



IUSS
Scuola Universitaria Superiore Pavia



Università
Ca' Foscari
Venezia

AESTHETICS WITHIN THE STORM. A CRITICAL COMPASS TO CONTEMPORARY ECOLOGICAL SENSIBILITY

A Thesis Submitted in Partial Fulfilment of the Requirements
for the Degree of Doctor of Philosophy in

Sustainable Development and Climate change

Doctoral Programme of National Interest



PhD SDC
SUSTAINABLE DEVELOPMENT
AND CLIMATE CHANGE

In the Curriculum
THEORIES, INSTITUTIONS AND CULTURES

Matteo Savoldelli

March, 2025



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ABSTRACT

Since the 1960s, a new discipline has been emerging in the academic field. Environmental aesthetics attempts to bring back to the centre of discourse the conditions of experience of the environment, the possibilities of appreciation and the judgement of its constituent elements and processes. Curiously, however, even though the field of study was born in conjunction with the emergence of environmental scientific and political awareness, the ecological crisis has remained on the margins, treated sporadically and often within theoretical frameworks that pay little attention to the causes and socio-political implications of the aesthetic experience of the same.

After mapping the main text of the field of study, the research will try to adopt an approach in line with the most recent developments of political ecology, i.e. by integrating feminist, decolonial and animal issues within the tools of investigation and questioning certain problematic assumptions of environmental aesthetics, in particular the universalist approach that permeates the idea of nature, environment and environmental crisis, their perception and the judgement that follows from it.

At the same time, considering how criticisms of the universality of science by marginalised communities and postmodern theories have, on the one hand, allowed progressive demands to be advanced but, on the other, undermined trust in scientific activity, an attempt will be made to temper the possible drifts of such criticisms, namely ontological indeterminacy, perspectival and perceptual incommensurability and lack of criteria for judgment and orientation. Returning to the work of one of the earliest proponents of a social and historical (and thus political) vision of science, Ludwik Fleck, the research concludes by seeking to elaborate possible strategies for the articulation of the crisis, the harmonisation of its multiple perspectives and the research of a possible compass to orient our ecological sensibility.

AESTHETICS WITHIN THE STORM

A CRITICAL COMPASS TO CONTEMPORARY ECOLOGICAL SENSIBILITY

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INTRODUCTION

We find ourselves in a strange and interesting historical moment. After decades spent investigating the processes of environmental degradation, the causes of anomalous events, and the effects of relentless global warming, the scientific community is converging to show us how these events can be condensed into a complex and articulated phenomenon. Climate change, global warming, ecological and environmental crisis¹. There are various names with which to identify this interweaving of relationships and processes, all of which, however, are capable of showing the phenomenon's twofold character: on the one hand, a certain coherence and consistency capable of holding together the loss of biodiversity, an increase in average global temperatures, ocean acidification, an increase in extreme climatic events, and so on; on the other, a certain proliferation and ineffability, a pervasiveness that crosses environments, bodies and relationships, so that the closer we get to the phenomenon, the more its threads disperse.

Perhaps it is the realisation of this last characteristic that makes it such a strange time: a large segment of the world's population, in fact, despite the broad consensus of the scientific community, refuses to recognise the emergence of the crisis, that is, to act individually and collectively to stop it. Perhaps the phenomenon is so pervasive and complex that the simplest and most immediate response is to avoid it, to pay no heed, to remain still and silent, or even to fight for such evidence to be discredited, denied, categorically rejected. So many people struggle to perceive or do not want

¹ The crisis and its aesthetic experience will be the main objects of the present research. While recognising the different ontological nuances of each term, their use will be alternated, thus stressing the prismatic and elusive nature of the crisis.

to perceive the ecological crisis.

At the same time, in the academic sphere, a group of experts has slowly made its way to investigate the conditions of experience of the environment, the possibilities of appreciation and judgement of its constituent elements and processes. Starting in the 1960s, environmental aesthetics began to take its first steps, establishing itself as a specific field of study in the years to come. If the first objects investigated concerned the so-called natural realm – from forests to waterfalls, from wilderness to the animals that inhabit it, from flowers to the sounds and smells experienced in the environment –, in the following decades various authors decided to broaden the field of investigation towards the built, urban and everyday environments, thus attempting to break down the rigid distinction between nature and culture, non-human environments and human environments. Curiously, however, despite the fact that the discipline was born at the same time as the emergence of scientific awareness of the growing processes of environmental degradation and the rise of the first environmentalist demands, the ecological and climate crisis has remained on the margins, treated sporadically and often within theoretical frameworks that pay little attention to the causes and socio-political implications of the aesthetic experience of the same.

In the light of these shortcomings, called upon to reflect and write about environmental aesthetics, the first question I asked myself was: how does ecological sensibility unfold today? That is, how does the environmental crisis come to be perceived and articulated in today's context? To find an answer to these questions, one cannot but start by exploring the texts and interventions of so-called environmental aesthetics. The first chapter, echoing the famous article by Hepburn considered as a forerunner of the discipline², will be entitled "The Neglect of the Ecological Crisis". The aim will be to provide an introduction to environmental aesthetics, mapping its classical texts and finally arriving at the most recent interventions on the crisis. Divided into three sections - relating to object, experience and

² Hepburn, R. (1966). Contemporary aesthetics and the neglect of natural beauty. *British analytical philosophy*, 285-310.

judgement - it will provide a structure that will be repeated in the following two chapters, so that ontological, perceptual and ethical-political issues can be investigated separately.

Alongside the climate emergency, other challenges loom on the horizon. Taking the clear distinction between nature and culture as an increasingly weak dualism, the demands of environmental movements cannot but start considering human suffering and death on an equal footing with those of endangered animal species, as well as struggles for emancipation and for social and economic justice as part of a broader claim for an extended ecology. It is becoming increasingly clear, for example, that an ecological transition driven solely by the interests of multinational corporations and dedicated to the creation of profit for a select few at the expense of the rest of the human community cannot be considered a viable path, even if it were to help reduce CO₂ emissions. Similarly, mitigation and adaptation to the climate crisis cannot focus on the countries of the global north alone, forgetting to support those of the south that are most affected and, certainly, bear a smaller - if not derisory - share of responsibility. And, moreover, it is important not to forget the unequal impact of the crisis and the different participation of female, sexual and racialised minorities in decision-making processes, as well as not forgetting that full justice can only be achieved if the suffering and unnecessary deaths inflicted on the animal kingdom are drastically reduced.

Academic discourse has been quick to acknowledge these demands, attempting to take an intersectional approach³ capable of bringing together

³ We could say that intersectionality already finds its roots in early critical theory, when Marcuse, in the closing of one of his most famous texts, affirmed the convergence of different forms of marginality: "However, underneath the conservative popular base is the substratum of the outcasts and outsiders, the exploited and persecuted of other races and other colours, the unemployed and the unemployable. They exist outside the democratic process; their life is the most immediate and the most real need for ending intolerable conditions and institutions. Thus, their opposition is revolutionary even if their consciousness is not. Their opposition hits the system from without and is therefore not deflected by the system; it is an elementary force which violates the rules of the game and, in doing so, reveals it as a rigged game" (Marcuse, H. (2002). *One-dimensional man*:

different marginalised voices, thus considering unforeseen possibilities for interpretation and action. Following Jonathan Maskit's advice⁴, the second chapter, "Against Universalism in Environmental Aesthetics", drawing on critical postmodern, feminist, decolonial and animal theories, will try to challenge the universalism that - as highlighted in the previous chapter - often envelops the perceived object, the perceiving subject, as well as the judgement emerging from aesthetic experience. The first section will therefore return to the theme of the object of study, asking whether scientific objects (be they nature and the environment, as well as the ecological crisis) are merely material referents waiting to be discovered by the hard sciences or whether, on the contrary, they cannot be divorced from the meanings, representations and social uses that constantly reproduce and reconfigure them in the various contexts. The same discourse will then concern sensory perception, which, often described as a faculty impermeable to the historical and social environment, has recently been analysed in its situated and acted dimension, leading us to reflect on the epistemic and ontological consequences of divergent environmental perceptions. The last section, starting from the observation of the impossibility of perceptive neutrality, will attempt to reflect on the interests that have articulated (the perception of) nature – and, by contrast, human beings – over time, then extending the discourse to (the perception of) the ecological crisis, which is always inevitably partial and partisan.

However, one question still remains open, namely, as we said: why do so many people today still struggle to perceive or do not want to perceive the ecological crisis? The protection of the environment, apparently an issue that should not generate strong political fragmentation, has instead

Studies in the ideology of advanced industrial society. Routledge, cit., pp. 260-261). Later inspired on the work of Foucault, who was able to provide useful tools for the critique of gender, race, species, ableism and so on, this approach now seems indispensable for the study of social (and, indeed, ecological) phenomena.

⁴ Maskit, J. (2014). On Universalism and Cultural Historicism in Environmental Aesthetics. In M. Drenthen & J. Keulartz (Eds.), *Environmental Aesthetics: Crossing Divides and Breaking Ground*. Fordham University Press, 41-58.

become a central point of debate today. Various exponents and parties are nowadays spending a great deal of time and effort to discredit as much as possible the claims of the scientific community and the demands of environmental movements, leading their electorate to perceive any demand for the protection, preservation and promotion of more than human wellbeing as a whim or an issue of little relevance. There are many reasons for this, certainly rooted within the economic interests that revolve around the extractive and fossil industries, as well as the losses or missed gains that a radical structuring of our consumption and production system would cause. Not only material causes, but also a form of ideology that does not allow us to think of the individual and society outside of a certain socio-economic paradigm considered as inevitable⁵.

According to some, however, such climate scepticism also stems from a broader climate of generalised criticism of the scientific enterprise, i.e. the academic phenomenon that developed around the 1990s and is referred to as the “Science Wars”. On the one hand, the old and outdated realism, convinced of the existence of an autonomous and observer-independent world, investigated through the dictates of scientific objectivity and a variety of increasingly accurate measuring instruments. On the other hand, the new wave of postmodern theory, capable of highlighting the uncertainty and intrinsic indeterminacy of scientific objects, capable of situating the gaze of researchers to show their backgrounds, practices and values, capable of rethinking the scientific enterprise as part of political struggles, enlivened by funding, projects and interests that irreparably invalidate its neutrality and the possibility of standing as a *super partes* judge.

These critiques and tools, as seen in the previous chapter, have enabled important demands to be made by marginalised communities, showing the

⁵ In the wake of one of the leading exponents of critical theory of the new century (Fisher, M. (2009). *Capitalist realism: Is there no alternative?*. Zero Books), Stefania Barca names such a paradigm as “eco-capitalist realism”, i.e. the logic according to which the only possible form of human existence consists in the constant increase in the production of goods and services implemented through technological and industrial development (Barca, S. (2020). *Forces of reproduction: Notes for a counter-hegemonic Anthropocene*. Cambridge University Press).

hetero-patriarchal prejudices that often inform the idea of nature, the colonial presumption of an “objective” view of the same as opposed to the “interpretative” gaze of native peoples, as well as the economic interest hidden behind the apparently neutral distinction between humans and nature (specifically between humans and animals). Transferring these same thinking procedures within the climatic field sometimes allows one to criticise assumptions, prejudices and shortcomings that undoubtedly still inform scientific activity and the scientific community; at the same time, the incessant critique of scientific universalism and neutrality risks delegitimising those results and research that are now more fundamental than ever in supporting environmental demands.

This is exactly the concern expressed by Bruno Latour, who, after several years spent demonstrating how not only the objects of the humanities and social sciences, but also the objects of the natural sciences could be considered as social constructs, asks himself: “Why has critique run out of steam?”⁶. Trying to answer his question, the third chapter, “How can critique get back on track”, will go back to one of the earliest socio-historical accounts of science, in order to identify the limits – as well as possible remedies – of contemporary critical theory and epistemology. After opening each section with a kind of “critique of critique”, we will then proceed with the analysis of Ludwik Fleck's texts, verifying the presence of the first germs of the postmodern trajectories that nourished the ontological inconsistency of scientific objects, the incommensurability of perspectives and the dissolution of criteria useful for orientation and judgement. The microbiologist's positions, based not only on philosophical speculation, but also and above all on the in-depth knowledge of his own scientific field, will prove to be much more reasonable and thoughtful than the more recent constructivist drifts. Thanks to Fleck's insights, it will thus be possible to elaborate strategies capable of overcoming the theoretical *impasse* within which ecological discourse seems to find itself.

Rather than closing the discussion by drawing its boundaries with a classic

⁶ Latour, B. (2004). Why has critique run out of steam? From matters of fact to matters of concern. *Critical inquiry*, 30(2), 225-248.

conclusion, we will instead leave with the invitations that have emerged from this (apparently) outdated texts, in the hope that dispersed and collective voices and actions may continue to nourish and energise this wide conversation that, tentatively, I have tried to stage.

CHAPTER 1



The Neglect of the Ecological Crisis

1 THE NEGLECT OF THE ECOLOGICAL CRISIS

After a long period - from the classical era, through the Middle Ages to the Renaissance - during which reflection regarding the appreciation of nature condensed around the techniques of its representation and visualization, the theme returned in new guises in the 18th century, that is, with the birth of the aesthetic discipline proper⁷. Starting with the work of Baumgarten and proceeding with the theoretical systematisations of Kant and various scholars in the years to come, aesthetics would begin to take shape, presenting itself as the science of sensible knowledge. If the beauty of nature was previously linked to its representation, the same will now become intertwined with a certain aesthetic posture: while shifting the focus from the object of appreciation to the aesthetic experience, the discipline will indeed try to outline the privileged mode of such experience, namely the contemplative and disinterested attitude. The concept of disinterestedness will thus enable the disentanglement of the aesthetic realm from the overall flow of experience, thereby identifying – if not producing – a particular way of approaching both nature and art.

