishment of hierarchies. History of modern science is full of Faustian epics of heroes of knowledge who unveil the reality (allowing vision to penetrate it), where individualistic efforts are rewarded with the mastery of nature. Galileo, as we will see later in this paper, is an example of this.

The perspectivism introduced in the Western understanding of this period, expresses the importance of individual vision in the new cultural world in which it replaces the unperspectivistic world of the collective (Gebser 2011, pp. 26-27)⁶. Vision emphasises the tension between the individual and his environment, which is resolved through the idea of dominance with seeing conceived as a condition for control. Thus, the patterns

⁴ The original Latin text of this letter (*Epistolae familiares*, IV, 1) is available in Petrarca 1366. There is an English translation in Robinson 1898.

⁵ Probably the most salient expression of this is the Goethe’s *Faust*. Johann Wolfgang Goethe, which was contemporary of Caspar David Friedrich, author of the *Wanderer above the Sea of Fog* (Goethe 2008).

⁶ *The Optics*, a study on vision upon Aristotelian theory, was written by Abu Ali al-Hasan ibn al-Haytham at the beginning of the 11th Century. Two centuries later, the work was translated into Latin and arrived in Italy, just when Petrarch was flourishing. The book influenced artists as Lorenzo Ghiberti, Filippo Brunelleschi and Leon Batista Alberti, all of them originators of the theory of perspective. A significant fragment of the book is available in English in al-Hasan ibn al-Haytham 2014, 121–131.

of the colonisation of nature are delineated, paving the way for the capital accumulation and the development of technoscience that culminates in the current process of geological transformation (Fischer-Kowalski and Haberl 1998).

Accordingly, the image of the man-at-the-top allows us to identify the centrality of the vision of European men as a means of domination of nature. The cultural centrality of vision ultimately expresses the tension between the subject and the object, being the main signifier of the process of differentiation between them. Finally, in Petrarch's ascent of Mont Ventoux we see the parallel processes of subjectivation (of man) and objectivation (of nature), the separation of *res cogitans* [the thinking being] and *res extensa* [the physical reality], as formulated in the sixth of Descartes's *Meditationes de prima philosophia*, that define the foundations of Modernity (Descartes 1990).⁷

The image of the man-at-the-top has since been a telling representation of the hierarchies of Modernity in so far as it focuses attention on the dichotomy of subjectivity/objectivity at its heart. This *topos* is iconized in the famous 1818 painting by Caspar David Friedrich, *Der Wanderer über dem Nebelmeer* [The wanderer above the sea of fog], in which we see a Petrarchan character at the top of a mountain gazing down at and implicitly dominating the surroundings immersed in the fog below him: "*nubes erant sub pedibus*" [the clouds under our feet] (Robinson 1898, p. 313).⁸

The Romantic *pathos* of the painting gives a heroic patina to the secular process of the colonisation of nature, based on this idea of the glorification/subjectification of individual consciousness and the reification/objectification of nature. Visualizing became, from its military origins, since Thomas Carlyle's lectures on heroes, "the mark of the (...) hero, [who] was precisely [... who] could visualize history as it happened, unlike all other men (women being considered irrelevant by the archreactionary Carlyle)" (Mirzoeff 2014, p. 216). The irresistible force of the vision penetrates even the world of sounds, the world of music – from the symphonic poem to the video-clip; for example in the *Alpensymphonie* of Richard Strauß, whose central fragments *Auf dem Gipfel* [at the top] and *Vision* are overt references.

The hierarchy implied by this *topos* is intrinsically contained in the top-down narrative suggested by the Wanderer contemplating the sea of fog in the Friedrich's painting. As modern culture is also a culture of continuous progress, the man-at-the-top is easily elevated to an ever-higher position. The final stage of this process is represented by the famous *Blue Marble* picture, taken on 7 December 1972 by the crew of Apollo 17. The vision from above (and the implicit narrative of dominance) is transported to a new dimension in the picture of Earth captured from space, although the narratives associated with this icon are ambiguous, as we should see below (Wagley 2016).

⁷ Despite the foundations of modern dualism (the separation between the self and the reality) can be traced even in the Carolingian Renaissance, with John Scotus Eriugena, it is generally accepted that the clear separation between *res cogitans* and *res extensa* and the very concept of *cogito* in Descartes inaugurates modern philosophy, where epistemology is predominant regarding ontology. After Descartes, there is there are a series of philosophers focused on the questions related to knowledge, which start from the separation of mind and matter, such as Berkeley, Hume or Kant. This has been expressed to the idea of Cartesian Revolution (for example, Boulad-Ayoub and Vernes 2006).

⁸ The figure with his back to the viewer is an intermediary between the viewer and the landscape, situating the viewer in the position of the protagonist in the act of reaching the sublime through contemplation, thereby unifying the view, dominance and truth (Wolf 2003, p. 57).

Interestingly, in the original picture South was at the top and this was inverted in the published image to conform to the traditional vision of the North at the top, as in traditional Western cartography (Reinert 2011). In the *Blue Marble* the entire world seems finally to be in our hands... or at our feet (*sub pedibus*).

This iconic picture, to which I return later in this paper, unifies cartography (which is strongly linked with the origins of capitalism) with astronomy (which is closely linked to the origins of the scientific revolution). In both semiotic spaces vision is a fundamental notion expressing knowledge and domination at the same time, as well as the relationship between individual freedom fundamental and capitalist social relations and technoscience, as I will try to explain in the following pages. In this way, the man-at-the-top *topos* coined by Petrarch, becomes the quintessential expression of the modern world, being atomistic and “scopocentric” in a deeply intertwined way.

I assume that the sociocultural patterns generating the geological transition are based in this. For this reason, I believe that any significant movement to climate justice should deal with the fundamental cultural and social features that have produced injustice and unsustainability with the anthropogenic transformation of the planet. Now, I will develop how this sociocultural matrix have induced the geological transition and particularly climate change, producing injustices through domination and manipulation of nature.

