

Domination in the Anthropocene

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1. Introduction.

Human domination over nature has been a constant concern of environmental thinkers. For decades now, they have made efforts to describe the historical-cum-intellectual process that produces such domination (see Merchant 1980, Plumwood 1993). By shedding a new light on past ideas and practices, as well as on the relation between them, they have been able to unmask the ideological underpinnings of domination. This explains why the latter has mostly been seen as unproblematic or not «seen» at all -it has been «naturalized» in human societies. Mostly, they have interpreted domination as the convenient outcome of the artificial separation between humanity and nature, a dualism that involves a hierarchy locating humans *over* nature (see Leiss 1974). In this regard, modernity reinforces rather than inaugurates the project of human mastery over the environment - but it certainly gives it a new, powerful intensity (see Vetlesen 2015). To sum it up, the enlightened attempt to understand the world in scientific terms is no other than to control, manipulate and change natural processes to satisfy human interests (Katz 1997: 52). This argument goes a long way to explain why environmentalism has had a powerful anti-modern streak.

Now, the emergence of the Anthropocene -a geological-cum-ecological hypothesis about the human impact on the planet as a whole- lends a new urgency to the study of domination. It is not a coincidence that the most intense anthropogenic disruption of planetary systems takes place during modernity -first with the Industrial Revolution and then with the so-called Great Acceleration (see Steffen et al. 2007, McNeill 2000). From this vantage point, the Anthropocene offers itself as the culmination of the human subjugation of nature -it is thus only fitting that this new time is addressed as «the human epoch». Yet the scale of human domination in the Anthropocene is said to be reducing biodiversity at an alarming rate, thus compromising the very habitability of the Earth upon which humans themselves depend (see Newbold et al. 2016). The critique and removal of domination seems thus as necessary as ever.

But is this the only way of looking at domination? Or does the Anthropocene offer a vantage point from which domination can be seen differently? If so, how does the Anthropocene impinge on this concept? What does it mean for a renewed analysis and critique of human domination? Does the Anthropocene say something new about how domination is carried out? What would the alleged transition from the Holocene to the Anthropocene involve as far as domination is concerned? Do new possibilities for reducing or eliminating domination open up with the new epoch?

This paper will examine these questions. I will begin by examining the argument according to which the Anthropocene deepens human domination while exposing it from its very designation. Then, I will suggest that a different interpretation of the Anthropocene is possible as far as domination is concerned. This opens the door to an alternative understanding of human domination, the foundations of which I present in the next two sections. Finally, I will close the paper with an exploration of the way that may lead towards an enlightened domination -or managed liberation- of nature in the good Anthropocene.

2. Dominating Nature in the Human Epoch.

From food production to medical experimentation and social recreation, the human domination of nature is remarkably multifaceted. The concept cannot always be applied so neatly. The

disappearance of species due to habitat loss, for instance, does not fit easily into the category of domination yet it might be considered an unintended side-effect of human behavior. Other human practices, like pet ownership, fall into a grey zone insofar as domesticated animals depend on humans for their well-being. But even accounting for exemptions, the intensity with which human beings subject nonhumans requires theoretical, moral, and political attention.

By «domination of nature» I will be referring to those human practices and actions that, no matter which their ultimate goal, lead to the curtailment of nature's autonomy. In other words, dominating nature means interfering with the autonomous unfolding of the beings that belong to it. Thus I am restricting domination to practices that affect natural beings that are alive, whatever their degree of «sentience» is. I will leave aside those actions that touch upon nonhuman components of nature, like rivers or mountains, which however can be taken into account as far as they affect living beings that depend on them -as fishes living in rivers, for instance. Attempts to regulate the climate would thus be attempts to *control* rather than *dominate* it -a distinction that is far from meaningless. This restriction is meant to avoid a conceptual stretching of «domination» that, by applying the notion to all kinds of human-induced harms to all kinds of nonhuman entities, ends up neutralizing its descriptive force. That said, the range of human actions covered by this conceptualization is wide enough and in fact the suppression of domination is barely imaginable. In other words, eliminating this kind of domination makes for an *ideal* theory of non-domination, as opposed to a *non-ideal* theory of non-domination that would accept from the outset that some *degree* of domination (see Rawls 1999). We will come back to this.

A first thought about domination in the Anthropocene concerns the latter term itself. Might it not be interpreted as a declaration of unashamed anthropocentrism? By naming a geological epoch after themselves, human beings seems to suggest that the planet is theirs and for them to use. After all, the name of the new epoch puts humanity at the center of Earth's history, turning the *anthropos* into the main character of the planetary drama. This may indicate a deal of megalomania on the part of living humans, as Mark Sagoff (2018) has pointed out in his denunciation of the «Narcisscene», i.e. the unwarranted belief that the human species is producing decisive changes in the planet. We are somehow flattered by such news:

«The Anthropocene reclaims the power and dominance of human beings who, *pace* Darwin, far from acting like siblings of the apes, so rule over the plants and animals of the wild that they will soon kill off most of them» (Sagoff 2018).

On the contrary, Sagoff claims, there are no scientific evidences that a sixth extinction is underway and, as some heterodox ecologist suggest, nature may be more resilient than it seems. In any event, the question for him is that we are *not* the main characters in the planet's evolution. It should be pointed out, however, that stratigraphers are more interested in geological changes than in the fact that humans seem to be driving them -it just happens to be men who are behind them (see Zalasiewicz et al. 2017).