Without delving into the differences between the various “disinterests”, we can attempt to identify a common thread in the purification of aesthetic experience from instrumentality: experience is to be accomplished without any practical end guiding its unfolding. In fact, the creation of the possibility of disinterested interactions with nature and the environment – from the

⁷ We refer here to the reconstruction offered in Brady, E. (2003). *Aesthetics of the Natural Environment*. Edinburgh University Press, pp. 29-48.

landscape writings of Joseph Addison and Francis Hutcheson⁸, to the disinterested contemplation of nature elaborated by Kant⁹ – is accompanied by the generation of a morally impeccable subject, capable of detaching itself from its own interests and desires, thus ensuring the universal validity of its neutral judgment¹⁰.

Alongside the disinterestedness and the concept of beauty, other aesthetic categories will then begin to make their way. Starting with Burke's observations, Kant will present the mathematical sublime and the dynamic sublime, two approaches capable of providing us with the tools to deal with the infinity and power of nature. On the one hand, the use of reason gives us access to ideas such as those of freedom or totality, which can generate a tension between natural extension and the attempt to exert a restraining force on it. On the other hand, the dangers of nature, emphasized by the imagination, become aesthetic objects through an awareness of our remoteness from the dangers themselves, that is, through the creation of a safe space that allows us to distance from them. At the intersection of the beautiful and the sublime, the picturesque will also emerge. This new category, as we will see, will reconnect with representation, again giving importance to devices capable of guiding and articulating aesthetic experience – from landscape paintings to indications on the proper appreciation of the same, from the use of Claude glass to guides on how to design gardens and landscapes according to the dictates of the picturesque¹¹.

Moreover, nature would also be explored by overseas movements, such as American Romanticism and Transcendentalism, the former more oriented

⁸ Carlson, A. (2000). *Aesthetics and the Environment: The Appreciation of Nature, Art and Architecture*. Psychology Press, p. 3.

⁹ Kant, I. (2008). *Critique of judgment*. Newcomb Livraria Press. According to Brady, despite the marked interest in art, the main concern of Kantian aesthetics is in fact nature.

¹⁰ As Stolnitz observes, disinterestedness arises in the realm of moral philosophy, as proposed by Shaftesbury; paradoxically, this will allow aesthetics to separate itself from its own mother (Brady, E. (2003). *Aesthetics of the Natural Environment*, p. 132).

¹¹ Carlson, A. (2000). *Aesthetics and the Environment*, pp. 30-38.

toward a renewed attention to and observation of natural phenomena, independent of human beings and deserving of respect, while the latter more interested in the idealization of wilderness, of its spiritual potential and moral truths. Despite this, the theme will slowly fade away within (a certain) aesthetic theory, both from Hegel's marginalization of the beauty of nature¹² and from an increasingly lively interest in the artistic field and in artistic objects, shown particularly at the turn of the nineteenth and twentieth centuries.

It was precisely at the culmination of this process that came the paper that opens our field of study, that is, environmental aesthetics. Ronald Hepburn's *Contemporary aesthetics and the neglect of natural beauty*¹³, starting with the polemical tone already present in its title, will be able to advance a critique of the narrow-mindedness that has come to characterize the discipline of aesthetics for decades, by then reduced to a philosophy of art¹⁴. Indeed, the need for a return to nature¹⁵ is here asserted from a recovery of earlier articulations of aesthetics, oriented toward the study of perception and experience rather than that of the art object.

The focus of this introductory chapter will thus be the reconstruction of the field of study that has emerged since this intervention, highlighting in particular some of the distinctions that normally structure the discipline. Each section – respectively devoted to the ontological, perceptual and ethical issue – will open by introducing environmental aesthetics and showing how each of the three proposed topics normally is to be discussed. First, we will see how the ontological dimension of the perceived object, be

¹² Diffey, T. J. (1993). Natural beauty without metaphysics. In Kemal, S., & Gaskell, I. (Eds.). *Landscape, natural beauty and the arts*. Cambridge University Press, p. 51.

¹³ Hepburn, R. (1984). *Contemporary aesthetics and the neglect of natural beauty*. In R. Hepburn, *Wonder and Other Essays*. Edinburgh University Press. First published in 1966.

¹⁴ A similar position will be presented years later by Paul Ziff (*Anything Viewed*, 1979), who will reject the artistic context as a condition of possibility for aesthetic experience, shifting the focus from the work of art to the interaction between subject and object.

¹⁵ Defined in the first footnote of the text as “all objects that are not human artifacts”, with the clarification that we will avoid considering all those natural objects that have been, even minimally, affected by human transformations.

it nature or the environment, is alternatively considered as *univocal* - according to an approach more related to scientific objectivity - or *prismatic* - according to approaches that we might instead define as culturalist or subjectivist. Second, the status of the percipient subject will be examined, highlighting the dualism that usually structures its sensibility, namely the opposition between *scientific* and *creative* experience. Finally, with regard to the ethical issue, we will focus on the debate that sees on the one hand the possibility of an unambiguous and, therefore, *correct* aesthetic judgment, while on the other hand a greater openness of perspectives, instead leading towards a *reasonable* one.

/

Hepburn's intervention, although central, does not fully exhaust the roots of the discipline. In 1972, Francis Sparshott published *Figuring the Ground: Notes on some Theoretical Problems of the Aesthetic Environment*¹⁶, an article that shows a radical attitude right from the start, asking first and foremost what is aesthetic and what is environment. Indeed, the author does not lean on tradition, but rather tries to establish a generative space capable of shaping a discipline from ideas, conventions and practices circulating in the surrounding society. In the course of the article, we are shown how the environment and the experience we make of it are intrinsically plural and prismatic, always in mutual resonance: a change in the ontological status of the former is followed by a rearticulation of the experiential approach, just as a change in the perceptual disposition corresponds to a rearrangement of the perceived environment itself. The multiple configurations are explored (without being exhausted) starting from the relationship between the two (I and Thou; user and used; traveller and scene; thinker and problem; subject and object; self and setting), from the environmental "taxonomy" (private or public; transient or resident; rural or urban; material or imaginative) and from the experiential classification (background or foreground appreciation; positive or negative approach; formalism or

¹⁶ Sparshott, F. E. (1972). Figuring the ground: Notes on some theoretical problems of the aesthetic environment. *Journal of Aesthetic Education*, 6(3), 11-23.

associationism; perceptual or conceptual experience).

What I would like to emphasise, however, is not so much the opening up of possibilities pursued by the author, but rather his awareness of the power dynamics capable of making one configuration prevail over the others. Indeed, the article closes with the following consideration:

"In practice, what is going to count as an aesthetic aspect of the environment is not going to be settled by theoretical considerations, but by conventions of practice and speech among the *relevant practitioners*, by what planners and bureaucrats find themselves leaving out and putting in. In all professions, from surgery to garbage collection, professional practice observably goes by fads that are determined partly by reasoning (itself subject to fashion), but partly by habit. Conventions about what is aesthetically significant in the environment will partly filter down from analogous conventions in artistic and touristic practice, but will be partly autonomous. I think it would be nice if *steady pressure* could be exerted to protect people's sense of *what is a good place to be in and move through*, not only from being flouted by greed and indifference, but also from being demeaned by aestheticians and their clients in the interests of prettification and majesty; but such pressures are hardly within our control. All we can do here is scatter seeds, some of which may germinate into trees that will crack the sidewalk."¹⁷

What the environment and its aesthetic aspects "are", as well as the way we experience it, depend to a large extent on artistic and representational practices, tourist and professional habits, conventions of practice and speech, but above all they depend on the power dynamics at play within the reproduction and circulation of these dispositifs and dispositions. In other words, if we can all consider ourselves "practitioners", some "practitioners" are certainly more "relevant" than others in establishing and disseminating the desired configurations. It is in the light of this awareness that we cannot surrender to definitions of environment and experience that present themselves as univocal and natural, opposing instead alternatives capable

¹⁷ *Ivi*, cit., p. 23. Emphasis added.

of generating an increasingly habitable and traversable space.

Sparshott's reflection, focused on the theoretical dimension, finds application within the second, more contained, but equally incisive paper: *Landscape evaluation: the theoretical vacuum*¹⁸ by Jay Appleton. Indeed, the issues mentioned above seem to reappear, with particular reference to the context of environmental evaluation, i.e. the dimension of collective landscape management. The author thus shows two parallel and specular streams: on the one hand, the perception and appreciation of the environment inform its management, directing decision-makers and modelling implemented strategies; on the other hand, management policies shape the landscape, orienting and setting the conditions of possibility for our own aesthetic experiences. According to Appleton, it is thus necessary to provide ourselves with a theory capable of reflecting on this dual process, so to maintain a critical, conflictual and transformative approach towards it, i.e. to avoid reifications of the perceived object, evaluative approaches and management policies.

The concern of the two authors, therefore, unlike Hepburn, seems not to be strictly theoretical, but rather related to the responsibilities and political potential of the appreciation and aesthetic experience of the natural environment. As Carlson states:

"Hepburn's essay can be seen as the first philosophical move in the development of environmental aesthetics. However, the next stage in that development had a slightly different starting point. Although, as Hepburn had observed, philosophical aesthetics continued to ignore the aesthetic appreciation of nature in the second half of the twentieth century, the same was not true beyond the siloed world of academic philosophy, where there was a growing public concern about the apparent aesthetic degeneration of the environment."¹⁹

¹⁸ Appleton, J. (1975). *Landscape evaluation: the theoretical vacuum*. *Transactions of the Institute of British Geographers*, 120-123.

¹⁹ Carlson, A. (2014). Ten Steps in the Development of Western Environmental Aesthetics. In M. Drenthen & J. Keulartz (Eds.), *Environmental Aesthetics: Crossing Divides and Breaking Ground*, 13-24, cit., p. 14.

Indeed, stepping back (and sideways), we see how environmental concerns fostered other – often neglected, but still aesthetic – discourses. Looking for example at the American Transcendentalists²⁰, we see how Thoreau recognises nature as an autonomous ground, worthy of respect insofar as it precedes the human being, being its first condition of existence. His critique therefore moves on both the spiritual and material fronts, opposing the alienation of man from nature, as well as the exploitation of the earth by imperialism and capitalism²¹. The reunion with wilderness and with original purity will be recovered by Muir²², the main exponent of the preservationist approach, an attitude capable of giving shape both to movements aimed at the preservation of wilderness, and to that particular form of appreciation, often defined as positive aesthetics²³, aimed at uncontaminated landscapes free of any sign of human intervention. A few decades later, one of the most important texts for the environmental movement of the last century would be printed, once again in the US. In *A Sand County Almanac*, published in 1949, Aldo Leopold advances the proposal of a new *Land Ethic*, attempting to integrate moral and aesthetic dimensions within a single overall vision²⁴. The overlap is in fact made explicit in one of the fundamental points of the *Land Ethic*:

“The 'key-log' which must be moved to release the evolutionary process for an ethic is simply this: quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient. A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise.”²⁵

²⁰ Iovino, S. (2004). *Filosofie dell'ambiente*. Carocci, pp. 22-25.

²¹ Thoreau was indeed the main theorist of civil disobedience.

²² Muir, J. (1912). *The Yosemite*. The Century Company.

²³ Carlson, A. (2000). *Aesthetics and the Environment*, p. 5.

²⁴ Pratt, V., Howarth, J., & Brady, E. (2000). *Environment and philosophy*. Routledge, p. 128.

²⁵ Leopold, A. (1949). *A Sand County Almanac, and Sketches Here and There*. Oxford University Press.

The more pronounced critical vein presented by Leopold's aesthetic will be the forerunner of a multitude of claims capable of identifying responsibilities and constituting the ground for the blossoming of a collective political movement²⁶.

In 1962, *Our Synthetic Environment*²⁷, perhaps the first real socio-political reading of the emerging crisis, and *Silent Spring*²⁸, a brazen analysis of the damage caused by pesticides in agriculture, were published. In 1970, it was politics to show signs of interest, with Nixon's decision to pass the National Environmental Policy Act into law and, a few months later, Congress' choice to approve the Clean Air Act Amendments. It was then the turn of non-governmental organisations, with the founding of Greenpeace in 1971, and the research sector, with the publication of *The Limits to Growth* in 1972, a report on the state of the planet, natural resources and the growing population. The journalistic field and public opinion also began to move, both through strong ethical stances - starting with Peter Singer's article *Animal Liberation* in 1973 - and through the spread of a new environmental sensitivity by writers²⁹ and artists³⁰.

Starting from this last reflection, we could now ask ourselves: why did environment and nature again become a pressing and central issue for the aesthetic discipline precisely from the 1960s and 1970s? The answer seems obvious. As we have seen, on the one hand the need for a collective management of landscapes and natural environments and, on the other hand, the growing concern about their degradation, cannot but be seen as powerful triggers capable of initiating the new discipline. At the same time,

²⁶ For a reconstruction of the most relevant moments of the environmentalist debate see Iovino, S. (2004). *Filosofie dell'ambiente*, pp. 26-32. For a similar examination, aimed however at the specific field of science, see the introduction by Foster, J. B. (2022). *Capitalism in the Anthropocene: ecological ruin or ecological revolution*. NYU Press.

²⁷ Published by Murray Bookchin, a leading exponent of *social ecology*, under the pseudonym Lewis Herber.

²⁸ Carson R. (1962). *Silent Spring*. Houghton Mifflin.

²⁹ Iovino, S. (2004). *Filosofie dell'ambiente*, p. 143.

³⁰ T.J. Demos (2016). *Decolonizing Nature: Contemporary Art and the Politics of Ecology*. Sternberg Press, pp. 38-62.

I cannot avoid noticing how the ecological crisis as such (and, thus, the social and political dimensions of this process) often seems to be forgotten by the so-called “environmental aesthetics” and its main authors.

Given this (further) neglect, the chapter will continue by offering a different perspective on the field. The second fragment of each section will attempt to disentangle itself from the recurring conflicts, re-articulating reflections according to different coordinates that, as we will see, are now more central than ever in the ecological debate. Namely, it will highlight the presence of fundamental oppositions that have often remained in the background: Matter-meaning / Discovery-production; Body-narratives / Universal-particular perception; Ethics-aesthetics / Neutrality-partiality. Firstly, it will therefore be noted how the object is often defined through the supposed transcendence of scientific objectivity, capable of discovering it as a merely material entity. Secondly, it will be highlighted how perceptual experience is virtually configured as a mere bodily activity, potentially universalizable and non-historical. Given the (presumed) purity and universality of environment and perception, the two positions can only go hand in hand with the possibility of a universal aesthetic judgement – or, better, universalizable by purifying it from personal interests, political stances, ethical postures and value judgements.