3. Act One: E pur si muove!

On 22 June, 1633, Galileo Galilei was found guilty of heresy by the Roman Inquisition (the Sant’Ufficio di Roma) for having “sustained and believed a false doctrine and contrary to the Sacred and Divine Scriptures, as that the sun were the centre of the earth and it were not moving from East to West, and that the earth is moving and were not the centre of the world” (Antiseri 2014, p. 30; my translation). Galileo’s trial followed the publication in 1632 of the *Dialogo sopra i due massimi sistemi del mondo* [Dialogue concerning the two chief world systems], in which he supported the heliocentric system proposed by Nicolaus Copernicus in his *De revolutionibus orbium coelestium* [On the revolutions of the heavenly spheres], published in 1543,⁹ contrary to the Ptolemaic system accepted by the Catholic Church. In contrast to the original arguments in *De revolutionibus*, Galileo’s affirmation of the Copernican system was based in experimental evidence obtained by using the new refracting telescope designed by him in 1609.¹⁰

After being convicted and having abjured his heliocentric convictions, Galileo reportedly said: “*E pur si muove*” [And yet it moves]. With this, Galileo was defending a certain interpretation of the facts through the use of a new technology of “vision” – the

⁹ The heliocentric model was adopted by Copernicus essentially because of its elegance and simplicity as against the complicated mathematical artefacts needed to sustain the Ptolemaic system, not for its correspondence with experimental evidence. This ultimately was a development of the Ockham’s principle of economy, which relates to the idea that mathematics is nature’s language and to the duality of hypothesis and experiment, one of the fundamental features of the scientific revolution, where the work of Copernicus was foundational. Regarding Ockham’s thought and particularly his razor, see Spade 2019.

¹⁰ The duality hypothesis/experiment is a fundamental characteristic of the modern scientific tradition, as noted by Heidegger (1998). Nagel (1961) notes that it is not necessary to have clear ideas about the scientific method in order to be able to use it. Normally, people working in scientific research simply develop work habits through example and tradition without major reflection upon the methodology.

telescope – which gave him the opportunity to “prove” them through “observation”. This story was also interpreted in the sense of the individual defying authority, in the vein of the heroic pathos of the modern geniuses. But, as Bruno Latour notes, “the prophet became king”, and “we cry, like Galileo, but before the court of his successors” (Latour 2014, pp. 2-3). Our point is now again to overcome the *fossilized* structures of authority to expand and enhance our narratives, in order to cope with the transformation of the planet and find a new discourse of justice.

The importance of vision in the story of Galileo before the Inquisition is substantial, given the fact that his allegiance to (experimental) truth against dogmatism is linked to the use of a telescope as a means to *see* the true nature of things.¹¹ The *Dialogo* is written in Italian. Therefore, it is conceived not as an academic work, but as a popular book advocating for the link between mathematics and observation, challenging the bookish and dogmatic knowledge of the University (expressed in Latin) through the use of an artefact such as the telescope (Mumford 1974, p. 52). After this, the path for technoscience is open through the link between technics (artefacts) and science (knowledge of truth).

After Copernicus and Galileo, astronomy became the model for legitimate knowledge obtained through true science in which mathematical language and the centrality of vision are present. Classical mechanics creates a deep divide between the observer – the rational mind shaped by mathematics and having a window open to the world through vision – and the reality observed – seen, interpreted and dominated through mathematics and vision.

Nature, i.e. things observed, consequently becomes a mechanism governed by mathematical rules (permanent and foreseeable), which can be discovered through trained observation. After Copernicus and Galileo, Isaac Newton formulated the physical laws governing the world in the *Principia Mathematica* (1687), where the universe, being susceptible to observation through a telescope, is presented as a rational mechanism under stable and cognoscible laws. This capacity to *see the truth* is intimately linked with the idea of using the truth to dominate the object, thereby excluding any other forms of knowledge and establishing ultimately not only an ontological hierarchy, but also an epistemological one (Mumford 1974, p. 14ff).

Vision is central to the *di-vision* between subject and object, provided that the observer is always out of the picture, acquiring a position of superiority and dominance through unlinking form the observed.¹² For this reason, technologies of vision are also technologies of domination that reinforce the radical Cartesian separation between mind and body, and society and nature, which quickly become a hierarchy, with the man-at-the-top seeing/dominating the world (Mickelson and Rees 1993, p. 3). This can be perceived in the Baconian programme of domination, which shows technoscience as a means for governing nature (Bacon 1987, 129).

This disenchanting and cognizable word, deprived of mystery through the power of vision, becomes absolutely manageable, and subject to human conquest (Melucci 2001,

¹¹ During the Renaissance, the representation of error through a blind man is a *locus commune*, although the representation of blindness carries an ambiguous message. See Goodrich 2014, xxiv.

¹² Both terms, “vision” and “division”, share the same Latin root, “vid-”, from which derives the verb “video”, which can be translated as “to see” as well as “to know”.

p. 30). The subject is prone to sovereignty, with all its political and legal implications, and is willing to submit all that can be submitted; playing with words, the subject is willing to subject the subjected (Sloterdijk 2014a, 510). This implies an instrumental conception of nature, which exists to that which may be exploited by human beings (Vaughan 1974, p. 10ff, Touraine 1992, p. 349). In this vision nature can be shaped by the force and knowledge of human individuals freed from superstition and empowered by science (Mickelson and Rees 1993, p. 3).

Consequently, an ideology of science embedded in Cartesian and Newtonian narratives emerges in which human domination is desirable and the manipulation of the natural world is reversible (Vaughan 1974). Hence, there is no fear before a transformation of the world that could threaten the development of individual human beings, displacing the question of truth to instrumental manipulation of the reality (Heidegger 1998, p. 66). This is why the first law of thermodynamics expresses the essence of Modernity, as pointed out by Peter Koslowski, because it simultaneously underlines the externality of the observer as a subject and the permanence of the world as an object (Llano 1988, p. 192).¹³

The significance of the views of the Marquis de Laplace – who famously states that if an intellect would know at a certain moment the position and momentum of all the particles of the Universe, it could know all the past and future – can be understood in this context because he regarded nature as a mechanism subject to immutable rational laws (Laplace 1951, p. 4). The colonisation of nature and the emancipation of the individual, which are parallel processes in Modernity, generate a politics of truth with crucial consequences for the organisation of society (Chevallier 1998, p. 661).