Yet the Anthropocene's anthropocentrism poses a particular risk as far as domination is concerned. If the conversation about the Anthropocene keeps focusing on the dangerous disruption of planetary systems, fear of extinction can relegate nonhuman emancipation indefinitely. Hence the contemporary resonance of the «end of the world» and even the reflection upon what happens *after* extinction (see Danowski & Viveiros de Castro 2017, Grusin 2018). Andrew Dobson (1995) proposed an early distinction between the public and the private environmentalist, according to which the private environmentalist wishes to protect the nonhuman world but wears the mask of the public environmentalist who alerts the public about the threat of ecological collapse. It is not hard to see that the Anthropocene threatens to further obscure the case of the public environmentalist which emphasizes human survival over nature's domination in his attempt to persuade the public to tackle unsustainability -or, in a more desperate fashion, to conjure up uninhabitability. Thus an anthropocentric twist might take place within an already anthropocentric worldview.

And yet this may lead to an appreciation of the nonhuman world as a provider of planetary services and as performer of functions that are beneficial to human beings -so that its protection may prevent planetary collapse. The consumption of meat at a global level, for instance, is discouraged on account of the amount of resources required for cattle breeding which in turn deliver methane that contribute to global warming. More generally, the loss of biodiversity is pointed out as a grave danger for the habitability of the Earth. In this reading, protecting the nonhuman world would be conditioned to the contribution that the latter makes to human survival: an anthropocentric justification that leaves aside moral arguments about the emancipation of animals, not to mention the autonomy of rivers or ecological processes.

In this sense, the Anthropocene may be seen as culminating the process of human alienation from nature as described by environmental thinkers. This would happen in a particular way: instead of reinforcing the separation between humans and the nonhuman world, the Anthropocene would signal an intimate relation by which the former penetrate even more deeply in the latter. As a result, the whole planet shows traces of human activity and many species are threatened due to habitat loss. Most damagingly, the rise of human population has increased the number of animals employed to feed an increasing number of human beings -either by killing, fishing or abusing them in different ways. In view of this massive predation, it is argued, animals are scared of us: «The fear of animals towards human beings is the inner side of the Anthropocene» (Soengten 2018: 30). There is no way to demonstrate the validity of such claim, but reasons abound for that fear to exist.

Moreover, the language of the Anthropocene has been criticized for overshadowing the colonization and destruction of nature. The emphasis on the metabolic exchange between society and nature, which leads to the idea that social and natural systems are now materially «coupled» (see Liu 2007), has given credence to the claim that instead of a separation between society and nature there exists a «socionatural entanglement» (see Arias-Maldonado 2015). For those who deplore the anthropocentric undertones of this argument, the Anthropocene is but the last disguise of human exploitation:

«When "destruction" becomes "transformation", when the "hybrid narrative" is supposed to summarize the whole history of humanity (without issues of scales), when "human capital" and "natural capital" become interchangeable notions, it is the sign that a program of epistemic and ontological *derealization* is at work, as well as the dis-qualification of politics and democratic choices in the making of our possible socio-ecological future» (Fremaux & Barry 2019: 57).

The Anthropocene, or more specifically the ecomodernist interpretation of the Anthropocene as interpreted by its critics, would thus be tantamount to a new -or renewed- ideology of domination. According to Fremaux (2019: 28), ecomodernism combines a hypermodern narrative of control with a postmodern narrative of hybridity, the latter providing a view of nature not as a separate entity but as «a fluid techno-reality mixed with the products (and waste) of technology» in a way that prevents us from talking about a natural «otherness». On his part, Pellizzoni (2015) has argued that the new urge towards the mastery of nature is not predicated upon a conception of nature as an ontologically thick and stable agent. Dualism, in other words, is *passé*:

«If ecologism developed around the idea of a perturbed natural equilibrium to be restored as much as possible, this view is increasingly challenged by an account of the world as intrinsically disordered and unstable; a condition not only to be acknowledged, but exploited and even enjoyed» (Pellizzoni 2015: 11).

This socionatural intimacy, which is presented as a promiscuous set of relations that run in several directions, would be ultimately embodied by the concept of the Anthropocene. Yet the latter has also been described as way of justifying the destruction that takes place, rather unidirectionally, in those hybrid worlds where some agencies are more harmful than others (see Fremaux and Barry 2019). At the same time, though, the ecological crisis itself -or climate change, for that matter- shows that nature is not entirely subsumed in human power (Fremaux 2019: 20). In philosophical jargon,

nature is non-identical with human beings and cannot be reduced to concepts nor simply «appropriated» by social processes. This surplus takes the form of those planetary risks that are associated to the Anthropocene:

«To ignore nature's non-identity or, in other words, to pursue the domination and appropriation project while ignoring its dramatic impacts, leads to the "return of nature" on the scene of human history in the form of biological dysfunctionalities and environmental catastrophes» (Fremaux 2019: 29).

More dramatically than in the past, then, the risk of uninhabitability posed by the Earth's disruption reinstates the credibility of an old green claim -namely, that nature cannot ever be dominated. In Katz's words: "Nature's control is a dream, a delusion, a hallucination" (Katz 1992: 267). Proposals such as geo-engineering the climate system or biologically enhancing human beings for reducing their ecological footprint would however show how widespread is the belief that we can actually master nature (see Boyd 2008, Liao et al. 2012). Such projects pursue a technological «fix» that leaves patterns of production and consumption untouched -an optimistic projection of future technological progress that, according to its critics, seeks to «de-politicize» environmental policy (Keary 2016). The ideological foundations of domination may change with time, but the will to dominate remains in place.