To conclude, in the third and final fragment of each section we will explore the literature concerning the aesthetic experience of the crisis, verifying the presence and persistence of these dualisms and posing the three following questions: how is the ontological status of the environmental crisis configured today? Which theories can be identified in relation to climate perception and what specificities do they present? What kind of questions have emerged in recent decades concerning ecological sensibility, understood in its twofold aesthetic and ethical sense?

1.1 OBJECT

1.1.1 Univocal or Prismatic Nature?

We might think that the object of investigation is the shared pivot around which different perspectives debate, mainly competing for the title of “adequate” appreciation and approach. As we move through the readings and follow the historical track of the discipline, we soon realise how the various interpretations given by each author continually destabilise the boundaries of the environment: approaching its most minute details and retreating to enjoy the overall view; marching on the solid ground of materiality and then investigating its disparate representations; fixing a stable perspective in space and time or following the movements that animate it. Ambiguity, indeterminacy and elusiveness pervade the field of environmental aesthetics and often seem to be characteristics of nature as such. As Morton reminds us:

“The more we study it, the more we see that, beyond the fact that many different people have many different opinions about it, nature in itself flickers between things - it is both/and or neither/nor. This flickering affects how we write about it. Nature is ... animals, trees, the weather... the bioregion, the ecosystem. It is both the set and the contents of the set. It is the world and the entities in that world. It appears like a ghost at the never-arriving end of an infinite series: crabs, waves, lightning, rabbits, silicon... Nature. Of all things, nature should be natural. But we cannot point to it. What we usually get is a suggestive effusion on something.”³¹

The object of appreciation is the first of the spheres we are going to problematise, since, as Carlson recalls in the introduction to one of his fundamental texts, *Aesthetics and the Environment*³², an aesthetic

³¹ Morton, T. (2009). *Ecology without nature: Rethinking environmental aesthetics*. Harvard University Press, cit., p. 18.

³² Carlson, A. (2000). *Aesthetics and the Environment*, pp. xvii-xxi.

investigation will necessarily have to start from its object of reference. The author, one of the leading exponents of the discipline, makes his position explicit from the outset, arguing how the “what” and “how” to appreciate can only be solved through two divergent approaches, namely the subjective (or sceptical) and the objective. Against the spectre of postmodern relativism hovering over the former, it will be necessary to stand in favour of objectivity, letting the nature, history and properties of the object guide us in our appreciation. Although he acknowledges the multiplicity of environmental declinations, ranging from wilderness to urban environments, from the drop of water in a pond to the suburbs of a city, from everyday spaces to the most exotic landscapes, he would seem to lean towards the possibility of a general (and correct) model of appreciation or, possibly, variations of the same depending on the object of reference. The possibility that is explicitly rejected is that of a plurality of alternative *interpretations* of the same object; but, even more subtly, what is implicitly rejected is the possibility of multiple, cultural and subjective, *articulations* of the object itself, in particular when we speak of nature and the natural environment. Considering such perspectives as ontological articulation is a risky move or, even more than risky, incorrect: let us not lose sight of nature “on its own terms”³³.

Against the advice of his colleague, Donald W. Crawford cautiously attempts to force the uniqueness of nature. Wondering what we value when we say we “value nature”, the author compiles a list of possibilities that, initially, appear harmless in the objectivists' eyes:

- “a. *Objects and organisms*: This is the category of plants and animals, their parts, their products, as well as inorganic complexes that exhibit orderly structures or intensive qualities. [...]
- b. *Ecosystems*: A second aspect of nature especially prominent in recent aesthetics focuses on natural environments or ecological systems and communities – the interdependencies of organisms, climate, and inorganic elements as they exist in a particular locale through time.
- c. *Events, phenomena, and monuments*: A third aspect of nature, more often found in traditional aesthetic literature and nature writing generally, consists of natural events, phenomena, and monuments [...]

³³ The expression is often used by defenders of strong scientific positions.

these often are aspects of nature whose description essentially involves reference to some human location from which these aspects of nature are observed."

While the last sentence may make defenders of the objective approach turn up their noses, what will be most destabilizing, however, is the fourth point, namely "scenery":

"d. *Scenery*: A fourth paradigm of nature in the literature also, but even more explicitly, requires a human perspective. This is the category of scenery, which is frequently exemplified in landscapes. This is the initial focal point for my question, 'Is Scenery Part of the Aesthetics of Nature?'"³⁴

Aware of the controversies that such an inclusion might generate, Crawford will devote the article to defending the legitimacy of this alternative, i.e. the possibility of including scenery within the "aesthetics of nature", by responding to the three most common criticisms.

The first juxtaposes scenery with landscape and concerns the accusation of constructivism, that is, the reduction of the object to a mere human and subjective projection; on the contrary, the author will argue how the dependence of landscape on a situated and embodied perspective does not necessarily mean *absolute arbitrariness* in the configuration of landscape itself. The second concern is that of art-mediated perception, which, unlike scientific disciplines, is accused of distorting nature; as one might guess, the simplest response will be to show how the objectivity of science, that is, its lack of mediation and its ability to grasp the object purely and without interpretive activity, is an outdated illusion. Moreover, there is no strictly aesthetic reason why experience should be based on scientific knowledge: the work of art (landscape paintings in this case) is not fiction that distances us from nature, but rather an extension of perceptual possibilities through the adoption of a different perspective, that is, experience of the effects that

³⁴ Crawford, D. (2004). Scenery and the Aesthetics of Nature. In Allen Carlson & Arnold Berleant (Eds.), *The Aesthetics of Natural Environments*. Broadview Press, 253-268, cit., p. 254.

nature can produce on us as (different) perceivers³⁵.

The last affront is made by the *engagement* thesis, which argues how the experience of scenery is, on the one hand, disinterested and contemplative and, on the other hand, merely visual and passive. First, even if contemplation were to characterize this kind of experience, this does not imply that it is not aesthetic: many people *actually* perceive nature in this mode, and it is not clear why should anyone delegitimize it. Second, as much as it may prioritize certain perceptual dimensions (the visual one for example), this does not mean that the experience is reduced to those dimensions: every experience of the environment is *inevitably* multisensory and engaged, albeit at different gradations and intensities.

On the one hand, Carlson's position attempts to promote the uniqueness of the object of appreciation, in particular through recourse to science and its ability to identify nature and its constituent boundaries; on the other, Crawford seeks to demonstrate how the articulation of nature depends on artistic and cultural devices, as well as on bodily dispositions and abilities that are intertwined with them and that, inevitably, constantly reconfigure it, making it a prismatic object that is difficult to fix definitively. At this point we might ask ourselves: what are the dichotomies that, under the surface, structure the opposition between the two thinkers?

1.1.2 Matter-Meaning / Discovery-Production

Looking at the most accepted historical reconstructions, we immediately notice how they often focus on the gradual expansion of the types of environments or elements on which to focus³⁶. Starting from the natural

³⁵ An alternative defence of the validity of landscape painting for articulating the aesthetic experience of the environment can be found in Berleant, A. (1991). The viewer in the landscape. In *Art and Engagement*. Temple University Press, pp. 76-104.

³⁶ For a similar reconstruction, partly focused on historical stages and partly on the expansion of the object of study, see Carlson, A. (2014). Ten Steps in the Development of Western Environmental Aesthetics. A more concise description can be found in Brady, E. (2003). *Aesthetics of the Natural Environment*, pp. 55-59.

environment and its mineral, vegetable or animal components³⁷, we then moved on to investigations directed towards specific environments³⁸, specific perceptual dimensions³⁹ or temporal and meteorological dimensions⁴⁰. The expansion towards modified settings then led to the agricultural environment⁴¹, gardens⁴², the urban and built landscape⁴³, in particular architectural space⁴⁴, until the extreme extension towards the spatial environment⁴⁵ or the focus on the everyday, lived environment⁴⁶ - that is, to a paradigm shift capable of fully embracing the lesson of ecology, which had already operated a radical rethinking of nature from "essence to place, from metaphysical concept to environment, context of dynamic relationships", but above all "considered as a place where man is, as home: eco-logy"⁴⁷.

³⁷ Brady, E. (2014). Aesthetic Value and Wild Animals. In M. Drenthen & J. Keulartz (Eds.), *Environmental Aesthetics: Crossing Divides and Breaking Ground*, 188–200.

³⁸ Rolston, H. (1998). Aesthetic experience in forests. *The Journal of Aesthetics and Art Criticism*, 56(2), 157-166; Tuan, Y. (1993). Desert and ice: Ambivalent aesthetics. In S. Kemal & I. Gaskell (Eds.), *Landscape, Natural Beauty and the Arts*, 139-157.

³⁹ Fisher, J. A. (1998). What the hills are alive with: In defense of the sounds of nature. *The Journal of Aesthetics and Art Criticism*, 56(2), 167-179.

⁴⁰ Saito, Y. (2005). Aesthetics of weather, in A. Light and J. Smith (Eds.), *The Aesthetics Everyday Life*. New York: Columbia University; Diaconu, M. (2015). Longing for Clouds- Does Beautiful Weather have to be Fine?. *Contemporary Aesthetics (Journal Archive)*, 13(1), Article 16.

⁴¹ Carlson, A. (1985). On appreciating agricultural landscapes. *The Journal of aesthetics and art criticism*, 43(3), 301-312.

⁴² Carlson, A. (1997). On the aesthetic appreciation of Japanese gardens. *The British Journal of Aesthetics*, 37(1), 47-57; Miller, M. (1993). *The garden as an art*. Suny Press.

⁴³ Berleant, A. (1978). Aesthetic Paradigms for an Urban Ecology. *Diogenes*, 26(103), 1-28; Berleant, A. (1986). Cultivating an urban aesthetic. *Diogenes*, 34(136), 1-18; Berleant, A., & Carlson, A. (Eds.). (2007). *The aesthetics of human environments*. Broadview press.

⁴⁴ Berleant, A. (1991). Architecture as environmental design. In *Art and Engagement*, pp. 76-104; Carlson, A. (1986). Reconsidering the aesthetics of architecture. *Journal of Aesthetic Education*, 20(4), 21-27; Carlson, A. (1994). Existence, location, and function: the appreciation of architecture. *Philosophy and Architecture*, 141-164.

⁴⁵ Berleant, A. (1992). Designing Outer Space. In *The Aesthetics of Environment*; Hepburn, R. (2010). The aesthetics of sky and space. *Environmental Values*, 19(3), 273-288.

⁴⁶ Among the main texts we find Light, A., & Smith, J. (Eds.). (2005). *The aesthetics of everyday life*. Columbia University Press; Saito, Y. (2007). *Everyday Aesthetics*. Oxford University Press.

⁴⁷ Iovino, S. (2004). *Filosofie dell'ambiente*, cit., p. 25. Translation mine.

In a way, it would seem that the circumscribed character of the natural environment has gradually dissolved, making room for a whole series of environments inhabited, altered or generated by human beings. According to Diffey, this separation between nature and culture was produced and maintained in the field of aesthetics on the basis of religious instances, i.e. the idea that nature was the work of God and that, uncontaminated, it shone in perfection, while the intrusion of human action undermined its beauty⁴⁸: the disintegration of such beliefs, combined with an awareness of widespread and persistent human intervention in the landscape (not to mention the now acknowledged influence exerted on climate), as well as other social and cultural factors, has thus led towards an expansion of the field of study capable of integrating modified and built environments.

At the same time, however, it should be emphasised how the opening to the cultural and human side is driven by the strictly *material* dimension: the so-called “cultural” environments only become part of the analysis when the human configuration of the same concerns the generation or alteration of their physical features⁴⁹. In other words: the object of investigation has been extended since it was modified through material practices (farming, building, decorating and dwelling). In this way, it is still possible to consider the (cultural or natural) environment as a merely material referent, ontologically impermeable to discursive, narrative, speculative, imaginative, interpretative or representational activity.

However, going back again to one of the earliest texts on environmental aesthetics, we see how the semiotic and interpretative dimension is pretty essential for the articulation of the perceived object. As Sparshott points out:

“I suggested before that environments are imaginary unities into which people variously synthesize the contexts of their actions. If we accept that, I can think of three ways in which objects might enter into such a

⁴⁸ Diffey, T. J. (1993). Natural beauty without metaphysics, pp. 47-48. In contrast, other positions argue that the biblical narrative provided the basis for the massive exploitation and depredation of nature by human beings. See for example Berleant, A. (2014). The cultural aesthetics of environment. In M. Drenthen & J. Keulartz (Eds.), *Environmental Aesthetics: Crossing Divides and Breaking Ground*, p. 68.

⁴⁹ As can be seen in Carlson, A. (2000). *Aesthetics and the Environment*, p. xvii-xviii.

synthesis. First, they can contribute as parts to an overall organized form. Second, they can be subordinated to a style by sharing in a common system of elements and relations, such that an agreeable ensemble might result even from quite careless arrangements. Third, more confusingly, they can be brought under a single concept. Such might be the unity we think we find in a forest, where there is no single unifying pattern and no unifying system of modules and relations, but everything looks right because everything looks woody: we take for a visual harmony what may really only be a harmony of associations."⁵⁰

The environment is certainly composed of a whole series of natural and pristine, as well as constructed and modified spaces; at the same time, it is also the *imaginary unit* capable of synthesising disparate elements through a certain concept, form or style. What the environment "is" (and "can be") cannot but inevitably link up with our activities of representing and describing it, i.e. with varied perceptual habits, scientific information and classifications, as well as with narrative and visual artistic creations that incessantly renegotiate and reconfigure the object's properties, boundaries and characters. That this is the case is demonstrated by the same detractors of the so-called "landscape model"⁵¹ who, in criticising the effects produced on perception from exposure to landscape paintings (fragmentation into scenes, two-dimensionality, detachment and passivity), in a certain sense cannot but affirm the actual working of this stylisation within the articulation of the experienced environment.