The divide between subject and object, which is fundamental in the “scopocentric” culture of Modernity, makes possible to establish the in-di-vidual (who is also in-visible, just because is the subject looking around) as one of the terms of the relation, the human soul in the Petrarchan narrative. The individual is the one who cannot be divided, the abstract entity with vision, who looks through the di-vision and sees the world of objects. Hence, the story of Galileo and the Inquisition is doubly instructive because it illustrates the construction of knowledge through vision – which is also di-vision – through the telescope, but also because underlines the importance of the individual, the heroic character struggling against and finally defeating the communitarian constraints of the Catholic Church. This makes it possible to disregard traditional knowledge, which intensifies with the diaspora of Europeans around the globe that accompanies colonialism, and to construct certain notions of truth fundamental to the development of capitalism (Moreno Navarro 2000, p. 107).

In the end, the capacity to see is also the capacity to dominate and transform, as well as the means to be free from the constraints of nature. The subtext of modern science can be detected in the story of Galileo’s trial as a narrative in which the in-di-vidual (the one who cannot be di-vided or seen, but who is himself the subject of vision and di-vision)

¹³ The first law of thermodynamics expresses the conservation of energy in a closed System, stating that energy can be transformed from one form to another, but never created. Implicitly this assumes that the system is susceptible of indefinite manipulation, as well as assumes the externality of the observer, who does not interfere with the system. This is related to Newtonian physics and an implicit assumption of reversibility, through the idea of endless transformations (Adam 1998, p. 44).

conquers truth and freedom through a vision which transcends the di-vide between subject and object, leaving the latter open to domination and manipulation. And in this way the link between technoscience and the capitalist world-economy becomes increasingly transparent (Jaria-Manzano 2011, p. 50ff).

4. Act Two: ... *iacet extra sidera tellus*

In Book VI of Virgil's *Aeneid* it is prophesied that future conquests of the Emperor Augustus will extend to a land beyond the stars ("*iacet extra tellus*", *Aeneid*, 6,795). Centuries later this unknown land was discovered in the New World. In a letter to his patron, Lorenzo Pietro di Medici, Amerigo Vespucci expressed the conviction that Europeans had not reached Asia in their transatlantic journeys, but a new continent (Vespucci 1916). The impact caused by this text was the reason why Martin Waldseemüller gave the name "America" to this *mundus novus* in his *Universalis cosmographia secundum Ptholomaei traditionem et Americi Vespuccii aliorumque lustrationes* (1507), which contains the first map in which America is separated from Asia (Taylor 2007, p. 37).

This is the foundational moment of modern cartography. With the Renaissance, cartography is provided with "coordinate systems, Euclid, scale maps, and accurate measurement" (Harley 1989). But maps are not only a scientific enterprise, but they create a "juridical territory" facilitating "surveillance and control" (Harley 1989). In this sense, cartography manufactures power, "is a power embedded in the map text" (Harley 1989; also, Crampton and Krygier 2006, p. 15). We should be aware of "the inherently political nature of the mapping process" (Johnson *et al.* 2006, p. 85).

The map is projecting power on a new world, announcing also the dynamism of the emerging societies, which are developing new processes of social reproduction progressively generating a new socio-ecological framework. The reception in Europe of the news about the first trip of Christopher Columbus to the New World in 1492 endorsed the impression that the world was changing before the very eyes of contemporaries, illustrating the process of transition from the Middle Ages to Modernity and the expansion in an unlimited world, submitted to control and exploitation through the rational laws that determine the *mechanics* of nature and, with them, of the instruments that allow its domination (Taylor 2007, p. 37ff). To some extent, this Geographical Revolution, led by Columbus, Vespucci and Waldseemüller, precedes and provides a model for the Scientific Revolution, led by Galileo, both linked to the conquest of a newly *discovered* world, being this dis-covering a means for envisaging.

The idea of Americas as the new world is highly significant. From a legal point of view, it made it possible to justify the European appropriation of the "discovered" continent and the dispossession of the native population, which was a fundamental aspect of colonialism. The arrival of Europeans in the Americas was the first step in the global expansion of capitalism, which demanded the substitution of traditional communities by individuals as fundamental social actors (Wallerstein 1974). In this context, leading representatives of the Spanish school of law which contributed to the creation of modern international public law, such as Francisco de Vitoria and Domingo de Soto, confronted with the moral and legal problems raised by the Columbian exchange, argued that the principle of individual property (*dominium*) was universal, being the condition for social

life (Koskenniemi 2011, p. 16). Then this *dominium* was attributed to “civilized” peoples, while aboriginal peoples, incapable of even understand *dominium*, were excluded of the modern society, expelled from the emerging international law and deprived of its lands.¹⁴

The cartographical representation of the Americas in Waldseemüller’s map illustrates how vision and domination are closely linked in the cultural development of Modernity, creating hierarchies, surveillances and also invisibilities. In the narrative implicit in Virgil’s quotation and Waldseemüller’s cartographical representation, a link is established between visual representation and conquest that helps to elucidate how the whole planet became a set of resources for a global social metabolism built through capitalism (Serrano Moreno 1992, p. 87ff). We are confronting here a cartography of power which enables the submission of peoples and the exploitation of resources.

The mapping of America after the arrival of the Europeans is an expression of the power exercised by them on the new lands, as far as “it is a way of representing space which facilitates its domination and control”, as was stated by the French Geographer Yves Lacoste (cited by Crampton and Krygier 2006, p. 22). The map is “an authoritarian image”, which allows to remove “life and context (...)”, facilitating managerial, bureaucratic and autocratic modes of governance, distanced from the complex reality of the ground” (Chandler 2018, p. 34). Regarding America, the map allowed the newcomers to say: “This is mine; these are the boundaries” (Harley 1989). This is the framework for appropriation (of lands), domination (of labour) and exploitation (of resources). The colonization of the Americas is the inauguration of the process of capitalism accumulation.

The world represented by Waldseemüller is simultaneously a scenario for economic exchange and hierarchy. The New World is conceived as a repository of resources for the old world, establishing a global differentiation between centre and periphery, which is essential to the capitalist world-economy.¹⁵ This economic differentiation is based on unequal carbon exchange, where the fundamental issues raised by climate justice are embedded.¹⁶ The “discovery” of the new world made possible to amplify unequal relations between the centre and the periphery on a global scale.