What is the alternative? How should human beings relate to nature? For the sake of the argument, I am going to develop this point drawing upon Mick Smith's (2011) critique of human sovereignty *over* nature. For him, radical ecology contests human dominion over the natural world, i.e. «ecological sovereignty in all its many guises» (Smith 2011: xi). Such dominion would be the key principle underpinning the modern political constitution, which explains how difficult it is to remove the beliefs that support it. If ethics is -following Iris Murdoch- an exercise in attempting to see and respond to the world as it is, environmental ethics tries to turn nature into an ethically considerable entity by calling attention to its otherness, to the natural realities that exist independently of us. Therefore, ethics «requires a suspension or clearing of our self-referential obsessions, the distorting influences of that self-regard which always tends to reconstitute others as somehow being like us, or suiting our interests» (Smith 2011: 41). In a word: nature is not the same *as* us, nor does it exist *for* us. As a consequence, nature is never just a resource and exceeds the boundaries and categories that human beings use to apprehend it. The alternative to domination can only be grounded on an ethical view oriented towards «a letting be that ceases to regard nature as means» (Smith 2011: 117). Yet radical ecology cannot accept half-hearted approaches based upon the so-called «stewardship» of nature, as the latter

«remains a fundamentally theocratic and paternalistic model wherein responsibilities for nature are actually inseparable from subservience to God and potentially (...) to God's (self-proclaimed) representatives on Earth» (Smith 2011: 14).

Natural reserves are an example of stewardship and are thus rejected by radical ecology insofar as they free nature from human domination «only by being already and always *included* within the remit of human domination» (Smith 2011: xiii). The reason is that such managed liberation reinforces what Giorgio Agamben has called «the anthropological machine» (see Agamben 2004) that defines the human as that which is not natural and vice versa. For radical ecology, then, only a genuine liberation of nature -as opposed to a managed liberation- counts as such.

If the only true alternative to domination is non-domination, the Anthropocene seems to be a problem for anyone concerned with spreading environmental ethics. What differentiates the theoretical framework provided by the Anthropocene, after all, is the assumption that human transformation of nature is an indelible feature of the human habitation on Earth. The lens through which socio-natural relations should be seen according to the Anthropocene account is seen by critics as a means to «normalize» domination, i.e. to present it as an unavoidable side-effect of human existence. But is this the only available interpretation of the Anthropocene? Could it not be recruited for reducing, rather than eliminating, domination?

3. Reframing Human-Nature Relations in the Anthropocene.

I would like to argue that the Anthropocene can provide a historical account of socionatural relations that makes it possible to see *past* and *present* human domination under a new light. This is a first step towards changing human practices of domination, as the epistemic turn provided by the Anthropocene concept opens up new possibilities for critique that do not rely on traditional arguments about dualism, human's lack of empathy, or capitalism's rapaciousness. As the Anthropocene simultaneously *centers* and *decenters* human beings, a new narrative about domination can be put forward -one that should help to diminish *future* domination. By no means it is suggested that radical ecology's argument are devoid of merit or value -on the contrary, they are irreplaceable contributions to a complex debate that however calls for different approaches. In fact, the arguments of radical ecology are not yet shared by the wider public and thus it seems advisable to look for alternative ways of presenting the critique of domination.

For a start, the meaning of the Anthropocene should not be conflated with the meaning attributed to it by particular interpreters of the concept. The former is potentially richer than any of its versions, as the meaning of the hypothesis presented by geologists and Earth-system scientists cannot be exhausted nor fixed. On the contrary and given the scope of the subject, it is bound to be contentious and open to debate. The Anthropocene does not prescribe its own meaning nor prescribes a particular course of action for human beings (see Arias-Maldonado & Trachtenberg 2019). As Lidskog and Waterton puts is:

«The narrative of the Anthropocene is dynamic and changing: new layers of meaning are constantly added to old ones. (...) Thus, the narrative is still very much a concept in the making, involving a plurality of meanings, tensions and debates» (Lidskog & Waterton 2018: 31).

Admittedly, its very denomination suggests a particular narrative about the current state of socionatural relations where the «human» component is given epistemic priority. Yet the whole point of the Anthropocene concept lies precisely in the proposition that human beings have disrupted planetary systems and become a global environmental force -hence the reference to the *anthropos* and the lack of any further distribution of responsibilities among humans, as this distribution is scientifically irrelevant. This whole frame can be rejected, as Sagoff (2018) does when questioning the evidence behind the Sixth Extinction (although the loss of biodiversity, prospects of massive extinction aside, can be substantial in itself). If the science that points to the coupling of social and natural systems by way of anthropogenic impact is accepted, then the Anthropocene provides a framework for discussion rather than a given set of beliefs about socionatural relations. Conceptual alternatives such as the «Capitalocene» or the «Tecnocene» thus emerge as critical responses to the Anthropocene proposition -but they do it under its umbrella, as it were (see Moore 2014; Malm & Hornborg 2014). In a nutshell: we know what the Anthropocene *is*, not what the Anthropocene *means*.

Granted: the Anthropocene puts human beings in the center of the planet's history, as the aggregated impact of their actions -both spatially and temporally- drives the global disruption of natural systems. On the face of it, you cannot be more anthropocentric. Yet the Anthropocene is essentially ambivalent: it simultaneously *centers* and *decenters* humanity. It decenters humanity insofar as it brings attention to the telluric dimension of socionatural relations. In the long history of the planet, humanity is an anecdote: according to the famous cosmic calendar conceived by the late Carl Sagan, our species appears on Earth around 11:48 PM in the last day of December -if that huge tract of time could be compressed in the span of a human year. The geological side of the Anthropocene dissipates the delusion of an effective control of human destiny. Paradoxes of the Anthropocene: the all-powerful human agency that has disrupted natural systems seems much weaker under this light. We are no just biological beings, but earthly creatures that depend upon a plethora of organic and inorganic processes and phenomena (see Clark 2010, Yusoff 2013). They can also be threatening: hurricanes, earthquakes, asteroids, and viruses are potentially devastating «actants» against which

an effective human defence cannot always be mounted. In the last years, Earth Sciences have incorporated the neocatastrophist paradigm previously emerged in geological studies, according to which the planet has not been shaped just by slow processes of erosion and sedimentation -there have also been collisions with extra-terrestrial bodies, climatic and geomorphic turbulences, sudden multiplications or extinctions of species. Gradualism and catastrophism are probably balanced in the long run, but the importance of the latter cannot be dismissed (see Huggett 2011).