Despite the importance of configurations and stylisations, arrangements and interpretations, the concern to maintain the separation between matter and meaning seems to persist among the main voices in the field. Looking at the writings of Emily Brady, for example, we see how the author, while acknowledging the influence of relational frameworks, concepts and cultural conventions that allow us to grasp nature, firmly maintains that nature is autonomous with respect to human beings and independent in the reality of its processes⁵². By affirming the independence of nature with respect to our frameworks, as well as by introducing the idea of

⁵⁰ Sparshott, F. E. (1972). *Figuring the ground*, cit., p.22.

⁵¹ Carlson, A. (2000). *Aesthetics and the Environment*, p. 6.

⁵² Brady, E. (2003). *Aesthetics of the Natural Environment*, pp. 52-53.

interpretation as an activity that follows the acquisition of data regarding the primary qualities rooted in the materiality of the environment, Brady seems to maintain the distinction between the prior uniqueness of matter and the coming plurality of meanings, thus avoiding the much-feared risk of a radical postmodern constructivism.

Along with the distinction between nature and culture (or matter and meaning), a second discrimination that has shaped environmental aesthetics is that between nature and art⁵³.

On the one hand, we find some authors that have tried to overcome the distinction, fighting against the imposition of a constitutive dualism that isolates environmental aesthetics from artistic aesthetics. Take, for instance, Diffey, who, although does not actually argue against the separation of the two types of beauty, actually urges us to undermine it through a process of internal multiplication. In other words, he asks whether artistic beauty is one or multiple, that is, whether the beauty of sculpture, painting, music, poetry and so on, can be subsumed under a single type of experience and, again, whether the beauty of two paintings is to be considered equal to itself or different⁵⁴. If every experience of appreciation is to be considered within a particular and contextual dimension, then the creation of two monolithic and opposed models for art and nature becomes a purely theoretical abstraction. Specularly, Berleant attempts to advance a unified aesthetic theory, capable of avoiding the fragmentation of kinds of experience according to the object of appreciation⁵⁵. The first step in this direction is realised in a still unsystematic way in *Art and Engagement*, a text that, although focused on artistic forms, also moves freely in the natural field, in particular discussing landscapes, architecture and the environment⁵⁶. The author's increasing involvement with the field of environmental aesthetics would later lead him to articulate the proposal of an all-encompassing aesthetics through

⁵³ Dalmaso, A. C. (2022). *Natura*. In Pinotti, A. (Eds.). *Il primo libro di estetica*. Einaudi, p. 172.

⁵⁴ Diffey, T. J. (1993). Natural beauty without metaphysics, p. 51.

⁵⁵ Alcaraz, A. L. (2017). Introduction to Arnold Berleant's Perspective. *Espes*, 6(2), 1-8.

⁵⁶ Berleant, A. (1991). *Art and Engagement*. Temple University Press, p. xiv.

various articles and texts⁵⁷, arguing how the dimension of corporeal and multisensory engagement can become a unifying factor for the variety of appreciative experiences.

On the other hand, other authors have tried to defend the distinction between nature and art (and, thus, between environmental aesthetics and artistic aesthetics), often reinterpreting this opposition as that between discovery and production. In contrast to the matter-meaning dichotomy, which upholds the independence of the natural environment with respect to the plurality of cultural interpretations, this new distinction seeks to claim the a-historicity of nature, of its scientific properties and the categories with which we grasp it. The latter are in fact inscribed in the natural environment forever and ever, waiting to be simply revealed, as opposed to artistic categories, messages and meanings attached and incorporated by the artist in the work, which are instead historically produced and situated. If what art "is" depends on the becoming of artistic intentions, social conventions and critical interpretations, nature is one and persistent, simply waiting to be discovered through scientific practices and knowledge.

Among the proponents of this dualism, we surely find Allen Carlson, who argues that the main factor to take into account when appreciating natural environments is that they, precisely because they are "natural", are not produced by human beings:

"Here it is relevant to note the second point that I wish to emphasize about natural environments: they are natural. [...] The fact that nature is natural – not our creation – does not mean, however, that we must be without knowledge of it. Natural objects are such that we can discover things about them that are independent of any involvement by us in their creation."⁵⁸

The properties of the environment are somehow intrinsic to it, independent of our active intervention. The most effective strategy for experiencing them is therefore to turn to that knowledge capable of bringing these properties

⁵⁷ Key examples include Berleant, A. (1993). *The Aesthetics of Art and Nature*. In Kemal, S., & Gaskell, I. (Eds.). *Landscape, natural beauty and the arts*; Berleant, A. (1992). *The Aesthetics of Environment*. Temple University Press.

⁵⁸ Carlson, A. (2000). *Aesthetics and the Environment*, cit., p. 49.

to light. As with properties, the same argument applies to the categories through which we catalogue, perceive and organise nature:

“In general we do not produce, but rather discover, natural objects and aspects of nature. Why should we therefore not discover the correct categories for their perception? We discover whales and later discover that, in spite of somewhat misleading perceptual properties, they are in fact mammals and not fish.”⁵⁹

Differently from nature, the produced character of works of art is necessarily linked to the idea of will or intentionality, which becomes central to the aesthetic experience phase; the viewer will in fact be required to consider the artist's intentions and the messages they wish to communicate as a relevant, if not privileged, element for appreciation (particularly according to the theories of expression⁶⁰ developed in the last century and still operative in the experience of most).

The centrality of this intentional dimension is emphasised by Carlson through the idea of “design appreciation”, which is valid in the artistic context and has now been outdated in the natural sphere, particularly following the delegitimization of a certain Western tradition, mentioned earlier, which sees nature as a product of the divine will⁶¹. The search for different forces – more or less ordered, but in any case, “unconscious” – capable of shaping the environment and, therefore, of directing aesthetic experience in an opportune manner, will gradually lead to the legitimisation of the scientific approach. The author will thus advance the so-called “order appreciation” as a more appropriate alternative to the first mode of experience, replacing artistic intentions (“design”) with natural laws (“order”).

References to the dimension of intentionality are also present in several other authors: alongside Carlson we certainly also find Malcom Budd, firmly convinced of the non-intentional character of nature and of its properties⁶²,

⁵⁹ *Ivi*, cit., p. 64.

⁶⁰ Hepburn, R. (1984). *Contemporary aesthetics and the neglect of natural beauty*, p. 11.

⁶¹ Carlson, A. (2000). *Aesthetics and the Environment*, pp. 115-116.

⁶² Budd, M. (2000). The aesthetics of nature. In *Proceedings of the Aristotelian Society* (Vol. 100, No. 1, pp. 137-157). Blackwell Science Ltd, p. 138.

as well as Brady, who suggests how the incorporation not only of the intention, but also of the skills, talents and creativity of the artist, is central to the appreciation of works of art, providing us with useful clues to appropriately direct and guide that specific experience⁶³.

1.1.3 Environmental Crisis Ontology

Once we have highlighted some of the structuring oppositions of the field of enquiry, we might ask: how does the climate phenomenon present itself within the discipline? Focusing on the material dimension of climate change, Brady's approach considers the same as a of environmental alteration. Indeed, according to the author, climate change would affect three main spheres:

- “(a) Effects on nature itself - that is, on natural entities which are subject relatively little human influence;
- (b) Technologies developed in response to climate change which become built elements in landscapes or seascapes, e.g., structures for renewable energy, geoengineering, etc.
- (c) Changes to the other human structures, including, for instance, denser urbanisation, crop changes, changes in transport modes, etc.”⁶⁴

Her discourse, however, will be limited to the first sphere, considering only the experience of natural objects affected by climate change. Sticking to the idea of aesthetics as a theory of appreciation⁶⁵, the author will try to understand how it will be possible to preserve the beauty of nature, or rather how to continue to appreciate natural environments subjected to (material) alterations⁶⁶.

⁶³ Brady, E. (2003). *Aesthetics of the Natural Environment*, pp. 60-61.

⁶⁴ Brady, E. (2014). Aesthetic value, ethics and climate change. *Environmental Values*, 23(5), 551-570, cit., p. 554.

⁶⁵ The link between aesthetics, appreciation and judgement is always emphasised by the author, as can be seen from the very first pages of her most important text. Brady, E. (2003). *Aesthetics of the Natural Environment*, p. 7.

⁶⁶ A similar concern is also shown by Ciccarelli who, in order to preserve the possibilities of appreciation, relies on the cinematic world, arguing how it is able to open up glimmers

Although the author focuses on the strictly material dimension of climate change, at the same time, she seems to reflect in terms as detached as ever from the actual materiality (and brutality) of the process. This insistence on beauty is in fact criticised by Auer who, in response to his colleague's article, attempts to demonstrate the ethically problematic aspects of such an approach. In particular, according to the author, continuing to appreciate environments and objects degraded by climate change risks both becoming a mere theoretical abstraction against actual lived experience, and a privilege for those who can afford not to rely on such environments for their subsistence and, therefore, to appreciate them in a detached and contemplative manner⁶⁷.

Other authors have therefore tried to take different approaches, on the one hand shifting their focus to objects of study more relevant to collective survival, and on the other assuming a critical approach to the study of the climate crisis itself. Ross Kiester, for example, explores different modes of experience that might be aesthetically effective in the appreciation of biological diversity: from collecting to reading natural catalogues, from narrative to painting, from the recovery of the mathematical and dynamic sublime to the development of new aesthetic possibilities through taxonomy as a creative activity⁶⁸. Similarly, Tribot, Deter and Mouquet will insist on the same theme, attempting to develop a discourse around biodiversity capable of integrating aesthetic reflections and scientific methodologies⁶⁹.

Shifting the focus to the climate crisis and to the ways in which we narrate,

of alternative futures, that is, of possible ways of experiencing environments that will inevitably be contaminated (Ciccarelli, S. (2014). The beauty of climate change. In Di Paola, M., Pellegrino, G. (Eds.), *Canned Heat. Ethics and Politics of Global Climate Change*. Routledge, 225-238). The reflection will be later expanded in Di Paola, M., & Ciccarelli, S. (2022). The disorienting aesthetics of mashed-up Anthropocene environments. *Environmental Values*, 31(1), 85-106.

⁶⁷ Auer, M. R. (2019). Environmental aesthetics in the age of climate change. *Sustainability*, 11(18), 5001.

⁶⁸ Kiester, A. R. (1996). Aesthetics of biological diversity. *Human Ecology Review*, 151-157.

⁶⁹ Tribot, A. S., Deter, J., & Mouquet, N. (2018). Integrating the aesthetic value of landscapes and biological diversity. *Proceedings of the Royal Society B: Biological Sciences*, 285(1886), 20180971.

visualise and articulate it, Ziser and Sze, attempt to intertwine the field of visual, aesthetic and artistic studies with social, economic and political analysis. In *Climate Change, Environmental Aesthetics and Global Environmental Justice Cultural Studies*⁷⁰, the two authors question the effects of photographic and audiovisual works on today's society, asking themselves what interests they serve and what assumptions they convey, while keeping them implicit.



Figure 1. *Edward Burtynsky, Manufacturing #17, Deda Chicken Processing Plant, Dehui City, Jilin Province, China, 2005.*

In particular, a critique will be made of the work of Edward Burtynsky, an iconic photographer of climate change, focused on the production and distribution of images devoted to beauty that, devoid of information and decontextualised, risk promoting a certain taste for environmental ruin. One of his most famous works (*China*, 2006), deals with the delocalisation

⁷⁰ Ziser, M., & Sze, J. (2007). Climate change, environmental aesthetics, and global environmental justice cultural studies. *Discourse*, 29(2), 384-410.

of production in Chinese factories, showing fields of men and women workers who become indistinguishable in the multitude. Avoiding to consider and to highlight the link between Western consumption and Chinese production, instead pointing the finger at the new Chinese middle class as the main cause of this excessive production, the ecological crisis is thus simplified and sublimated into the rivalry between West and China.



Figure 2. *Rodrigo Sorogoyen, As Bestas, 2022.*

In contrast to this approach, there are other artists who have tried to produce works capable of seriously considering the dimension of climate justice. On the one hand, we have filmmakers who focus more on the collective level, such as Daniel Gold and Judith Helfand with *Everything's Cool*, a 2007 documentary about the catastrophe caused by Hurricane Katrina, which brings to light the structural inequalities that distribute environmental damage. On the other hand, we find productions that attempt to shift the focus to the individual dimension, showing the intersections between personal history and global political and economic dynamics. A good example is *Up the Yangtze*, a documentary that focuses on

the lives of a family affected by the construction of the Three Gorges Dam on the Yangtze River in Hubei, China, as well as the more recent *As Bestas*, a story capable of undermining the idea of “sustainable development” and “green transition”, increasingly conducted at the expense of defenceless and unconscious populations and territories devoid (or deprived) of resistance.

While Brady tries to analyse the material effects of climate change on natural environments (and on their appreciation), we can see how these latter interventions begin to question the way in which we artistically and politically represent, interpret, perceive and articulate the climate crisis itself, making this complex condition, this socio-environmental process, a new object of investigation for environmental aesthetics⁷¹.

Nevertheless, it is important to emphasise that the efforts and attempts made in this direction still remain scarce; as Mikkonen points out, environmental aesthetics ironically seems to be one of the few disciplines left almost untouched by the ecological crisis⁷². Together with Lehtinen, the author will then attempt to define the main reasons for such indifference, thus calling for a collective effort towards taking charge of the climate issue:

“First is the aestheticians’ focus on beauty. [...] Second, Anglo-American environmental aesthetics reflects a North American perspective on environmental issues, for instance, in highlighting the concept of wilderness. Even today some central philosophers see pristine nature as an ideal nature, at least as a useful heuristic concept in a theory of nature appreciation. Third, the Anglo-American analytic, universalist approach emphasises objectivity, operates on a relatively high level of abstraction and prefers to set aside historical, social and political issues that are thought to confuse and complicate conceptual examinations;

⁷¹ In a more recent article on the subject, Brady continues to deal with the issue in terms of experience of crisis-affected environments, rather than examining the perception of the crisis itself. Nevertheless, by referring to the experience of the sublime, the author seems to open up this unexplored path: “It might be claimed that the *concept* of GCC, as such, is sublime because it describes an environmental problem of extraordinary temporal and spatial vastness” (Brady, E. (2022). Global climate change and aesthetics. *Environmental Values*, 31(1), 27-46, cit., p. 35).