Hence, Waldseemüller’s map becomes a depiction of the triangular trade between the European metropolis, Western African territories and the American colonies leading to the establishment of a plantation economy in the latter based on slave labour (Mannix and Cowley 1968, 79ff, Kriedte 1982, p. 109ff). This process of planetary transformation, referred to by some as the “Plantationocene”, has been underway since the seventeenth century (Haraway 2015). In this context, the new technoscientific knowledge is deployed

¹⁴ Legal theorists strive to build a hermeneutic pattern for the law of peoples stating the differentiation between civilized and semi-civilized peoples (barbarians) or uncivilized (savages), as is the case of Franz von Liszt, in his *Völkerrecht* (1898), or James Lorimer, in *The Institutes of the Law of Nations* (1883 and 1884). See Iranzo Dosdad 2006, p. 56.

¹⁵ The structure of a capitalist economy between centre and periphery in the global economy was proposed by the Argentinian economist Raúl Prebisch, working for the Economic Commission for Latin America and the Caribbean (ECLAC), in 1949, giving way to establish the dependence theory. See Conti 1996, p. 129ff.

¹⁶ This notion emerged in the context of ecological economics, pointing out to the overexploitation of natural resources in the periphery to fuel the development of the centre (Hornborg 2009, Roberts and Parks 2009).

as a tool of domination. The nature is known as an object to be put at the service of man's ends in the context of a capitalist system of social reproduction (De Cabo 2004, p. 48).

Subsequently, the evolution of the process of capital accumulation results in a system "extremely unbalanced and unfair" global exchange which has exacerbated the exploitation of resources and the anthropic transformation of the planet (Roberts and Parks 2009, p. 389). Ultimately, the imbalances in the capitalist world economy, which has expanded over the planisphere, are paralleled by growing pressure on resources, particularly in the periphery (Jaria-Manzano 2020, p. 40ff). This is the product of an institutional system and a legal culture based upon the dynamics of individualisation and appropriation embedded in Western Modernity, which are anchored in the capitalist accumulation channelled through technoscientific artefacts and cultural gears (Grear 2015, p. 233).

Capitalism depends upon certain institutional structures and politics of truth, based in the delimitation of the individual regarding the community and the nature, transforming social relations and natural beings in commodities, through a matrix of valuation based on pure quantification. Then, it is possible to define the structure of internal costs and externalities, which allows or impedes different forms of use of resources, thus making them economically profitable or not. The exclusion of environmental costs from the price system makes certain economic activities profitable through backdoor subsidies, as happens with major energy companies (Stiglitz 2013, p. 124). This is why cultural assumptions are intimately linked with capitalist tools and institutional arrangements, making objects "amenable to visualization, inventorying and manipulation" and allowing its commodification in techno-capitalist framework, making clear "that territory is not simply given but is the historically contingent effect of a shifting production by particular governance imperatives, instruments and strategies" (Clark 2017, 221).

The di-vision implied in the "scopocentric" *nature* of Modernity results into the design of an object conceived as a means to satisfy human (in-di-vidual) needs, defined in terms of consumption, implying the reification of the world which is essential to capitalism.¹⁷ With this, the Petrarchan man-at-the-top is developed into the anthropological embodiment of capitalism, a system of social reproduction based on the existence of a subject aspiring to obtain maximum satisfaction at minimum cost – which is the diagram of consumer society. This defines the bourgeois ethos which dominates the social landscape of capitalist society (Buck-Morss 1995, p. 136). At the end, the man-at-the-top wants to know the world only to dominate it, or, more specifically, to *shape* it. And in fact, he does so. Digging into geological strata, "capitalism has naturalized itself to the earth, feeding off the fossil stocks and mineral flows of the substratum, its actions are material processes, not primarily ideological ones (although the ideological is a mode of capture and generator of affects)" (Yussof 2017, p. 113). This is the way through the in-di-vidual, as social construct, embeds himself in the geological time, becoming the *Anthropos* in the advent of the Anthropocene.¹⁸

¹⁷ This was particularly underlined by Georg Lukács and developed in the context of the Frankfurt School (Buck-Morss 1981, p. 72ff).

¹⁸ I will use the masculine pronoun for the subject, as this concept was developed as a masculine idea.

5. Act Three: That all men are by nature equally free and independent and have certain inherent rights

On 12 June 1776, the Convention of Virginia adopted a Declaration of Rights, a few days after the Declaration of Independence of the United States of America. This may be considered the first modern constitutional document. It begins with the following statement:

That all men are by nature equally free and independent, and have certain inherent rights, of which, when they enter into a state of society, they cannot, by any compact, deprive or divest their posterity; namely, the enjoyment of life and liberty, with the means of acquiring and possessing property, and pursuing and obtaining happiness and safety.

The construction of the subject – “the most important artefact of European history, fundamental for [the] self-understanding of most individuals in the Western world” (Müller 1982, p. 1, von Bogdandy 2006, p. 7) – through the twin ideas of autonomy and appropriation, which are equally important to the predominance of vision in modern culture, has deep political implications for human rights, one of the most important nodes of sense in contemporary politics and law (Jaria-Manzano 2020, p. 92ff).¹⁹ Human rights evolved from natural rights established in early liberal thought. These rights are designed to secure the appropriation of resources by the members of the hegemonic social group – white, male property owners – within relations of exchange in the uneven capitalist world economy.²⁰ In fact, a trope transforming animals like bees “into budding little capitalists” is common in the 18th century, being appealing until today as a description of natural processes as resulting of acting individuals (Latour 2017, 78).

In this view, modern science (defining the politics of truth on the model of classical physics built upon astronomy) and capitalism (defining hegemonic processes of social reproduction based upon the appropriation of resources and the effacement of traditional communitarian links) contribute to produce a new institutional framework. This framework is the nation-state, built on the idea of the constitution as a social contract between individuals, where perspectivism and atomism find their political and legal texture.²¹ Since that time the aims of political power have been to provide the rules for economic relations in the process of capital accumulation (the legislative arm), to protect the safety of them through different public policies (the executive arm) and to solve eventual conflicts (the judiciary) (Crook *et al.* 1992, p. 14).