The warning that is implicit in the neocatastrophist explanation is consistent with the transition from the Holocene to the Anthropocene, forcing us to see the planet with new eyes -less as a passive recipient of human colonization and more as an active power of unsurmountable force. The Anthropocene should awaken us to the *otherness* of the planet -hence references to a «defiant Earth» (Hamilton 2017) or an «inhuman nature» (Clark 2011). In that vein, Bruno Latour (2017) has emphasized how the goddess Gaia, once employed by James Lovelock to simbolize the self-regulating ability of the planet as a whole, was also portrayed by the Greeks as an enraged and vengeful deity. Geology reminds us that the planet's history is a geohistorical adventure whose episodes have not been written by human beings.

At least two more aspects of the Anthropocene possess this decentering quality. The first is deep time: by connecting the present with the long history of the planet, the life of the human species is contextualized in a completely different fashion. If officially accepted, the Anthropocene would be the third *epoch* of the Quaternary *period*, which closes the Cenozoic *era* that in turn belongs to the Phanerozoic *eon* beginning 542 million years ago. This is the time around which life exploded via the so-called Cambrian explosion, but it is hardly the beginning of Earth: the planet was formed, according to calculations, 4543 billion years ago. Such are the depths in which the planet is rooted, an abyss of time throughout which violent episodes such as glaciations and extinctions abound. As Brett Milligan (2013) has argued, we are bound to experience a «space-time vertigo» when pondering such vast extensions of time. In this context, the emergence of the *anthropos* is a minor episode rather than an alternative to geohistoric turbulences -despite it being a major event for *us* (see Davies 2016: 139).

Then there is size. Humanity itself has become «colossal», as the planetary disruption created by it has no precedents in the animal kingdom (see Raffnsøe 2016: 12). Yet while the causal strength of the human species is made evident by phenomena such as climate change, biodiversity loss or the monstrous production of waste, it also brings forth realities that underline our insignificance. In this vein, the concept of the «hyperobject» as conceived by Morton (2013) is especially useful. He is alluding to things that are massively distributed on time and space in relation to human beings - black holes, the Florida everglades, the biosphere, plutonium and the like. For Morton, hyperobjects represent the end of the world as a welcoming and stable home for human beings. Admittedly, the Earth was never that stable, but then again the Holocene had gotten us used to favourable conditions that might not be repeated in the Anthropocene.

Realizing that the planet has a long and violent history prior to the appearance of human beings should thus contribute to a new kind of self-reflection on the part of living humans. Both geological eventfulness and the vulnerability of a «situated» biological existence should be incorporated into the human outlook. In turn, a planetary subjectivity should emerge -one that is aware of the need to keep the planet habitable. According to the chronology of the Anthropocene devised by Steffen et al. (2007), the last stage of the Anthropocene would precisely consist in the assumption of our role as geological agents at a global scale -together with its responsibilities. Let us recall that the human emission of greenhouse gases has delayed the next glaciation and changed the climate for at least 100.000 years. By doing so, our impact can be compared to that of fluctuations in Earth's orbit, which affect glaciation cycles (Chakrabarty 2018: 7). Moreover, the melting of Greenland's ice cover has been shown to have an observable effect on the angle of Earth's axis due to the decline in ice mass (Delanty and Mota 2017: 13). That is not so bad for a primate and yet it can be bad for the primate that we are.

By pointing out the primacy of human agency we are not just acknowledging how *in normal conditions* some agencies are more powerful than others, but also emphasizing the human difference vis-a-vis other animal species and non-sentient natural «actants». The historical record is clear that our species is more transformative and destructive than the rest (see Coole 2013: 460). In other words, humans might not be the center of things, but they -we- are able to think more deeply about their own situation and thus bear a special responsibility (Connolly 2013). Even Donna Haraway, which dislikes the concept of the Anthropocene and urges us to acknowledge that human beings are «with and of the earth», admits that «the doings of situated, actual human beings matter» (Haraway 2016: 55). The reflective operation that can be elicited by the Anthropocene is thus also a starting point for feeling and thinking anew about domination.

4. Towards an Alternative Understanding of Human Domination (I).

For radical ecologists, as we saw, human domination over nature is not permissible and should thus be abolished. But then a key question must be answered: is domination avoidable? Or, to put it differently: has it just been a contingency, rather than a necessity, in the history of sionatural relations? These are important questions that often remain unexplored because the focus is set on the *ideas* that have justified domination and on the *forms* it has adopted. Yet a different view on domination can be envisaged if we see the latter as a permanent, universal feature of sionatural relations. But if we focus on the *degree* and *character* of domination rather than on its *existence*, the goals themselves change: instead of eliminating domination, the latter should be reduced and softened as much as possible. It is not a matter of *desiderability*, since an ideal world would certainly be devoid of any relation of domination, but rather of *feasibility*.