⁷² Mikkonen, J. (2022). Aesthetic appreciation of nature and the global environmental crisis. *Environmental Values*, 31(1), 47–66.

in the analytic tradition, changes in the sublunary sphere are not considered philosophically interesting."⁷³

Despite the scarcity of attempts made in this direction, as we have seen, some authors are nevertheless beginning to understand the importance of visual, artistic and narrative imaginaries, as well as economic, social and political interests, in the articulation of the crisis and its very perception. Setting aside for the moment the question of the ontological status of the crisis, let us now move on to the next section, devoted to the multiple modes of experience proposed and promoted by the authors of environmental aesthetics.

⁷³ Mikkonen, J., & Lehtinen, S. (2022). Philosophical Aesthetics and the Global Environmental Emergency. *Environmental values*, 31(1), 15-26, cit., p. 15.

1.2 PERCEPTION

1.2.1 Scientific or Creative Experience?

One of the main tools employed to systematise and order the discipline is the classification of modes of experience. Each voice gives its own interpretation - often functional to the discourse it attempts to promote -, although the majority adhere to the classic distinction between cognitive and non-cognitive positions, occasionally revised with slight variations on the theme. It is possible to verify how this division informs the dominant narrative by looking at the synthetic reconstructions proposed by texts that are external to environmental aesthetics in the strict sense.

Consider, for example, *Il primo libro di estetica* ("The First Book of Aesthetics"), an introduction to aesthetics recently published by Einaudi, and look at the "Nature" section. The reference to the contemporary debate sees, on the one hand, Berleant, with his emphasis on *engagement*, multi-sensory immersion and active participation in the aesthetic process, and, on the other, Carlson, promoter of the cognitive approach, based on the scientific understanding of the natural world⁷⁴. Moving on, let us see how two introductory texts on environmental philosophy deal with the subject of aesthetics. The first is Iovino's *Filosofie dell'ambiente* ("Philosophies of the environment"), which takes up the opposition between the "engagement approach" and the "cognitive approach", redefining them in terms of a subjectivist and objectivist orientation and emphasising the psychological, emotional, non-dichotomous and immediate dimension of the former, as opposed to the knowledge of properties, origins and categories proper to the latter⁷⁵. Another text is then *Environment and Philosophy*, part of the Routledge "Introductions to Environment" series. Again, the terms change, but the substance remains the same: in the chapter on aesthetics, written by Brady, the two terms in the contemporary debate are defined as "science-based and non-science-based models" - following the same

⁷⁴ Dalmasso, A. C. (2022). *Natura*, pp. 178-179.

⁷⁵ Iovino, S. (2004). *Filosofie dell'ambiente*, p. 135.

reconstruction made in her best-known text⁷⁶. Here the description of the second approach expands to include the dimensions of imagination (a central theme for the author) and non-scientific narratives⁷⁷.

If we delve into the main texts of environmental aesthetics, we see how the discourse often repeats, while finding interesting reconfigurations. Carlson, for example, while taking up the two main approaches, tries not to posit the question in a dichotomous manner and instead proposes several models, some referring to singular authors, others capable of integrating multiple positions⁷⁸. The first two models proposed, "object model" and "landscape model", are probably the most criticised in the field and concern in the former case the extraction of the object from its context and the focus on formal qualities, while in the latter the reliance on the modes of appreciation typical of landscape paintings (division into scenes, two-dimensionality, focus on form, passive contemplation). Against such distortions of the true character of nature, the "natural environmental model" is proposed by the author, i.e. what we have so far defined as the cognitive approach, followed immediately by the *engagement* model - criticised for promoting a shallow and superficial appreciation, linked to the whims of the subject who is left free to shape the experience as they please. We then have the "arousal model", which concerns openness to nature and the possibility of being moved by it⁷⁹. We note here how the description of the model is somewhat biased; the emotional relationship is presented as being informed by experience and everyday shared "knowledge", and then it is argued that this model is a kind of more general variant on Carlson's model, which is instead based on richer, more in-depth knowledge. We continue with the "mystery model", which conceives nature as alien, distant and elusive in its deepest character and, therefore, only approachable through an attitude of humbleness and acceptance of unknowability⁸⁰. Here, too, we can see a veiled criticism on the part of the author, who argues

⁷⁶ Brady, E. (2003). *Aesthetics of the Natural Environment*, pp. 86-116.

⁷⁷ Pratt, V., Howarth, J., & Brady, E. (2000). *Environment and philosophy*, pp. 152-161.

⁷⁸ Carlson, A. (2000). *Aesthetics and the Environment*, pp. 3-13.

⁷⁹ Carroll, N. (1993). On being moved by nature: Between religion and natural history. In Kemal, S., & Gaskell, I. (Eds.). *Landscape, natural beauty and the arts*.

⁸⁰ Godlovitch, S. (1994). Icebreakers: Environmentalism and natural aesthetics. *Journal of Applied Philosophy*, 11(1), 15-30.

that the model leads to a kind of veneration of nature, making it more of a religious than an aesthetic disposition. In the same vein, we find the "nonaesthetic model", which argues that the paradigmatic aesthetic appreciation is that of works of art and, possibly, human artifacts; consequently, talking about the aesthetics of nature makes no sense. A certain amount of artifactualisation is therefore necessary for an appreciative experience to be given. This characteristic is respected, but at the same time exaggerated, by the "postmodern model", which, according to Carlson, considers nature as a text, i.e. essentially made up of multiple layers of meanings that have been conferred upon it from different points of view, in different ways, in different epochs:

"The possibility of a postmodern model of nature appreciation focuses attention on the many layers of human deposit that overlay pure nature."⁸¹

It is precisely with this sentence that the author succeeds in continuing the discourse to redirect it in his favour, arguing how common sense and especially science constitute the "more basic" and "most fundamental layers of the human overlay, those constituting the very foundations of our experience and understanding of nature"⁸². Using the image of the *pure* core and the *accidental* and gradual layers, an implicit hierarchy of sources is established, according to which the layers closest to and adhering to the core enjoy greater relevance and validity. A similar reference to layers can be seen in Patricia Matthews' reading of Stecker's position⁸³:

"He compares the thin surface qualities of a flower to the thick/enhanced appreciation that occurs when one knows that the flower indicates a certain stage of spring. [...] Stecker seems to assume that having further knowledge about an object is like throwing on layers of clothes: the new layers do not change the old layers, although

⁸¹ Carlson, A. (2000). *Aesthetics and the Environment*, cit., p. 9.

⁸² *Ivi*, cit., p. 10.

⁸³ Stecker, R. (1997). The Correct and the Appropriate in the Appreciation of Nature. *The British Journal of Aesthetics*, 37(4), 393-403.

as a sum total they may together give more warmth. But insofar as the outer layers do not change the inner layers, they are optional.”⁸⁴

The distinction between core and layers, as well as the ontological-metaphysical significance of the same, is then reiterated in the last model presented:

“However, there may be other layers relevant to our appreciation of nature that are equally universal, although they may constitute the spires rather than the foundations of the human deposit. Such layers are the focus of the metaphysical imagination model of nature appreciation.”⁸⁵

Once again, after opening up to the possibility of grasping the true metaphysical substance of nature through imagination, meditation and speculation, a doubt is immediately instilled in us, namely whether these activities do not produce layers and interpretations that are trivial and fanciful, rather than serious and sustainable. While recognising their situated character, Carlson then closes by referring to the natural sciences as the Western world's privileged way of grasping the essential core, the deepest layers of nature – to some extent excluding both the marginal spaces and voices that inhabit the so-called “Western world”, and interpretative possibilities other than this orientation.

Summarising the entire journey, we note how most models are somehow either criticised – as distorting, unattractive, superficial, inappropriate or trivial – or incorporated within the “natural environmental model”, the only one capable of accessing the true character of nature. The problem is thus underlined by Brady:

“There is no question that a normative aim is bound up with the cognitivists’ arguments. Science, as they see it, reveals nature’s real properties, rather than other narratives that may falsify it. [...] Carlson recognises that science is a human framework, but nowhere does he

⁸⁴ Matthews, P. (2002). Scientific knowledge and the aesthetic appreciation of nature. *The Journal of Aesthetics and Art Criticism*, 60(1), 37-48, cit., p. 41.

⁸⁵ Carlson, A. (2000). *Aesthetics and the Environment*, cit., p. 11. The reference is to Hepburn, R. (1996). Landscape and the metaphysical imagination. *Environmental Values*, 5(3), 191-204.

consider whether or not it fails to reveal nature's properties as they are. On the contrary, science is clearly accepted as objective and factual, and he puts it in a separate category rather than in the category of 'cultural information'."⁸⁶

Let us look, then, at the classification proposed by the author in her main text, who will once again trace the cognitive/non-cognitive distinction, while at the same showing the weaknesses and criticisms raised against both – thus avoiding slipping into banal generalisations.

First of all, the author will try to unfold the scientific and cognitive approach in its different declinations and possibilities, revealing its nuances and intensity. The first author she presents is Rolston, who attempts to mediate between phenomenology and science through an analysis of the aesthetic experience of forests⁸⁷. He recognises the importance of scientific knowledge and categories, capable of pointing to the primary qualities of nature; in contrast, secondary qualities, i.e. those related to the aesthetic sphere and appreciation, only emerge through multisensory immersion and the sensitive participation of the appreciator. In this case, the separation between primary and secondary qualities does not so much refer to a distinction between deep and superficial, but rather to a definition of spheres, the former relating to the ontological dimension of the object, the latter to the experiential dimension of appreciation⁸⁸. Another author who argues for a fruitful interaction between the cognitive dimension and direct apprehension is Aldo Leopold who, while celebrating perceptual experience unmediated by scientific knowledge, at the same time constantly promotes the importance of ecology for appreciation, insofar as it is a necessary basis for sustaining the protection and balance of nature⁸⁹. Similar concerns can be found in Eaton, who, as we will see more clearly later on, will argue how the appreciation of natural beauty can only be rooted in ecological knowledge, in order to avoid possible aesthetic

⁸⁶ Brady, E. (2003). *Aesthetics of the Natural Environment*, cit., p. 100.

⁸⁷ Rolston, H. (1998). Aesthetic experience in forests.

⁸⁸ Rolston indeed argues how forest science, when moving from being an applied science to a pure science, can help us appreciate "what the forest is in itself". On the contrary, "the secondary qualities are observer-introduced. *A fortiori*, forests cannot be beautiful on their own" (*Ivi*, cit., p. 161).

⁸⁹ Leopold, A. (1949). *A Sand County Almanac, and Sketches Here and There*.

experiences potentially generating environmental harms and damages⁹⁰. After outlining the cognitive theories and their critiques, Brady proceeds to present the non-cognitive positions. In addition to the *engaged* approach and the aforementioned "arousal" and "mystery" models of Carroll and Godlovitch, which focus respectively on the emotional dimension and the acentric perspective, two other interesting positions are set out. First, Hepburn's seminal article is recalled, capable of developing a multiform and complex perspective, holding together different components through multiple links and balances⁹¹. For example, although scientific knowledge is not considered essential, the author argues how thoughts and concepts, interpretations and associations, do not necessarily conflict with perceptual experience but, if properly dosed and balanced, are capable of expanding and intensifying it. It is through the idea of "realisation" that the author manages to show how the two dimensions can coexist. When, for example, we look at a mountain and realise its majesty and height, this does not mean that we are measuring and analysing its properties quantitatively, but simply perceiving its height by imagining ourselves walking up and down it, or by juxtaposing the image with other elements whose height we already know.

Realising is therefore not estimating or calculating, but this does not mean that a process of associations, references and information is not at work during the perceptual experience. In particular, the imaginative capacity is the one that most supports us during such activity, on the one hand making us cling to perceived qualities, and on the other allowing us to "perceive-like", i.e. to explore different perspectives thanks to the experiences and knowledge that already inhabit our sensibility. This extremely flexible and conciliatory approach will also be maintained in a later article, more focused on the dichotomy between objectivity and subjectivism, revisited as serious and trivial appreciation⁹². What the author will argue is that the distinction between correct and incorrect, true and false approaches is not to be found within a standard a priori established by scientific objectivity, but is to be

⁹⁰ Eaton, M. M. (1998). Fact and fiction in the aesthetic appreciation of nature. *The Journal of Aesthetics and Art Criticism*, 56(2), 149-156.

⁹¹ Hepburn, R. (1984). Contemporary aesthetics and the neglect of natural beauty.

⁹² Hepburn, R. W. (1993). Trivial and serious in aesthetic appreciation of nature. In Kemal, S., & Gaskell, I. (Eds.). *Landscape, natural beauty and the arts*.

assessed contextually according to the variability of situation, nature and personal experience⁹³.

The second mentioned non-cognitivist philosopher is Yuriko Saito, who opens her article by arguing the meaninglessness of a distinction between correct and incorrect aesthetic experiences, the latter often still capable of producing satisfaction, appreciation and pleasure⁹⁴. The main thesis argued in the article concerns the de-hierarchisation of narratives about nature; in other words, science will be compared to myths, folklore and traditional stories, different ways of making sense of nature, of helping it to tell us its story. At the same time, the author's final proposal seems intended to maintain a kind of nature's ontology prior to the narratives⁹⁵, proposing a mode of experience that respects this independent reality of nature as much as possible. She therefore speaks of bioregional narratives, namely stories produced and reproduced in situated contexts and, therefore, non-exportable - emerging from observation and attention to the specific characteristics of the environment, as well as from sensitive and participatory experience of these environments. However close it seems to be to Carlson's operation, devoted to the definition of the *object* and the fixation of the deepest and most adherent layers of nature, what Saito proposes is rather a good way to give form to such depth core - always contextual and specific, rather than persistent and universal.

Attempting to define the persistent dichotomy through new terms, we could reframe it as the opposition between creative and scientific experience. Indeed, on the one hand we find a more creative approach to nature, unfolding both through the interweaving of multisensoriality, psychological factors, emotions and imagination, and through "external" sources such as language, cultural, religious and artistic productions, as well as local and traditional narratives of the environment. On the other hand, the approach

⁹³ Despite the diversity of approaches, a similar critique of the universalisation of the appropriateness of experience, with a consequent proposal for contextual evaluation, can be found in Budd, M. (2000). The aesthetics of nature.