¹⁹ The essence of human rights is related to the idea of human dignity, which developed after the Second World War, and is fundamental to understanding the consensus in international public law and in Western constitutionalism. This concept has been fully developed in German constitutional law by such significant authors as Peter Häberle (2004, p. 26), who deems human dignity to be the anthropological-cultural premise of the constitutional state.

²⁰ Individual rights are the legal tools used to exploit the commons, as in the enclosure of the land in England in the sixteenth century and similar historical processes such as the *desamortización* in nineteenth century Spain (Sainz Moreno 1998, pp. 238–239).

²¹ “Atom” and “individual” have the same etymology, “individual” being derived from the Latin *individuum* (that “which cannot be divided”) and “atom” derived from the Greek *ἄτομος* (meaning exactly the same). The social world of Modernity is consequently atomised, as pointed out by Gosálvez Sologuren (2010, p. 181). This idea is rooted in the metaphysical dualism starting with the di-vide between subject and object, as I have said previously (Gear 2015, pp. 233–234).

The subject – the Cartesian *cogito*, the Petrarchian man-at-the-top – defines a new political space and a new legal culture (Garrido Peña 1995, pp. 22–23). This idea has driven the process of human occupation of the globe culminating in the Anthropocene. It implies a radical divide between the traditional communitarian realities and the centrality of the individual in modern constitutionalism. The idea of citizenship based on individualism has been used to suppress traditional institutions among non-Western indigenous peoples for whom “the most immediate oppression is at the hands of the nation-state within whose boundaries they have been determined to lie” (Whitt 2009, p. 72).

Consequently, the individual is conceived independently of society, as its premise rather than its result (Weber-Fas 2002, pp. 55–56). The absence of the right to association in the French *Déclaration des droits de l’homme et le citoyen* of 1789 as well as in the first ten amendments to the American Constitution (1791) are examples of the radical individualism of early liberal constitutionalism, designed to create a homogeneous space of social exchange (Preuß 2012, p. 954). Indeed, as Benjamin Constant showed at the time, the freedom of the ancients is to participate in the government of the city, while the freedom of the modern ones consists in an individual sphere of privacy (Constant 1988).

However, ample segments of humankind are excluded as individuals taking part in the political society, considered of inferior quality, not fully human or not enough mature to participate in the social life, as happens with slaves or with women, excluded, for example, from the *Déclaration* of 1789 (Baer 2012, p. 984). In the case of the American Republic, the exclusion is also clear. Hence, the slave is excluded from the set of rights granted to the other members of society, because he was not human like the others (Sáez Valcárcel 2018, 203). The pretended neutrality of the individual is therefore loaded.

The individual is deployed as a cultural artefact promoting uniformity because effacing cultural difference. This is fundamental to the development of capitalism, allowing social mobility and ultimately economic exchange (Estermann 1998, p. 33). The individual becomes a reality previous to political society, which is only the result of a social contract (“when they enter into a state of society”),²² a hypothetical agreement between individuals assenting to live together in order to have guaranteed “certain inherent rights,” conceived basically in terms of appropriation (“the enjoyment of life and liberty, with the means of acquiring and possessing property, and pursuing and obtaining happiness and safety”), as it is derived from the bourgeois ethos as a model of life in the capitalist society (Garrido Gutiérrez 2005, pp. 640–641).²³

The modern constitution provides a clear set of supposedly neutral and predictable rules which break ancient communitarian links, promote social mobility, and destroy commons in favour of individual appropriation (Etxeberria 2006, p. 65). Political power

²² The idea that the existence of individuals is previous to the society, which mimics the criticism on universals developed since William of Ockham, is a widely accepted topic at the moment of the early liberal revolutions (for example, Paine 2008, p. 122).

²³ The contractualist literature is developing since the beginning of the 17th century, being Johannes Althusius a notorious example (Stolleis 1998, p. 154ff). However, the most significant contractualist works are produced during the same century in England, with occasion of the political unrest which encompasses the period between English Civil War and the Glorious Revolution. Particularly, it should to be mentioned the works of Thomas Hobbes (2012) and John Locke (1980).

is seized from God by the (white male) property owners to accomplish the cultural rationalisation and devaluation of religion (the *Entzauberung*) demanded by the new politics of truth, *e pur si muove!* (Fleiner-Gerster 1990, p. 89). The constitution defines the new consensus on legitimacy as well as the limits and procedures for exercising political power (Burckhardt 1944, p. 130).

The entire deployment of the unequal exchange system in the context of the capitalist world-economy occurs through a legal culture that promotes, on the one hand, homogenization and, on the other, the construction of an atomistic social reality based on guarantee and expansion of individual autonomy, in accordance with the paradigm of rights. Capital accumulation and the technoscientific paradigm are thus able to dominate the world and eventually to transform it on a geological scale. The modern constitution appears here as an expression of the *epos* of the man-at-the-top, providing him with rights and freedoms so that he may dominate the world at his feet. As Alec Stone Sweet has pointed out, “[i]n today’s world, the ideology of rights has, arguably, achieved the status of a civic religion” (Stone Sweet 2012, p. 819).

6. Act Four: I put up my thumb and shut one eye, and my thumb blotted out the planet Earth

It is time to return to the *Blue Marble*, “[a]n unplanned photograph taken more than 20,000 miles from Earth [that] may have had more influence on humanity than any other photograph in our history” (Wuebbles 2012, 509). Although the photograph allegedly “jumpstarted Earth Day and environmentalism as we know it” (Wagley 2016; also, Wuebbles 2012, p. 510), it tells a slightly different story, or at least suggests a sobering reading of hegemonic environmentalism. If vision implies di-vision between subject and the object, the iconic image puts the entire planet in human hands.