My main argument, then, is that domination -understood as the instrumental use of nonhuman beings for satisfying human interests- is less a historical contingency than an feature of sionatural relations. The forms and the intensity of that domination are historically contingent -but domination, as such, is not. The reason is that there is no way to prevent human-nature *friction* once human beings start to roam the Earth. As Raymond Williams put it in rather Marxian terms:

«once we begin to speak of men mixing their labour with the earth, we are in a whole world of new relations between man and nature, and to separate natural history from social history becomes extremely problematic» (Williams 1980: 76).

And while it would be tempting to describe the Earth prior to human emergence as some sort of sustainable Eden, we have seen that the planet has always been a fairly turbulent place. The distinctiveness of the human species lies in how we adapt to nature by adapting nature to us. In order to acquire autonomy from natural constrictions, humans try to control nature and only after enough control has been secured can we discuss *how* that dominion should be exerted. Yet even if human beings decided to embrace the goals of radical ecology, they could only liberate nature after having decided it and having carefully looked for ways to implement that demanding project. And while cultures may differ, history has always involved human domination of nature in various degrees (Sheldrake 1990: 26). Whether they are considered unique or shared with other animals, the exceptional abilities of the human species could not help but lead to the transformation, disruption, and destruction of the natural environment. That's how we got the Anthropocene in the first place.

It should be emphasized that there is an *ontological* unity between humanity and nature. Yet the critique of the dualism nature-humanity that often features in green accounts of domination may be misplaced. Could it not be the case that there actually *exists* a separation between humanity and nature? It would not be an ontological separation, but a historically developed one: an emergent order produced by human beings in the course of their aggressive adaptation to the environment. To put it crudely, such adaptation will count as successful if the human population increases -as it has. Obviously, domination is detrimental to the number and life conditions of other species, as well as

to the integrity of ecosystems and biological processes. Ultimately, it can be maladaptive for humans if the habitability of the planet -as the Anthropocene suggests- becomes imperiled. But from this viewpoint domination is less a decision than a necessity, i.e. the necessity experienced by an species that struggles for survival in a dangerous environment. It should be added that the production of the historical dualism that separates humanity from nature is reinforced by an «ideational» dualism: a body of ideas and beliefs whose function is to justify human dominion over nature -thus legitimizing what was already being done by humans across the planet. It is the success of this fiction -the fiction that humans are ontologically separated from nature- what explains the shock provoked by Darwin's explanation about the human lineage.

Now, the human ability to transform the physical environment has been translated into evolutionary terms by the so-called Niche Construction Theory, which sees ecological engineering on the part of humans as a potential contributor to evolution. Instead of subscribing to the standard view that organisms always adapt to their environments and never vice versa, Niche Construction Theory argues that organisms *change* their environments, thus describing a dynamic, reciprocal interaction between the processes of natural selection and niche-construction:

“From the niche-construction perspective, evolution is based on cycles of causation and feedback; organisms drive environmental change and organism- modified environments subsequently select organisms. (...) Niche-construction is not just an end product of evolution, but a cause of evolutionary change” (Laland and Brown 2006: 96).

Niche-construction would not be the *effect* of a prior cause (namely, natural selection), but also a *cause* of evolutionary change (Laland and Brown 2006: 6). Whereas the conventional view of evolution is that species acquire through natural selection those traits that best enable them to survive and reproduce in their environment, restricting the *locus* of such changes to organisms, Niche Construction Theory describes how changes in environments must also be held responsible for species' adaptation (Laland & O'Brien 2012). On their part, the offspring of those organisms that have changed their environments in order to suit their metabolic needs will *inherit* a transformed environment (Odling-Smee 2010: 180). As Zev Trachtenberg, who has called attention to niche-construction's relevance for environmental political theory, points out:

«The niche should not be understood primarily in physical terms, as the surroundings of a given animal, containing its food. Rather an animal's niche should be understood in *functional* terms: for example, what, in its surroundings, *its particular capabilities* render available to it to eat» (Trachtenberg 2019: 87; my emphasis).

It follows that the transformative capabilities of human beings will be especially significant when compared to the transformative capabilities of other species that also manage to change their environments -from beavers to ants. Human beings are specially effective niche constructors due to their capacity for generating culture (see Smith 2007; Kendal et al. 2010), which is synonymous with their capacity to act collectively and learn socially (see Ellis 2015). The latter is arguably the key factor, since culture -mediated by language- allows humans to accumulate and propagate the techniques that have been employed by particular groups in their adaptation to the environment. Human systems are thus an important driver of biospheric change and the fact that their force cannot be compared to that of the long carbon cycle, glaciations or asteroids does not make it less potent.

But is the described dualism a universal reality? Are we not «naturalizing» a typically Western phenomenon? What about those communities where a different conception of nature can be found? Brazilian anthropologist Eduardo Viveiros de Castro (2014) has described how a number of Amazonian and Amerindian peoples do not see plants and animals as different species, but rather as «personas» endowed with consciousness, language and culture -personas that happen to inhabit a body that is different than ours. Another anthropologist, Philippe Descola (2013), suggests that the diversity of representations of the natural world attests to the uselessness of the human-nature

dualism. Describing premodern cultures as victims of a superstition that has since been unmasked by scientific research would in itself be the product of an arrogant superstition.