⁹⁴ Saito, Y. (1998). Appreciating nature on its own terms. *Environmental Ethics*, 20(2), 135-149.

⁹⁵ "The appropriate appreciation of nature, I have argued, must embody a moral capacity for recognising and respecting nature as having its own reality apart from our presence, with its own story to tell" (*Ivi*, cit., p. 145).

would be based on the natural sciences, in particular on their ability to produce an unambiguous and univocal perspective on both (as seen in the previous section) the ontology of our aesthetic objects and the (proper) way of their perception.

1.2.2 Body-Narratives / Universal-Particular Perception

Alongside the major reconstructions, I would like here to recover two minor systematisations that help us develop the discourse along new lines, showing other possible dichotomies that fragment the aesthetic experience. The first is that proposed by the aforementioned Eaton, who distinguishes between facts and fictions, the former discovered by the sciences and the latter produced by the imagination⁹⁶. Despite the importance given to both and the recognition of their mutual interaction, in the course of the article one realises how the author places the products of the imagination - from myths, to legends, to art - in a subordinate position with respect to science. Indeed, in order to “imagine well” it is necessary to anchor this activity to scientific facts and ecology, capable of containing the drifts of fiction and the possible damage it could cause. Aesthetic experience must attend to the intrinsic properties of objects and events, and although imagination is operative within experience, it is not always able to bring our attention to these properties.

Another important classification is proposed by Foster and concerns the distinction between narrative and environmental dimensions. The former includes knowledge, information and interpretative frameworks relating to the “invisible or intangible events and processes beneath, behind, or before [the perceptual surface of nature]”⁹⁷. On the contrary, the environmental dimension is not based on any standard or framework external to the experiencing individual, configuring itself in terms of a multisensory encounter, of direct sensitivity capable of dissolving the classificatory habit thanks to the encounter with what is radically other than us. Foster, too,

⁹⁶ Eaton, M. M. (1998). Fact and fiction in the aesthetic appreciation of nature.

⁹⁷ Foster, C. (1998). The narrative and the ambient in environmental aesthetics. *The Journal of Aesthetics and Art Criticism*, 56(2), 127-137, cit., p. 128.

seeks to emphasise how the two dimensions are not mutually exclusive, but rather always jointly operating⁹⁸.

Let us dwell for a moment on the two oppositions proposed. The first distinction between fact and fiction brings us back to the two previously proposed in relation to the object, namely matter-meanings and discovery-production. In a sense, we could say that facts comprise the first two terms of the oppositions, insofar as they are inherent to the intrinsic properties of matter that are revealed through a process of discovery. On the contrary, fictions, i.e. all cultural and artistic productions, concern the meanings and interpretations we elaborate in relation to the object, always produced by historically and socially situated subjectivities⁹⁹.

On the contrary, the second distinction leads us towards new reflections, in particular towards debates that see the body on the one side and the mind on the other, senses on the one side and sense on the other, the immediacy of perception on the one side and language, interpretative activity and cultural mediation on the other. The subject is often split within this discourse between a passive part, dedicated to the reception of data and information and identified with body and sensory organs, and an active part, capable instead of subsequently processing the information received through interpretative operations.

As already mentioned, the two environmental philosophers do not pose the question in dichotomous terms, but nevertheless try to show how the two dimensions (facts and fictions, body and narratives) are more or less overlapping. Moreover, it is interesting to note how the two discourses counterbalance each other. On the one hand, Eaton's proposed opposition between facts and fictions is countered by Foster, pointing out how science is a story that proceeds from strictly human and social *creative* practices,

⁹⁸ Diffey similarly questions whether language actually operates in aesthetic experience or if the latter has an immediate and direct character. See Diffey, T. J. (1993). *Natural beauty without metaphysics*, p. 44 and following.

⁹⁹ Sometimes the distinction is also articulated in terms of primary and secondary qualities, non-aesthetic or aesthetic, intrinsic or relational, and so on. The former usually concern "basic" properties, such as mass, volume and form; the latter refer instead to relational qualities, such as colour, or qualitative connotations, such as delicate, graceful or melancholic.

rather than a process of *discovering* the autonomous core of nature, that is, the oft-cited nature “on its own terms”:

“Carlson promotes the objective status of appreciative judgments made through order appreciation, but, by his own admission, science functions in this context as a story [...] stories in their most literal form function as acts of individual creation and not as processes of discovery [...]”¹⁰⁰

“[...] narrative dimensions of aesthetic value, even the scientific ones, are more anthropomorphic than their champions seem to believe they are.”¹⁰¹

Similarly, we see how the polarity between the bodily and narrative dimensions referred to by Foster finds perfect integration in the words of Eaton, who emphasises the incessant working of language and frameworks within the sensory dimension:

“Even knowing the names of different flowers may lead one to see the flowers. As Edward Abbey writes: ‘Through naming comes knowing; we grasp an object, mentally by giving it a name – hension, prehension, apprehension. And thus through language we create a whole world, corresponding to the other world out there’. In learning what to look for, we achieve the very possibility of seeing – and seeing is surely essential to an aesthetic experience. Seeing something is more likely if we look for it, and we look for it only if we know where and what to look for.”¹⁰²

Finally, it is possible to interpret the two distinctions along a common interpretative line, namely that which distinguishes between particular and universal perception. *Fictions* and *narratives* are in fact associated with artistic, cultural, social multiplicity, producing articulations of the real that each individual person acquires, selects, reinterprets and combines, thus producing a *particular* vision of the world and the natural environment. On the contrary, the conjunction between *facts*, considered as indisputable data, and the *body*, understood in a strictly biological-physical sense as a

¹⁰⁰ Foster, C. (1998). The narrative and the ambient, cit., p. 131.

¹⁰¹ *Ivi*, cit., p. 135.

¹⁰² Eaton, M. M. (1998). Fact and fiction, cit., pp. 154-155.

common perceptive base, leads us towards a possible univocal and *universal* vision of nature and its properties.

1.2.3 Theories of Climate Perception

As already done for the object of investigation, in this section we will explore the perspectives that have emerged in environmental aesthetics with reference to the perception of the climate crisis. We will first take up Brady's aforementioned article, certainly one of the most influential on the subject, and begin to see how the two distinctions we have just sketched out recur or change in the more recent debate.

As pointed out earlier, the philosopher's main concern is about how natural objects will be transformed over time, in particular how climate change will alter their material structure. Indeed, reference is made to "aesthetic losses and gains" in terms of "sounds, textures, smells, colours, patterns, activity and movement"¹⁰³. The central problem emerging with the climate crisis concerns the fact that, while it is certainly possible to imagine and appreciate the forces and influences that have produced and transformed objects that we face, it is much more difficult to enjoy and experience the future projection of those same objects and their properties, as the material transformations they will undergo remain uncertain and unknown¹⁰⁴.

Promoting an approach based on the so-called "experiential thesis" or "acquaintance principle" - the necessity of having concrete experience of the object in order to be able to make an aesthetic judgement -, in particular in its strong version¹⁰⁵ - which privileges perceptual and bodily access rather than through meanings coming from narratives - the author will therefore argue that it is not possible to make aesthetic judgements about future environments, inaccessible to the sensory organs; the only possibility will

¹⁰³ Brady, E. (2014). Aesthetic value, ethics and climate change, cit., p. 556.

¹⁰⁴ Not just aesthetic objects, but also aesthetic values, postures and ways of grasping and appreciating will unpredictably change. On the topic and on possible strategies to face the problem see Capdevila-Werning, R., & Lehtinen, S. (2021). Intergenerational aesthetics: A future-oriented approach to aesthetic theory and practice. *Philosophical Inquiries*, 9(2), 171-194.

¹⁰⁵ *Ivi*, p. 557.

be to make aesthetic predictions that guide our choices of management and conservation. Where there is a lack of bodily interaction (understood in a strictly physical and material sense) no aesthetic experience can therefore take place.

The distinction between bodily perception and narrative dimension is instead opposed by Mikkonen. The author recognises how the experience of the past history of an environment - also evoked by Brady herself - necessarily unfolds through scientific knowledge and natural history, that is, through narratives that are always learned, incorporated and interwoven with bodily sensibility. However, even in this case the possibility of experiencing future environments will be denied, not so much because they cannot be directly approached, but rather because the information that allows us to picture them is mostly *uncertain*: even if much science may strive to create models and predictions of the environmental transformations to come, the complexity of living systems and the unpredictability of human actions and climate policies make such predictions extremely precarious. Scientific approaches can certainly provide information about the genesis and causes that have brought the environment to its current state, but at the same time forecasts and relevant information about future states will always have to be considered within a probabilistic framework; the very climate aesthetics of the future can therefore only be permeated by a hypothetical atmosphere¹⁰⁶.

The argument is further expanded by Nathalie Blanc who, in agreement with Mikkonen, recognises how bodily sensibility is constantly inhabited by information, visualisations and narratives that inform our future climate imaginaries, while at the same time refusing to recognise science as the only possible narrative trajectory. The author states:

“The ideas that we come up with collectively have a degree of freedom; scientific knowledge plays a role in shaping these but does not determine them totally. We need to define this freedom and understand how sensory experience works as a register for shared knowledge and as a way of sharing emotional and ethical impressions: ‘what do I know?’ is increasingly synonymous with: ‘what do I feel?’. We

¹⁰⁶ Mikkonen, J. (2022). Aesthetic appreciation of nature, pp. 5-7.

also need to acknowledge the gap between ordinary life governed by the senses and social life determined by images and image politics.”¹⁰⁷

The philosopher therefore questions the role of science, not so much to limit its relevance in the construction of models and information useful for the perception of environmental crisis and its effects, but rather to verify its actual operativity at the level of sensibility and everyday experience. The author refers, for example, to a study¹⁰⁸ conducted on the population of Strasbourg regarding the perception of air pollution. The results can be summarised in three main conclusions:

“1. The people surveyed paid little attention to information on air pollution. They used sensory information (e.g. smell, sight, and noise) to forge an understanding of the phenomenon. 2. The objectified and standard scientific information available on air quality from the ASPA is very different from inhabitants’ sensory and empirical knowledge about air pollution, which is bolstered by their attachment to a social and identity-based reality. The contrast between these two realms of knowledge concerning a physical-chemical phenomenon is quite striking. 3. The practical means of avoiding pollution for city dwellers involves symbolically connecting it to other environmental phenomena. For example, some of the people surveyed believe that green spaces protect them from pollution. Such reasoning is based not on solid scientific knowledge but on a feeling that greenery purifies and that the ‘garden’ image that it conjures up, a heavenly place in many religious cultures, can offer protection from pollution experienced as the product of unnatural human activity.”¹⁰⁹

What Blanc argues considering these conclusions is not so much that we should rely on common sense and everyday experience to perceive such

¹⁰⁷ Blanc, N. (2012). From environmental aesthetics to narratives of change. *Contemporary Aesthetics (Journal Archive)*, 10(1), 7, cit., p. 15.

¹⁰⁸ Glatron, S., Waldvogel, C., & Blanc, N. (2008). Le développement urbain durable au prisme des politiques urbaines de prévention de la pollution atmosphérique: quelle place pour les citoyens aujourd'hui? In *Colloque international et interdisciplinaire 'Le développement urbain durable saisi par les sciences sociales/Sustainable urban development seen by the social sciences'*, organisé par TemiS, Université Jean Monnet, Saint-Etienne, 299-315.

¹⁰⁹ Blanc, N. (2012). From environmental aesthetics to narratives of change, cit., pp. 6-7.

phenomena, but rather that this is what we actually do. Even if we have accurate scientific information about air pollution, we often base our perception of the phenomenon, its alterations and future developments on sensible experience, collective discourse and popular beliefs¹¹⁰.

In order for the experience of the crisis to take shape (and solidify), it will therefore be important to act not only on the production of scientific data, but also on that of narratives and stories shared on a daily basis, on the images and statements that populate the media, as well as on the most relevant artistic and cultural productions: from eco-poetics and climate literature, to the critical and creative re-appropriation of environmental visualisations, up to the most participative and dynamic artistic practices¹¹¹. Not only, as we said, by virtue of their importance for the perception of the crisis, but also in order to counter-fight the constant and insidious production of sceptical, negationist or mystifying narratives, equally operating within the sensibility and capable of diverting it in undesirable directions.

At this point, let us preserve the tension between body and narratives (as well as that between universal and particular perception) for the chapter to come and, letting ourselves be guided by the commitment of the many environmental and climatic artists, proceed to the next section, dedicated precisely to the intertwining of ethics and aesthetics, as well as to the attempts to separate the two fields.

¹¹⁰ Andreas Malm notes that another central factor in the perception (or non-perception) of the crisis is political affiliation, in particular the adherence to right-wing populist movements. See the following pages and various notes Malm, A. (2018). *The progress of this storm: Nature and society in a warming world*. Verso Books, pp. 102-104.

¹¹¹ Blanc, N. (2012). From environmental aesthetics to narratives of change, pp. 13-15; Mikkonen, J. (2022). Aesthetic appreciation of nature and the global environmental crisis, pp. 13-14. At the same time, Mikkonen argues that although "environmental art [...] could make climate change conceivable, as it may, for instance, bring spatially or temporally distant things into our sensory reach" it is important to remember how "one ought not to instrumentalise art and see it as an illustration or dramatisation of a univocal point made elsewhere. Art is characteristically ambiguous, open-ended and unpredictable; works that drum a message and allow no room for different, even mutually incompatible interpretations, fall short as art. Aesthetically valuable works rather reveal unforeseen connections between things and aspects of the world that were previously unnoticed or accepted without question" (cit., pp. 12-13).

1.3 ETHICS

1.3.1 Right or Reasonable Judgment?

Environmental aesthetics emerged and developed in the 1960s and 1970s and, although - as mentioned - the issue of the climate crisis was not directly present in many of the writings that appeared at the time, we cannot fail to note the fact that the discipline arose at the same time as concerns about environmental degradation and pollution. In fact, the relationship between ethics and aesthetics is one of the central themes and concerns of the field, which - even if it is not very attentive to the reflections that have emerged in the *environmental humanities* and the perspectives that can intertwine ecology with issues of gender, race, species, class and capital - has certainly spent time reflecting on the relationships between aesthetic appreciation and judgment, environmentalism and environmental politics.