As Neil Armstrong famously said, “I put up my thumb and shut one eye, and my thumb blotted out the planet Earth” (New Mexico Museum of Space History 2019). Accordingly, the popularisation of the *Blue Marble*, which seems to me a pictorial representation of the climax of the Petrarchian *topos* of the man-at-the-top, suggests two ideas. The first one is that the earth as a whole, di-vided from the subject who can see it, can become an object of science as suggested by scientific framings such as the Gaia Hypothesis, which was formulated two years after the capture of the *Blue Marble* (Lovelock and Margulis 1974).

A sense of totality in the image suggesting “[t]he interconnectedness of all the spheres – hydrosphere, atmosphere, cryosphere, and lithosphere – into one sphere is the power of this image” (Wuebbles 2012, p. 509). The progressive development of the Earth Sciences since then is hardly surprising. Beginning with James Lovelock, he has stated that:

[t]o my mind, the outstanding spin-off from space research is not new technology. The real bonus has been that for the first time in human history we have had a chance to look at the Earth from space, and the information gained from seeing from the outside our azure-green planet in all its global beauty has given rise to a whole new set of questions and answers. (Lovelock, quoted in Wuebbles 2012, p. 510)

The emergence of the Earth as an object, represented by this *Blue Marble* iconography, “had constituted a solid but distant and faithful background for various geosciences” (Latour 2017, p. 62) as far as “younger geoscientists have grown up entirely with this

view of the Earth and take it as their birthright that the Earth is in their care" (Wuebbles 2012, p. 510). But this totality is also suggesting a division. The Earth as a whole is divided from the subject and thus, as usual, can be dominated and transformed by man. The narrative of the Anthropocene gives an account of both ideas: the perception of the Earth and its mastery.²⁴

In January 2002, Nobel prize winner, Paul Crutzen argued that "[f]or the past three centuries, the effects of humans on the global environment have escalated" and that "[i]t seems appropriate to assign the term 'Anthropocene' to the present, in many ways human-dominated, geological epoch, supplementing the Holocene" (Crutzen 2002). Ever since, the narrative of the geological transition, according to which the Earth has left behind its "natural geological epoch, the present interglacial state called the Holocene" (Steffen *et al.* 2007, p. 614) as a result of anthropogenic activity has become increasingly prominent in scientific research and popular culture (Kotzé 2016, pp. 37–38).²⁵

The narrative implied in the concept of the Anthropocene is that humankind has shifted from a situation of struggling for survival in a threatening environment to its domination (Jamieson 2011, p. 46, Hamilton 2016, p. 94). "The recognition that human activities are indeed affecting the structure and functioning of the Earth System as a whole (as opposed to local- and regional-scale environmental issues) is filtering through to decision-making at many levels" (Steffen *et al.* 2007, p. 618).²⁶

²⁴ The term was introduced in 2000 in research by the International Geosphere-Biosphere Programme (IGBP) (Crutzen and Stoermer 2000). However, it seems that Stoermer has been using the term since the 1980s in an informal way (Kotzé 2016, pp. 32–33).

²⁵ On 21 May 2019, following guidance from the Subcommission on Quaternary Stratigraphy and the International Commission on Stratigraphy, the Anthropocene Working Group (AWG) have completed a binding vote to affirm some of the key questions that were voted on and agreed at the IGC of 2016. The details are as follows: Q1. Should the Anthropocene be treated as a formal chrono-stratigraphic unit defined by a GSSP? 29 voted in favour (88% of votes cast) and 4 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 cast) and 4 against (no abstentions) (AWG 2019). This view is supported on the experimental data about "the artificial radionuclides scattered around the Earth", which "may be regarded as a primary, and arguably the primary, marker for Anthropocene strata because of their global distribution" (Zalasiewicz *et al.* 2017, p. 86). According to the same authors, "atmospheric fall-out from nuclear testing has considerable advantages as a potential tool for marking the start of the Anthropocene" (Zalasiewicz *et al.* 2017, p. 92). "This has led to the proposal that this putative time interval could coincide with the start of the atomic age with the first detonation of the Trinity nuclear device in New Mexico, on the specific date of 16 July 1945" (*ibidem*). This dating is related to the confluence of the grand narratives of the Great Acceleration and the planetary limits, supporting the statement that "[t]he last 50 years have without doubt seen the most rapid transformation of the human relationship with the natural world in the history of humankind" (Steffen *et al.* 2004, p. 131). Other authors consider other factors, as "megafaunal extinctions", "evidence for widespread agriculture" or "persistent industrial chemicals, including plastics and other decay-resistant chemicals", which can lead to other proposals regarding dating (Meineke *et al.* 2018, 1). In the end, this is still a controversial question, as far as it is linked to establishing responsibilities regarding the effects of the geological transformation and, particularly, climate change (Arias Maldonado 2018, p. 47). Moreover, the beginning of the new era would have been less punctual than cumulative, asynchronous and prolonged (Arias Maldonado 2018, p. 50).

²⁶ This implies the intervention of law in the transdisciplinary project defined by Earth System Science (Greenwood 1994, p. 100).

Some authors have promoted the idea of a good Anthropocene by extending the technological optimism inherited from the scientific revolution – *e pur si muove*, as we already know.²⁷ Confidence in the capacity of technology and innovation to produce human welfare has deep roots in Western culture linked to teleological ideas of progress associated with capitalism and modernity (Ross 1991, p. 101ff). The idea of a good Anthropocene is linked to technoscientific and managerialist responses to the environmental crisis linked to image of the *Blue Marble*.²⁸ Sustainable development is symptomatic of such approaches because it does not entail substantial changes in processes of social reproduction and the politics of truth, endorsing a colonial ecomodernist perspective, which is deeply attached to the modern construct of the individual.²⁹

In fact, the Anthropocene discourse as well as the climate change focus “have been criticized for underrepresenting the neo-colonial element of the distribution of both human impact and intervention”, providing an “imperial aesthetics”, still distinguishing “between First World prowess and Third World deficiency” (Last 2017, p. 149). Technological fantasies of domination extended to the whole Universe can be found beyond the Blue Marble narrative, suggesting an involvement in the shaping of the world (Mayer 2016, p. 578). This is the niche for geoengineering, justified for some ecomodernist technophiles because of the “historical failure in establishing a political solution to the problem of anthropogenic-induced global warming” (Tavares 2014, p. 66). This kind of Faustian narrative endorses a managerial perspective and a domination discourse which suggest a Space Age ascent to Mont Ventoux. Yet, it seems that this supposed era of human domination is rather an epoch dominated “by a growing entanglement of heterogeneous human and non-human agencies within the body of the Earth”, an epoch that will be “noisy” (Szerszynski 2017, p. 254).