They have a point. The task of decolonizing Western thought, which allows us to see *from the outside* the concepts and categories that organise our worldview, points to the limits of universalism -let alone the universality of the Western worldview. Still, the survival of monist communities that feel closely connected to nature does not invalidate the argument that I have been presenting. In which form and how intensely a natural environment is actively transformed by a human population that is engaged in niche-construction will depend on a number of circumstances, but such transformation -mild or aggressive- will take place. Mounting evidence, for instance, suggest that Pre-Columbian populations actively cultivated Amazonian biodiversity (see Roberts et al. 2017). Now, it is reasonable to suppose that small populations that do not rely on complex technologies will more easily sustain monist beliefs. The communities described by anthropologists stay more or less isolated and exhibit a material dualism -since they *are* engaged in niche construction - that is not yet reinforced by an ideational dualism. The latter is most fully developed in Europe through a process we now call «Modernity» and is later globalized:

«The societies situated around the North Atlantic rim of Europe, who first experienced the scientific revolution and the enlightenment, and were convulsed by further forces of industrialization, urbanization and capitalist social relations, are quite unusual in human history in terms of how they conceptualized socio-ecological relations (...) there is clearly a move in such societies to increasingly separate "society" and "nature" into distinct and clearly demarcated spheres (...) that associate human betterment with "the domination of nature"» (White, Rudy & Gareau 2015: 46)

Social complexity brings about further distance with the natural environment and facilitates the spread of technologies that contribute to the human domination. It is an ambiguous process: farming machinery liberates oxes, while other animals become more thoroughly exploited. Yet all human cultures, albeit in different degrees, have practiced domination. And this intuition is confirmed by the Anthropocene, which reminds us the importance of human niche-construction for understanding current planetary conditions. As Isendahl (2010) suggests, the Anthropocene forces us to reconsider adaptationist models of human-environment interactions, as the emphasis shifts from defensive adaptation to human transformation. There is a catch: the problem is also the potential solution, since human agency understood as a problem-solving resource is more diverse than is usually suggested when we describe people as inherently destructive to their environments.

5. Towards an Alternative Understanding of Human Domination (II).

Aggressive human adaptation through niche-construction has so far been described as a «blind» process lacking in self-reflection. A different perspective is opened, however, once we introduce normative criteria that replace the logic of the *species* with that of a *moral subject* that takes into account the impact -intentional or not- of her actions. This moral perspective sheds a different light on animal exploitation, species extinction or landscape deterioration. Satisfying metabolic needs ceases to be the only criteria according to which our practices and beliefs are judged. But this shift can only take place if human self-reflection is exerted.

Steven Vogel (2016) makes a very apt point when arguing that the dualism between humans and nature as it is criticized by environmental thinkers is not overcome by seeing humans as passive elements of a greater whole. On the contrary, and this chimes with the notion of an emergent dualism and niche construction theory, it requires that we accept that humans are as transformative as their environments. Both humans and the environment are engaged in a mutually transformative process, the result of which can be disappointing and even outright disgusting -and *that* is what alienates us. So Vogel:

«Alienation, I am suggesting, arises not from our transformation of the world but rather from our failure to recognize ourselves in the world we have transformed -a failure, that is, to acknowledge responsibility for what we have done and what we have built» (Vogel 2016: 91).

To overcome domination, the main factor is human self-awareness. We must come to terms with our ability to shape the environment -either *unwillingly*, as a side-effect of our habitation, or *willingly*, as the product of particular choices about how to inhabit it. So far, choices have not been made regarding the shape of socionatural relations «if choices are understood as the outcome of conscious social decision-making» (Vogel 2016: 230). The human community, in other words, has failed *as a community*. Only when conscious decisions have been made regarding socionatural relations will we be able to judge the outcome as the kind of managed environment supported by self-conscious human beings. As Vogel puts it: «Practices that *know themselves as such* (...) are superior to those that are engaged in thoughtlessly, unconsciously, without self-recognition» (Vogel 2016: 231). This logic is implicit in the narrative of the Anthropocene -the anthropogenic impact *precedes* its recognition. The official recognition of the Anthropocene would thus be a first step in the road to collective self-awareness.

Does this recognition come too late? If we take a long view, it does not: human self-awareness could not have arrived much sooner, since the conditions for it were simply missing. Nietzsche will help us to see why. In the first volume of *Human, All Too Human*, he suggests that goods are not classified according to moral criteria but rather spontaneously, so that they are first listed and then depicted as moral or immoral. And the viewpoint of the agent is a key factor in this judgement: «all of us, in fact, when the difference between us and another being is quite large, no longer feel any sense of injustice, and so we kill a gnat, for instance, without any remorse» (Nietzsche 2000: 67). Moreover, Nietzsche goes on, cruelty should not be evaluated without taking into consideration the different viewpoints of those involved:

«Indeed, no cruel person is cruel to as *great* an extent as the one whom he mistreats believes; imagining pain is not the same as suffering it. (...) Cause and effect are in all these cases surrounded by completely different clusters of sensations and thoughts; wheres we automatically assume that perpetrator and sufferer think and feel alike, and in accordance with this assumption measure the guilt of the one by the pain of the other» (Nietzsche 2000: 67-68).

Jokingly, Nietzsche points out how different our toothache is when compared with the pain we feel -out of pity- as we watch someone whose teeth ache... When we reflect upon *past* human domination of nature, then, we cannot forget how different our ancestors were -so different that they did not feel, as we may now do, that nature was being «dominated». On this, Nietzsche emphasizes that morality is context-dependent, so that what we call moral progress is the result of a process that cannot be hastened. This should refrain us from judging others harshly:

«When considering earlier periods, we must take care not to slip into unfair abuse of them. The injustice in slavery, the cruelty in the subjugation of persons and peoples, cannot be measured by our standards. For at that time the instinct of justice had not yet been developed very far» (Nietzsche 2000: 77).