Following our previous distinctions, we see how the ideal of “right” judgement (as opposed, as we shall see, to “reasonable” judgement) is often linked to the possibility of relying on mere facts, stripped of fictions and imaginative drifts, and on mere bodily perception, stripped of narratives and socially learned dispositions. “Facts” make it possible to anchor oneself to the unquestionability of mere material evidence, to the intrinsic properties that reside in nature waiting to be revealed, while the “body” makes it possible to support the idea of a sensorial and direct perception that, devoid of social habits, individual desires and subjective projections, unfolds in its universal and ahistorical purity: on the one hand the *unquestionability* of scientific objectivity, on the other the *universality* of bodily perception.

Let us attempt to focus on the first dichotomy, which sees on the one hand the properties inherent to matter, which can be revealed through practice and scientific knowledge, and on the other hand the cultural meanings produced through interpretative activity, both individual and social. This

distinction emerges clearly in the first pages of Holmes Rolston's *From Beauty to Duty: Aesthetics of Nature and Environmental Ethics*¹¹². After recognising how aesthetics and the appreciation of natural beauty play a fundamental role in shaping our attitudes towards the environment, the author asks *what* we actually appreciate. He therefore recalls Berleant's position, who argues that without human presence the environment possesses only possibilities: aesthetic properties and values emerge through interaction and experience, while in their absence they remain only unrealised potential possibilities. Rolston responds to this point by once again establishing a distinction between facts and relational qualities, between intrinsic properties and meanings produced as a result of the encounter:

"The aesthetic ethic will be a sort of light-in-the-refrigerator ethic. The light comes on when we open the door; until then, everything is 'in the dark'. But maybe the way to think of it is that, when we open the door, we see what is already there. The cake in the refrigerator is not sweet until we eat it, nor is it beautiful until we admire it. These are always possibilities, but only possibilities without us. But then again the cake is actually there with all its properties, whether we open the door or not. The sugar in the cake was originally stored for plant metabolism. When we light up the beauty in nature, *if we do it right*, often we are seeing something already there."¹¹³

Once the presence of the intrinsic and independent characters, different from the aesthetic qualities emerging from the encounter, has been established, Rolston will attempt (at least at first) to separate the percipient subjects. As we will see in the course of the article, some are better able than others to grasp the right aesthetic qualities (sweetness of the cake), that is, those directly related to the intrinsic properties (quantity of sugars), in particular thanks to certain abilities that enable them to access those

¹¹² Rolston III, H. (2002). *From beauty to duty: Aesthetics of Nature and Environmental Ethics*. In Berleant, A. (Ed.) *Environment and the Arts. Perspectives on Environmental Aesthetics*. Ashgate.

¹¹³ *Ivi*, cit., p. 132.

properties. Obviously, the privileged are those who are able to perceive nature through Gestalt informed by science, in particular genetics and evolutionary ecology; unlike other modalities that illuminate nature and its beauty, science enables them to do so in the right way: true beauty is therefore perceptible, but only "if we do it right".

A possible counterpoint to the supposed "univocity" of intrinsic properties emerges from the remarks of Patricia Matthews, who emphasises the dependence of properties on the categories that frame them¹¹⁴. On the basis of Carlson's famous thesis, according to which the adequate appreciation of nature implies the perception of it within the correct categories provided by scientific knowledge, Matthews wonders which knowledge is relevant and which is not, which categories help in the enterprise and which inhibit it¹¹⁵. While she acknowledges the importance of scientific knowledge, she also recognises how the sciences are multiple, each providing disparate orientations and knowledge, i.e. pointing towards different properties of the object in question.

In order to settle the matter, we therefore return to the original source of the theory under consideration, namely Walton's thesis regarding the correctness of categories in the field of art¹¹⁶. What Matthews argues is that,

¹¹⁴ Matthews, P. (2002). Scientific knowledge and the aesthetic appreciation of nature. *The Journal of Aesthetics and Art Criticism*, 60(1), 37-48.

¹¹⁵ Carlson, A. (1981). Nature, aesthetic judgment, and objectivity. *The Journal of Aesthetics and Art Criticism*, 40(1), 15-27. Other criticisms were previously raised against Carlson's proposal. For example, Carroll questioned whether in order to appreciate a waterfall one necessarily needed to have scientific information about it or whether, on the contrary, direct perception and emotional transport were sufficient for the aesthetic experience to take place (Carroll, N. (1993). On being moved by nature). Carlson responds to his colleague by arguing how some basic categories from common sense (such as "waterfall") were nonetheless necessary for appreciation (Carlson, A. (1995). Nature, aesthetic appreciation, and knowledge. *The Journal of Aesthetics and Art Criticism*, 53(4), 393-400, p. 399). At this point Stecker will join in and ask whether Carlson's proposal is not somewhat banal, since it argues that knowledge is necessary for correct perception, but at the same time it sets virtually no relevant limits to such knowledge (Stecker, R. (1997). The Correct and the Appropriate in the Appreciation of Nature, p. 397).

¹¹⁶ Walton, K. (1970). Categories of Art. *Philosophical review*, 79, pp. 334-367.

as with art¹¹⁷, the relevant knowledge in the natural sphere is not so much that which provides us with information about the object, but rather that which serves as a category for perception, i.e. that which defines the relevant properties and sets standard, counter-standard and variable parameters. There is, for example, a standard concerning the chemical composition of paint in oil paintings; however, the important question is: does this property and the information about it guide and influence our perception? Similarly, does knowing the weight of a painting influence our perception of it? It is clear to the author how some information is not relevant and therefore does not participate in the formation of the categories we normally use to perceive.

The same is true for the environment and nature¹¹⁸: on the one hand, it remains important to draw on scientific knowledge to inform perception, on the other hand, it is necessary to be able to discriminate between that which is relevant and that which is irrelevant to appreciation. Rather than embracing an incremental and oriented view of science, according to which the continuous increase of scientific information, all equally important, leads towards a better perception of the object, Matthews highlights the fact that the sciences themselves are plural, that the simultaneous adoption of all their perspectives is somehow impossible (and perhaps undesirable)

¹¹⁷ Towards the end of the article, however, the author emphasises how an important difference between artistic and scientific categories consists in the fact that the former incorporate the will and intentions of the artist, while the latter have no purpose or aim, except at most the correct role that the element plays within the ecosystem to which it belongs. We thus see how the distinction between art and nature, production and discovery, again comes to the fore.

¹¹⁸ Matthews also returns to the example of the waterfall: "Are we wrong to judge the waterfall as wonderful without knowing anything more about it? Probably not. But if we want to be sure that our judgment is correct, we ought to know more. This is the sense in which scientific knowledge is required for correct aesthetic judgments. In the end, some or all of the additional information may leave our original assessment unchanged, or simply enhance it. But because the knowledge is relevant to a correct and complete understanding of the object, and because it is an open question whether the additional knowledge will change our more naive assessment, it is not irrelevant to find out more about the object" (Matthews, P. (2002). Scientific knowledge and the aesthetic appreciation of nature, cit., p. 45).

and that, therefore, an active and conscious choice of the percipient subject is necessary in any case. The philosopher thus does not deny the existence of intrinsic properties; instead, she shows how the very nature of the object is a matter of perspective, capable of highlighting some properties while inevitably concealing others.

If Matthews questions the univocity of the scientific properties of the object, Hettinger instead attempts to question the univocity of the scientific method - in particular, responding to the position of his colleague Eaton¹¹⁹. The latter, as mentioned above, considers scientific knowledge to be necessary not only for a judgement that is as objective and appropriate as possible, but also and above all in order to prevent any incorrect judgements from subsequently producing environmental damage or problems, for example by influencing policy choices or land management programmes¹²⁰. According to Hettinger, this approach seems too strict, bound to a narrow conception of right judgement, thus presenting an overly normative proposal.

Firstly, he refers to authors such as Fisher or Budd to argue how the experience of nature is always plural: the same lacks both social or institutional conventions that prescribe perceptual frames¹²¹ and proper conditions of observation or sensory modalities¹²². Secondly, the author shows how the acceptance of multiplicity does not imply an absence of discrimination. Tempering the strong objectivity *à la* Carlson, we see how middle positions, such as Carroll's or Brady's, have been able to promote a "constrained pluralism", capable of opening up to multiple possibilities without considering them to be equally valid or functional for protection: according to Carroll, for example, emotional responses are diverse, but those that we can consider objective are those that are appropriate with respect to the object and that are structured on the basis of reasonably

¹¹⁹ Hettinger, N. (2008). Objectivity in Environmental Aesthetics and Protection of the Environment. In Carlson, A., & Lintott, S. (Eds.). *Nature, aesthetics, and environmentalism: From beauty to duty*. Columbia University Press.

¹²⁰ Eaton, M. M. (1998). Fact and fiction in the aesthetic appreciation of nature.

¹²¹ Fisher, J. A. (1998). What the hills are alive with: In defence of the sounds of nature.

¹²² Budd, M. (2000). The aesthetics of nature.

shareable beliefs and thoughts¹²³; Brady, on the other hand, points to the openness offered by the imagination and argues that this is, however, to be limited when it is superficial, naive and sentimental, but above all when it is not guided by the principle of disinterestedness¹²⁴.

Against the dichotomies of right-wrong, true-false, proper-inappropriate, Hettinger argues for the need to find more criteria to determine which aesthetic judgments of nature are better or worse, criteria that are *reasonable*, i.e. shareable and context-sensitive rather than universal or rigidly hierarchical and aprioristic¹²⁵. The advice is diverse:

“Discriminating responses are better than indiscriminating ones. Attentive responses are better than inattentive ones or inappropriately attentive responses [...] Mature responses are better than immature ones; unbiased responses are better than biased ones. [...] Patient and careful responses are better than hasty ones; perceptive responses are better than confused ones. Thoughtful and reflective responses are better than unthinking ones [...] Knowledgeable responses are better than ones that distort, ignore, or suppress important truths about the objects of appreciation.”¹²⁶

This last statement shows us how the author, aware of the current environmental crisis, can only continue to argue that ecological knowledge and awareness of the ongoing climatic process is vital for a good perception of the environment, without making it the only relevant criterion for aesthetic experience.

At this point, I would like to recall two thoughts discussed above. Firstly, scientific knowledge is not the only one capable of leading to such ecological awareness, but it can certainly be combined with other creative and artistic forms capable of promoting it. Secondly, not all scientific knowledge actually orients and informs perception; some is relevant and sensitively

¹²³ Carroll, N. (1993). On being moved by nature: Between religion and natural history.

¹²⁴ Brady, E. (1998). Don't Eat the Daisies: Disinterestedness and the Situated Aesthetic. *Environmental values*, 7(1), 97-114.

¹²⁵ Hettinger, N. (2008). Objectivity in Environmental Aesthetics, p. 416.

¹²⁶ *Ivi*, cit., pp. 417-418.

incorporated, others are forgotten and inoperative. Finally, a third reflection emerges from Hettinger's own words, according to which scientific knowledge does not necessarily lead to action; on the one hand, it is important to have information about the environmental crisis, on the other hand, to be empathetic towards endangered forms of life and thus have an *interest* in their preservation:

“As I suggested earlier, those people who are well informed about humans' massive and harmful impact on the planet's relatively natural areas *and* who have at heart the welfare of humans or nonhumans react to environmental degradation with dismay.”¹²⁷

Moved by the intention to promote the unquestionability of aesthetic judgement, we have seen how Rolston grounds a possible environmental ethics within the intrinsic and autonomous properties of the natural object, which can be grasped through scientific knowledge, while Eaton reaffirms the importance of science for a correct perception and, therefore, for a correct political and collective management of the territory. At the same time, certain limits are set to the claim of unambiguous and right judgement: on the one hand, Matthews shows how the sciences and scientific knowledge are multiple, some useful for grasping nature and its characters, others irrelevant at the sensible and perceptive level; on the other hand, Hettinger shows how scientific knowledge is part of a broader range of tools useful for shaping aesthetic judgement, in fact approaching common sense criteria – capacity for discrimination, attention, maturity, patience, sensitivity, reflection – or (following Carroll and Brady) criteria linked to the idea of intersubjective shareability.

In order for us to put aside the idea of right and univocal judgment and explore instead the possibility of a sharable and reasonable judgement, let us close the discourse with an article by Carlson¹²⁸ that unexpectedly undermines both the unquestionability of intrinsic properties and the

¹²⁷ *Ivi*, cit., p. 428.

¹²⁸ Carlson, A. (1976). Environmental aesthetics and the dilemma of aesthetic education. *Journal of Aesthetic Education*, 10(2), 69-82.

universality of perception. The central problem from which the author starts is that of litter abandoned on the streets and, more generally, in public space. A first strategy, often adopted by environmental movements, is to promote clean-up actions by adopting the so-called "eyesore argument": according to this argument, street litter is not aesthetically pleasing and an aesthetically pleasing environment is preferable to one that is not. The acceptance of such theoretical premises should therefore naturally lead towards direct action to clean the streets. A second answer to the problem is then put forward by Beardsley¹²⁹ who, referring to the *camp* aesthetics developed by Sontag¹³⁰, shows how adopting a different sensitive approach to the world, a different way of perceiving objects that are normally considered ugly or uninteresting, can actually make them attractive and pleasant: rather than modifying the environment we could therefore modify the way we see it, transforming the "eyesores" into possible objects of appreciation.

However, the *camp* approach does not convince Carlson, who rather attempts to support the ugliness of waste and, therefore, the action of cleaning, drawing on the reflections of Prall¹³¹ and Hospers¹³²: the two authors see, on the one hand, the possibility of a "thin" appreciation, linked to a pleasantness emerging from appearance, from the shape and design of things, and, on the other, a "thick" appreciation, according to which pleasantness necessarily also emerges from qualities and values (*expressive beauty* or *life values*) that the object expresses. In order for the idea of "expression" to take on greater depth and clarity, the author then turns to the work of Santayana¹³³, who is able to dissolve the difference between intrinsic properties and assigned values, showing how the values and

¹²⁹ Beardsley, M. C. (1970). The aesthetic point of view. *Metaphilosophy*, 1(1), 39-58.