7. Act Five: Is there anything more frightening than people?

On 26 April 1986, exactly 650 years after the putative ascent by Francesco Petrarca of Mount Ventoux, an explosion occurred in the No. 4 Reactor of the Chernobyl Nuclear Power Plant in the Ukrainian Soviet Socialist Republic. The radiation caused enormous damage to the environment and to human beings, sometimes at great distances from Chernobyl. The Chernobyl disaster has significant implications regarding my argument about vision. We do not have pictures of the disaster, not only because of the secrecy imposed by the former Soviet Union, but also because the effects of the disaster were insidious, unpredictable, difficult to detect, if not impossible to see. The disaster is the

²⁷ This would be achieved through technological developments such as geoengineering (Hamilton 2016, p. 99ff).

²⁸ The managerialist approach has inspired its share of environmental policies for decades. Especially relevant here are climate change policies such as emissions market promoted by the Kyoto Protocol and other technocapitalist framings (Chichilnisky and Heal 1998).

²⁹ Sustainable development was a concept coined in the *Report of the World Commission on Environment and Development: Our Common Future*, where it was defined as the ability “to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development 1987). It has been a target of criticism, since it endorses a business-as-usual scenario in terms of fundamental social practices and structures. For an overview of the criticism, see Alder and Wilkinson 1999 (p. 127ff); and Clarkson and Wood 2009 (p. 124ff).

negative to the ascent to Mont Ventoux, a clue about the blind spots of 'scopocentric' civilisation.

Recent events carry on this narrative of invisible threats. The revision of this paper was undertaken during the outbreak of the COVID-19 pandemic. It has been identified as a zoonotic disease (Andersen *et al.* 2020), and its links with anthropic decrease of biodiversity seems to be well established (Vidal 2020). In fact, "[c]limate change is increasing the geographic range, seasonality, and intensity of transmission of diseases such as Lyme disease, dengue, malaria, West Nile virus, and *Vibrio* infections" (Al-Delaimy and Krzyzanowski 2019, p. 1). In this context, the COVID-19 seems a good example of how disruptive episodes beyond the visual narratives of Modernity defy the ecomodernist views about the Anthropocene.

Rather than a good Anthropocene with an Earth System domesticated through technological innovation, sustaining the emancipatory promises of capitalism and liberal democracy, the Chernobyl disaster as well as the COVID-19 pandemic offer an alternative story in which the human impact on the planet gives way to a disruptive, unpredictable and fragmented scenario.³⁰ In the end, the Chernobyl disaster confronts us with the uncertainties caused by human transformation of the planet (Franson *et al.* 2004).

As we have seen, hegemonic politics of truth has been based upon instrumental reasoning in which knowledge is produced through di-vision and used to manipulate the object constructed by this di-visive practice. This technoscientific epistemology bases the domination of the nature on the establishment of predictable regularities that are revisable according to new evidence (Heidegger 1998, p. 67). Technoscientific knowledge may be provisional but hegemonic social structures operate on the assumption of its reliability, which is fundamental to society's decision-making processes such as risk-assessment (Gruszczynski 2010, p. 22ff.).

However, the complexity of the processes of the Anthropocene make it difficult to continue to rely on the predictability of anthropogenic impacts (Manaster 1978, p 16ff). Challenging Laplacian pretensions to absolute knowledge, awareness of uncertainty in social-ecological processes is growing (Conti 1996, p. 501). This awareness is parallel to the effacing of the divide between the subject and the object which resulted from the Petrarchian narrative about the man-at-the-top that is fundamental to the modern mentality. To the extend we progress towards a dissolution of the divide between subject and object, the Anthropocene seems to be understood as a cultural shift where the modern vision of the world is challenged in a radical way, with deep implications regarding (climate) justice.

The hegemonic politics of truth in Modernity have been contested since the perception about the human transformation of the environment have shifted from a positive to a negative appraisal (Llano 1988, p. 30). The nuclear threat in the post-war period

³⁰ Environmental disasters have had a significant impact on awareness of the consequences of the human transformation of the environment, producing political reactions and, eventually, legal responses (Fernández de Gatta Sánchez and Nevado Moreno 1997, pp. 169–170, Pont Castejón 1989, p. 316). Perhaps the first serious incident with this effect was the sinking of the SS *Torrey Canyon* in 1967 (Kiss and Shelton 1993, p. 10). The most significant events prior to Chernobyl were those of Seveso (1976), Three Mile Island (1979) and Bhopal (1984).

following the bombing of Hiroshima and Nagasaki and the stifling climate of the Cold War marked a decisive in shift in public attitudes to technology (Alder and Wilkinson 1999, p. 16, Clarkson and Wood 2009, p. 41).³¹ The publication of Rachel Carson's *Silent Spring* in 1962 was a turning point in environmental conscience (Belshaw 2005, p. 62) and contributed to changing the relationship between society and technology through a complex cultural process that is still underway. It seems clear that the environmental crisis has become a turning point in Modernity, especially since it has been constructed as a geological transition (Lewanski 1997, p. 14, Errass 1998, p. 6).

Progressive awareness of the uncertainty of socio-ecological processes and a complex and fragmented mindset replacing the modern subject/object di-vide (which are parallel processes running counter to modern "scopocentrism") are likely to have effects on the foundations of social action, which cannot continue to be based upon an acritical assumption about the hegemonic politics of truth (Bárcena and Schütte 1997, p. 15). Moreover, uncertainty is supplemented with irreversibility in order to raise doubts about the technical management of the planet, which is still the dominant way to confront the geological transition, with significant consequences in terms of (climate) justice.³²

The threats created by environmental disasters such as the Chernobyl disaster leads us wonder whether there is anything more frightening than people, as the winner of the Nobel Prize for Literature, Svetlana Alexievich, wrote precisely about the accident (Alexievich 2005, p. 60). The capacity of humankind to transform the planet reminds us of the vulnerability and finitude of our common home (Margalef 2000, 343). This sense of threat has been fundamental to environmental law and politics (Rolston 1993, p. 260).