But it would also be a mistake to think that *past* humans were wrong and *we* are right: by applying this criteria for moral progress, we are wrong too. All actions are in a sense stupid, Nietzsche argues, because human intelligence will always evolve. In other words, in the eyes of future humans we will be judged as evil or stupid as past humans look in our eyes. A key insight follows: «That another being suffers must be *learned*: and it can never be fully learned» (Nietzsche 2000: 78). It can never be fully learned because we cannot have access, phenomenologically speaking, to other beings. Yet Nietzsche is confident that humanity can actually improve its moral record -it actually does so. In the changeable field of morality, everything streams towards a single goal:

«The inherited habit of erroneously loving, hating may still hold sway in us, but under the influence of increasing knowledge it will become weaker: the new habit of comprehending, not loving, not hating, overlooking is gradually implanting itself in the same soil within us and will in some thousands of years

perhaps be powerful enough to give humanity the strength to bring forth a wise, innocent human being (one conscious of his innocence) as regularly as it now brings forth -*as the necessary, preliminary stage to him, not his opposite*- human beings who are unwise, unjust, conscious of their guilt» (Nietzsche 2000: 84).

He might as well be talking about socionatural relations and the way in which the morality of human-animal relations have evolved. Human domination may have continued and it has increased from a quantitative standpoint, but at the same time there has been a gradual change in how animals and the natural world writ large are perceived by human beings -especially by those who live in rich societies. There is thus a *qualitative* change that, however, is far from enough as far as the autonomy or integrity of nonhumans is concerned.

Following Nietzsche's insight, though, morality is slowly streaming -a whole new set of meanings has emerged in the last fifty years that radically changes the moral consideration of nonhumans. This is arguably the precondition for, if not eliminating, at least softening human domination. In this respect, the Anthropocene is not necessarily a *deepening* of human domination but rather an open sign whose meaning is not fixed and can actually be taken as an opportunity to *refine* socionatural relations. The last section of the paper will briefly explore how this can be done.

6. Domination in the (good) Anthropocene.

Can the human domination of nature be reduced in the Anthropocene? If so, how? My main argument is that the removal of dominating practices can be linked to planetary management, which in turn is demanded for keeping the planet habitable. While the complete absence of domination will remain an ideal goal for the time being, an enlightened or managed domination can meaningfully reduce the harm done to nature in a non-ideal world and prepare us for a future where humanity self-consciously overcomes the acquired habit of domination.

I will start by pointing out how a realistic position is advisable when dealing with domination: neither total domination nor total liberation are viable in the foreseeable future. It would be reckless to pursue the former; as for the latter, the Anthropocene shows us that the friction between humans and nature is unavoidable because our presence in the world is in itself disruptive and leads to a variable degree of domination. Hence the goal should not be the complete liberation of nature, but rather reducing domination and eliminating the most harmful forms that it currently adopts. A quick illustration: if no more birds were ever caged for human recreational use and the life conditions of chickens were significantly improved across Western societies, we would at the same time be removing a particular form of domination (caging birds) and reducing a persistent form of domination (jamming chickens in factories). This may be deemed an insufficient progress on the face of human suffering, but from the vantage point of current domination is not so meaningless.

As Robert Garner has suggested in relation to animals, the Rawlsian distinction between ideal and nonideal theories of justice can be very useful when dealing with socionatural relations (see Garner 2013, Simmons 2010). An ideal theory of justice take human beings as they are and the laws as they could be, so that a theory of justice that wishes to change humans is utopian while one that seeks to change contingent human arrangements is ideal. On its part, a nonideal theory is that which actually ponders how a given goal could be reached attending to existing social conditions. But a strong version of a nonideal theory of justice goes further and argues that a political philosophy that does not take the real world into account is a *bad* theory. Now, Garner's views on animal liberation can easily be applied to nature's liberation. Following the Rawlsian distinction, the removal of domination is more utopical than ideal -it asks too much from human beings and does not take into consideration the moral differences between humans and the rest of nature.

On the other hand, if we wish to refine socionatural relations -a wider goal encompassing the reduction of domination- we do not have to be ethically «pure», but rather accept all kinds of theoretical or moral justifications provided they all converge in the same direction. It should not be a problem that some people wish to alleviate the burden of nonhumans in order to prevent

unsustainability, while others try to defend the intrinsic value of nature and still others argue that the natural world is religiously sacred. This value difference will lead to disagreements about the measures or policies to be implemented, but this is a minor evil if compared with the absence of arguments against domination. Obviously, there must be enough people concerned with nature's predicament for public policies and private behaviors to be changed -a general *indifference* for the lack of nonhumans is a hopeless starting point for reducing domination. Therefore, the question is not just whether the «*Homo dominatus*» can become «wise» in the Anthropocene (Lewis and Maslin 2018), but also whether humans can be *gentler* to nature.

So far, I have suggested that the Anthropocene may help to instil a feeling of helplessness in living humans, insofar as they realize that they are «earthly creatures» whose existence depends on a fragile planet -the habitability of which cannot be taken for granted. This feeling can in turn be extended to other, nonhuman beings who share the same fate. To put it differently, the Anthropocene can -should- facilitate the emergence of planetary subjectivities, i.e. individuals aware of their earthly condition that are eager to contribute to planetary stability. Mark Sagoff has shed doubts on the ability of the Anthropocene to change people's perceptions:

«The human imagination cannot in any way reckon or fathom the depth of geologic time; in relation to that scale, human beings are unable to comprehend how vanishingly insignificant and epiphenomenal their tenure on the planet has been» (Sagoff 2018).

He might be right. Yet the proliferation of extreme weather events combined with greater media attention to planetary systems can end up making a difference, especially as climate change goes from *abstract* concept to *lived* experience. There is no guarantee that this will happen, but admittedly there is no guarantee that *any* environmental argument will be accepted -let alone those that demand respect for nature's autonomy. It may be tempting to fantasize, as Joan Cocks has done, about «a benevolent monarch with absolute power to impose earth-friendly rules of behavior on the entire human race» (Cocks 2013: 139). But if any such eco-sovereign comes to life, he will be concerned with sustainability rather than with the «natural freedom» (Cock's phrasing) of all beings. Provided that an emancipatory eco-politics is not going to be embraced anytime soon, the epistemic and affective possibilities contained in the Anthropocene concept may well be explored.