It seems that, contrarily to the narrative suggested by the idea of the good Anthropocene, we are entering in an unstable scenario prone to disruptive non-linear processes, very different from the stability of the Holocene which has allow humankind to settle and develop until the fossil-intensive technocapitalist global society of today, which have altered Earth's climate and geochemistry to inaugurate an era of unpredictability (Gillings and Hagan-Lawson 2014). In this context, "there is a need to question how [the hegemonic narrative on the Anthropocene] simultaneously reproduces this subjective mode through the proffered responses of planetary governance" (Yussof 2017, p. 119). The comprehensive transformation of the planet under conditions of uncertainty should not only cause concern but also stimulate changes in interpretations of experience and in social practices and corresponding alterations to law and institutions (Jonas 1985). However, reaction so far has been trapped in the mindset and practices that caused the Anthropocene: technoscientific rationality, capitalism and sustainable development.

This raises doubts about how a business-as-usual approach can help humanity to confront the challenges of the transition to the Anthropocene, particularly in terms of (climate) justice, as a far as climate change and its consequences have been caused

³¹ In this context Kiss and Shelton (1993, p. 9) point out that "[i]t was only recently, particularly since the reconstruction following World War II, that international public opinion began to demonstrate concern over the general state of the environment, leading to broader measures to combat pollution of inland waters, oceans, air, and soil, to protect biological diversity". See also Kiss 1999.

³² The Anthropocene is the most comprehensive and alarming example of the irreversibility of physical processes (Hamilton 2016, p. 100).

precisely within this sociocultural matrix, being the “drivers of the Anthropocene” also the “drivers of inequality” (Baskin 2019, p. 160). In the event of the global pandemics of COVID-19, maybe the metaphor of the disease is an appropriate description of how works the technocapitalist ideology inducing climate change. “[W]e might call it autoimmune climate-changing capitalism syndrome, or AICS for short” (Mirzoeff 2014, p. 215).

It must be recognized that scientific evidence has been fundamental to the development of policies designed to address climate change, a field where science and politics have interacted in a very intimate way (Keller 1999, p. 360). Nevertheless, the effects of climate change, conceived as a comprehensive process which is the most relevant signifier of the truth of the narrative of the Anthropocene, “result from numerous diffuse acts performed by countless individuals in scores of locations, generally unrelated to one another. And the actual harms experienced are only indirectly linked, at best to any particular act or person” (Humphreys 2010, p. 52). Thus, we are confronted to a complex and uncertain scenario, where “[h]uman interference will likely trigger highly nonlinear changes in the global environment that will tend to alter the very character of the life-support system in question and be largely irreversible on human time scales” (Reid *et al.* 2010, p. 917). Accordingly, as Bruno Latour states, “[g]iven that those who believe they will be in command – those whom Hamilton calls *Earthmasters* – will never control things better than Kutuzov, if we give them the Earth, what mess they’ll make of it!” (Latour 2014, p. 9).

Confronted with the inability of “[s]ocial and economic policies and institutions” before “abrupt nonlinear social and environmental change”, it seems we should go beyond business-as-usual solutions (Reid *et al.* 2010, p. 917). Hence, in my opinion, climate justice debates should discuss the hegemonic politics of truth, the carbon-depending dominant social processes and the prevailing institutional framework, providing a guide for responding geological transition in an inclusive and equitable way, despite its advocates could ridicule “the discovery of the new – also very old – agitated and sensitive Earth” (Latour 2014, p. 4). In this context, politics of decolonizing knowledge are crucial in advancing to recognize the inequalities embedded in the “scopocentric” and predatory features of hegemonic (hyper)modernity, as far as “politics of modernity (of top-down, cause-and-effect understandings) is dangerous, false and hubristic and does nothing to remove the hierarchies, inequalities, injustice and suffering of the world” (Chandler 2018, p. 214).

In this vein, the Anthropocene should be taken less as a description of a Faustian era of Earth System Governance, than an adjudication of responsibilities (Sloterdijk 2014b, 257). Accordingly, humankind (or better, a part of it) has created a geological disruption with unknown consequences (un-vision) but with a clear responsible (the in-di-vidual). In this sense, the visionary climbing to the top of the mountain, the neutral observer of the technoscience, the *homo economicus* of the capitalism, the holder of rights in the constitutional tradition, this complex cultural artefact is actually the *Anthropos* of the Anthropocene. Any claim of justice should to be made on the beneficiaries of this artefact, as well as justice claims should allow to overcome this tangle to allow actual human beings and communities as well as non-human actors to confront the geological change.

Climate justice should to be conceived not only as a means to assign responsibilities and repair inequalities regarding climate change, but also as a strategy to recognize different knowledges, social practices and institutional solutions, i.e. as a justice of recognition helping to overcome the business-as-usual responses starting from its cultural foundations. This demands also new narratives and new discourses in order to navigate the stormy waters of the Anthropocene.³³ Connecting with the narrative of vision I have developed so far, it should be concluded that “contesting Anthropocene visuality is a decolonial politics” (Mirzoeff 2014, p. 230). Chernobyl – and, more recently, COVID-19 – suggest that the Anthropocene cannot be seen, and thus cannot be controlled, challenging the visual narratives of ecomodernism. The exploration intended in this paper tries to identify this visuality in order to explore ways to circumnavigate it, which is the ultimate way to achieve justice in a meaningful sense.

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³³ In the context of decolonial narratives, different communities and individuals have tried to defy the limits of legitimate knowledge defined in the context of the hegemonic politics of truth. For example, the *Tropiques* writers “[i]n contrast to prominent black Caribbean scientists of previous generations” stressed scepticism before “the transformative scope of the scientific method” (Last 2017, p. 156). Other example is the interpretation is how the Tapeño community, confronted with the fact that “irregular precipitation and temperature fluctuations have decreased the flow of water to the village”, have interpreted this “as the action of the mountain deities punishing them for their lack of observance of the pago rituals and their adoption of Western lifestyles” (Szerszynski 2017, p. 268).

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