An emancipatory politics for the nonhuman world in the Anthropocene should thus take the form of an enlightened domination that simultaneously tries to exert a sustainable control of socionatural relations and take steps to remove or reduce existing practices of domination. Instead of human dominion over nature, a reflective control of socionatural interactions should be encouraged. That is what lies behind our attempts to slow down global warming or the identification of planetary boundaries that should not be trespassed. From this viewpoint, sustainability is the most accomplished form of control. Within this framework, the stability of planetary systems and the managed liberation of nonhumans are two different things that can however be connected. For the planet to be habitable *for us*, we need *them*, i.e. enough biodiversity. A scientific argument (stabilizing natural systems) can thus reinforce a moral one (reducing domination). It would be preferable that the moral argument could suffice, but that is too risky a bet: Dobson's private ecologist had reasons to adopt a different *persona* when going public.

Two different, albeit complementary measures can be singled out. On the one hand, the imperative of habitability (sustainability on a global, desperate scale) can serve as a justification for creating vast natural zones free of human intervention. On the other, common spaces where human beings coexist with nature may help them to realize that the latter is made up of sentient and living beings assembled in complex habitats that should not be subjected to human ends. Both policies can reinforce each other: controlled access to free habitats can have educative impact on citizens, while the gradual development of an ethics of coexistence might increase popular support for such liberated zones.

Before providing more detail on this, a contradiction that is apparent in this position should be briefly addressed. Namely: if rather than nature and society there is a socionatural entanglement characterized by hybridization and anthropogenic colonization, how can we «liberate» nature? Had it not «ended» a long time ago? I have discussed this at length elsewhere (see Arias-Maldonado 2015). Suffice it to say that the thesis that nature has ended alludes to a historical process whereby the natural world becomes less and less independent from humanity, while human beings increase their ability to transform and recreate nature. It does not mean that nature is literally «dead», nor does it involve denying that humans ultimately depend on the physical and chemical structures that makes up «deep nature» (see Soper 1995). In fact, the Anthropocene is a bitter reminder that there are elements of nature that exist beyond our control. Then again, recognizing that we cannot go back to untouched ecosystems does not mean «that society should give up on setting aspirations, goals, or targets for environmental protection» (Dryzek & Pickering 2019: 90). There is thus no contradiction between *describing* socionatural hybridization and *prescribing* environmental protection.

Interestingly, the creation of natural areas free of human interference can serve two complementary goals. On the one hand, it would help to restore biodiversity and thus planetary systems; on the other, it increases the autonomy of nonhumans and thus allows them to flourish. Edward O. Wilson has made the bolder proposal: «committing half of the planet's surface to nature (...) to save the immensity of life-forms that compose it» (Wilson 2016: 3). He combines instrumental and moral reasons for backing a proposal whose scientific foundation is no other than the key relation between habitat availability and species integrity. In the Anthropocene, though, freeing nature is up to us: «The only hope for the *species* still living is a *human* effort commensurate with the magnitude of the problem» (Wilson 2016: 187; my emphasis). The same goes for «rewilding», which, as Lewis and Maslin have pointed out, should accompany the creation of human-free areas: «Rewilding is both an act of unbounded restoration, and an act of mitigating against the negative impacts of rapid environmental change in the Anthropocene» (Lewis & Maslin 2018: 411). Wilson's proposal is the most ambitious manifestation of the «decoupling» of natural systems and social production encouraged by ecomodernist thinkers (see Asafu-Adjaye et al. 2015). Yet decoupling does not have to be seen as a «hypermodern» idea that doubles the aggression against nature. It can also be understood as «a kind of reflexive modernity» (Lynch & Veland 2018: 75). Hence its inescapable ambiguity -that of modernity itself.

Such ambiguity can also be found in practices that link humans to nature. We have seen that radical ecologists are against national parks and reservations, since animals do not *really* escape from human supervision while living in them. And yet, national parks are one of the «steps toward reconciliation» singled out by Soengten (2018): given that complete reconciliation is an utopian goal, creating spaces where animals do not feel humans as a threat is not a minor achievement. Even safari tourism that focuses on endangered species can produce positive results despite the kind of «crisis-voyeurism» it involves, as it can move travellers to adopt a stronger conservationism (see Heise 2010: 151-152). There must thus be some kind of contact between humans and animals, be them in national parks or urban spaces, for a new perception of nonhumans to spread -otherwise domination will continue to be invisible or meaningless to most people. If our most radical hope lies in a «perpetual self-transformation of life in all its forms» that awakens us to a complex sociobiological reality shared with other beings (see Mussgnug 2019), then this awakening must be elicited.

In sum, decoupling projects that seriously attempt to surrender vast territories to nonhumans seem to be the kind of aesthetic, affective, and cultural breakup that we need in order to start changing the way we relate to the rest of nature. The self-renewing ability of nature as exhibited in those free zones could be an epistemic trigger that encourages a less dominating -or more enlightened- human relation to nature. If that happens, it will make no difference whether we have set up these liberated areas to protect endangered animals or to prevent a loss of biodiversity that endangers our survival. In the Anthropocene, therefore, nature's liberation can only be the paradoxical result of managed

domination. Admittedly, it might as well not happen: the mistreatment of animals and the damage to their habitats may well continue in the future. All the more reason, then, to try to prevent it.

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