¹³⁰ Sontag, S. (1969). Notes on Camp. In *Against Interpretation*. Dell Publications.

¹³¹ Prall, D. W. (1929). *Aesthetic Judgment*. Thomas Y. Crowell Company, pp. 178-227.

¹³² Hospers, J. (1946). *Meaning and truth in the arts*. University of North Carolina Press, pp. 11-15.

¹³³ Santayana, G. (1961). *The sense of beauty*. Collier Books, pp. 137 ff.

qualities "expressed" are not exogenous to the object or emanated secondarily, but rather incorporated by it in a profound manner:

"Thus for an object to express a quality or value, the latter must not simply be suggested by it. Rather the quality must be associated with the object in such a way that it is felt or perceived to be a quality of the object itself; that is what Santayana meant by saying that the object must seem to 'embody' that which it expresses. Clarified in this way, expression is not typically due to the unique associations resulting from an individual's own personal history. Rather what is involved are the more general and deep-seated associations which are characteristically held in common by a community of individuals and by and large derived from what is perceived within that community of individuals to be the nature and function of the expressive object. Thus, the life values which an object expresses are often the ones reflecting the values, emotions, and attitudes of the individuals who are responsible for its nature and function."¹³⁴

What the object is, or at least what it is perceived to be, does not only concern its material, physical and formal structure, but also those qualities it expresses, the history that precedes it and the meanings that a community produces and shares. In a way, according to Carlson, this is not a mere possibility, but the way perception actually operates; indeed, it would be (psychologically) difficult, if not impossible, to perceive by removing or pausing such immediate associations and interpretations¹³⁵.

¹³⁴ Carlson, A. (1976). *Environmental aesthetics and the dilemma*, cit., pp. 75-76.

¹³⁵ Brady in her text also seems to refer to this distinction, although, as she sees it, the possibility of perceiving in a strictly "thin" manner persists: "My appreciation *can be thin*, that is, it rests on a surface rendering of what I perceive, and some of the experience will involve immediate perception rather than interpretation. Or, it may thicken, as I hear the cows munching and am reminded of the first time I walked through this pasture [...] As I see some of the flowers petals floating off the tree in the breeze, I imagine the leaves and fruit that will take their place. Here, the landscape becomes imbued with meaning from personal associations and my basic understanding of season changing. I draw on sources of meaning as the experience unfolds, determined both by how I direct my attention, and the changing conditions of the environment around me" (Brady, E. (2003). *Aesthetics of the Natural Environment*, cit., p. 73. Emphasis added).

Litter does not express waste, carelessness and degradation as incidental or secondarily emergent values, but embodies them in a profound way. Put in our terms, such qualities and values, together with the various formal, physical and material properties, constitute the deep core of litter, rather than being incidental and transitory layers of it.

However, a problem arises at this point. Some might indeed counter that litter, as they see it, recalls a history of tenacious production and labour, expressing determination and dedication. A similar issue is raised for example in Hettinger's article:

"Or consider this example: A community wanting to preserve its rural character argues that great aesthetic value will be lost when its tranquil tree-lined roads, interspersed with farmhouses, small fields, and ponds - symbolic of human harmony with nature - are replaced with an aggressive, cluttered, and gaudy strip-highway sprawl of auto dealers, gas stations, and parking lots, so symbolic of our society's careless exploitation and disregard of the natural world. In response, the developers maintain that the elimination of the monotonous weed-infested dirt roads and their replacement with useful and well-built stores will offer great aesthetic value and express and reward hard work, determination, and entrepreneurial ingenuity. Environmental aesthetics needs some type of objectivity if it is to help us adjudicate between developers who like strip malls and environmentalists who do not. Without some ability to distinguish between better and worse aesthetic responses, the appeal to aesthetic considerations has little use in environmental decision making."¹³⁶

According to Hettinger, as we have seen, the important thing here will not be to univocally determine which of the two experiences and perceptions is correct, but rather to attempt to find an *intersubjective agreement* based on common sense and ecological knowledge or - following Brady and Carroll - on a shared disinterested approach or a generally adopted emotional response. The connection between waste and wastefulness cannot be regarded as intrinsic and unquestionable but must be continually promoted

¹³⁶ Hettinger, N. (2008). Objectivity in Environmental Aesthetics, cit., p. 415.

through the creation of a certain collective sensibility, a common sense, a shared feeling, that is, of a more or less extensive “sensible community”¹³⁷. In contrast to the right and univocal judgement, Carlson too finally seems to lean towards the reasonable and shareable judgement, thus closing his article:

“[...] I am not sure who can say with certainty what life values these objects express. Although I suspect that the art critic and the social critic can help, in the last analysis it is, I expect, up to us as a *community of individuals*.”¹³⁸

1.3.2 Ethics-Aesthetics / Neutrality-Partiality

In order to envision new dichotomies, let us now go on to analyse one of the main proposals concerning the intersubjectivity of agreement, namely Emily Brady's theory of disinterestedness - scattered in her many texts and articles. To sum up, we could say that the author's main intention is to show how the disinterested attitude is fundamental, if not necessary, to make environmental aesthetics relevant for collective and political purposes. This is for two main reasons: on the one hand, such an approach allows everyone, even if not an expert, to be able to express a judgement¹³⁹; on the other hand, by removing subjective and private interests, it allows for the smoothening of idiosyncrasies between different aesthetic experiences, thus moving towards an ever-greater shareability of judgement¹⁴⁰. If the

¹³⁷ Similar terminology is used by Brady in her text, which variously refers to “sensibility groups”, “aesthetic community” and “community of imagination” (Brady, E. (2003). *Aesthetics of the Natural Environment*, pp. 206-219).

¹³⁸ Carlson, A. (1976). *Environmental aesthetics and the dilemma*, cit., p. 81.

¹³⁹ Brady, E. (2003). *Aesthetics of the Natural Environment*, p. 99.

¹⁴⁰ *Ivi*, p. 121. The author will again support this position (disinterestedness as the key to introducing aesthetics within the processes of political and collective decision-making) also in the conclusion to Pratt, V., Howarth, J., & Brady, E. (2000). *Environment and philosophy*, pp. 161-163.

hedonistic model, linked to a sensory and strictly personal pleasure, seems to dominate aesthetic experiences, as well as collective environmental evaluations and decisions, Brady rather invites us to go back to the dawn of the discipline, that is, to Kant's theory of disinterestedness¹⁴¹. The latter might seem dated and highly debatable today, which is precisely why the author decides to expose and refute two of the main criticisms of the concept that have been made throughout time.

The first focuses on the perceiver, and concerns the idea that the disinterested attitude corresponds to a passive and detached gaze, a mere bodily reception of stimuli that does not include any interpretative activity on the part of the subject; on the contrary, Brady argues that, while it is impossible to completely disconnect oneself from one's subjectivity, values, beliefs and life experiences, what disinterestedness requires is simply the removal of desire and practical and private interests¹⁴². The second critique moves instead to the side of the object, and argues how disinterestedness frames the object in strictly physical and formal terms, forgetting instead the history and meanings that accompany it; here too we see how the object can in fact be situated within its own narrative and be interpreted in the light of the knowledge we have of it, provided, however, that these narratives and interpretations are not linked to individual or utilitarian ends, to projections about the object that concern possible uses of the same¹⁴³.

However, apart from past criticisms, certain perplexities also emerge in Brady's renewed proposal, making her discourse less smooth than it might

¹⁴¹ Berleant will show its theoretical centrality, as well as the need for its overcoming - particularly in the light of actual contemporary artistic and aesthetic experiences -, in Berleant, A. (1986). The historicity of aesthetics - I. *The British Journal of Aesthetics*, 26(2), 101-111; Berleant, A. (1986). The historicity of aesthetics - II. *The British Journal of Aesthetics*, 26(3), 195-203.

¹⁴² Brady in fact argues that "aesthetic appreciation does not require that we set aside who we are, it requires only that we set aside *what we want*" (Brady, E. (2003). *Aesthetics of the Natural Environment*, cit., p. 132). We could counter-argue: are wills and desires merely accessory factors of subjectivity or do they profoundly characterise it and thus cannot be separated from the same?

¹⁴³ Brady, E. (1998). Don't Eat the Daisies: Disinterestedness and the Situated Aesthetic.

seem at first glance. A first problem concerns the alleged split between aesthetics and ethics, i.e. between the perceptive, emotional and imaginative faculty and the decision-making faculty. In fact, the author states:

“[...] aesthetic evaluation is generally restricted to perceptual, emotional and imaginative experiential states rather than significantly cognitive ones. Moral value is primarily concerned with making choices about how one ought to act, and how one ought to treat humans and the rest of nature.”¹⁴⁴

However, the statement seems contradictory, especially when applied within the theory of disinterestedness. Indeed, we might ask: is not adopting a disinterested posture a *decision* about the (according to Brady, more ethically acceptable) way of relating to nature? Disinterested or interested, do we not always perceive by making a decision (be it a selection or, indeed, a removal) of the interests relevant to the articulation of the experience at hand? This contradiction is made explicit by Brady herself on the next page, who argues that the separation is purely conceptual and operated a posteriori, rather than inherent in actual experience:

“Even moderate autonomism may be hard to accept because it might still seem that in our aesthetic experience it is unclear how the aesthetic and the moral can be teased apart. This may be because, experientially, the two concerns do feel as one in many cases. However, conceptually speaking it is not so difficult to maintain the separation.”¹⁴⁵

A second problem then emerges when the author tries to purify both subject and object from any possible interest. Recalling Kant, the author recognises that the beauty I appreciate through disinterestedness is a property emerging from the relationship between appreciator and object, rather than intrinsic to the latter:

¹⁴⁴ *Ivi*, cit., p. 250.

¹⁴⁵ *Ivi*, cit., p. 251.

"[...] as a judgment of beauty, aesthetic judgment cannot be other than subjective, since beauty is not an objective quality, but something which emerges through an *immediate* encounter between appreciator and object."¹⁴⁶

What often seems to take a back seat in Brady's treatment is the social component that articulates both members, i.e. the historical, cultural and, mostly, political stylisation that makes neutrality and shareability of judgement less obvious. This articulation is not only accomplished at the level of semiotics and narratives, but also includes a material modelling of bodies and environments: society does not only inhabit the body through knowledge, language and narratives, but also configures, regulates and shapes it in its most physical and material aspects - as taught by the studies on biopolitics and the disciplining of bodies initiated by Foucault and later taken up by different strands of research, in particular feminist and queer theories; similarly, society does not only produce ideas, concepts and environmental frames, but also participates concretely in the management of the territory, as well as in the biological, chemical, geological and climatic processes at work. On the contrary, Brady seems to forget the ecological crisis and the role of human beings in its unfolding, stating:

"Disinterestedness moves more easily in the space of natural aesthetics, where the *concerns of politics and society are of less relevance* than in the context of art. [...] In the case of artworks, a social aim is expressed through a creative artistic medium, so we attend to the artwork to discover its message. With nature it makes less sense to appreciate it in this way. Nature operates *spontaneously*, without such intentions, so that aesthetic appreciation is freed from such 'responsibility'."¹⁴⁷

Brady attempts to overcome the partiality of hedonistic and private judgement by removing subjective interests; at the same time, we see how this removal does not guarantee neutrality, since collective – social,

¹⁴⁶ Brady, E. (2003). *Aesthetics of the Natural Environment*, cit., p. 33. Emphasis added.

¹⁴⁷ *Ivi*, cit., p. 128. Emphasis added.

economic, political – interests are still operating not just by shaping perceiving bodies, but also by shaping the perceived environments. In the awareness of the variegated forces at play (often unwelcome) within the articulation of both sides and, indeed, of the experience itself, the subject's neutrality – instead of its positioning and resistance – runs the risk of translating into a careless acceptance or involuntary support of these interests.

While a complete removal of interest does not appear to be feasible, neither does it appear to be desirable. Indeed, we might ask ourselves: is it really possible today to experience an environment undergoing various processes of degradation and transformation without any interest and desire in it? Without considering how the current state of the environment contributes to human and non-human well-being, nor how our lives contribute to its dangerous becoming? And, above all, is it possible not to take a stand within the aesthetic experience, once we are aware of the way in which our perception of nature, the environment and the crisis is from the outset co-opted and shaped by multiple interests often aimed at the extraction, grabbing and exploitation of the earth's resources?

1.3.3 Issues of Ecological Sensibility

Once again, then, let us turn in this section to the most recent debate on the aesthetics of climate change. In spite of the urgency and pervasiveness of the crisis, as we have seen, we still find several positions aimed at maintaining the distinction between aesthetic appreciation and ethical concerns, as well as between pristine and modified environments. Alongside Brady's disinterested approach we also find, for example, Allen Carlson's article, *Environmental Aesthetics, Ethics, and Ecoaesthetics*¹⁴⁸, in which the possibility of a positive aesthetics - i.e. appreciation of pristine

¹⁴⁸ Carlson, A. (2018). Environmental aesthetics, ethics, and ecoaesthetics. *Journal of Aesthetics and Art Criticism*, 76(4), 399-410.

environments free of human traces - continues to persist. The author opens the article by referring to two lines of thought that characterise aesthetics, namely moralism and autonomism. According to the first position, works of art possess morally relevant aesthetic qualities, from which inevitable moral judgements will emerge. The second position, on the other hand, advocates the separation of the two spheres; although the object may give rise to aesthetic and moral judgements, the two will not necessarily be linked.

Carlson then shifts the discourse to the environmental sphere, showing how the most appropriate position today for lived environments is that of a "moderate moralism": considering that these environments have been created or modified by human beings, and are therefore accompanied by stories and informed by certain values, they can also be experienced through the ethical tones they express. At the same time, however, the author reminds us how this discourse is not equally valid for untouched environments, for pure and uncontaminated nature, which lies beyond good and evil insofar as it is indifferent to the dimension of intentions and interactions - thus more aligned with positive aesthetics. Where, however, can one find such completely untouched environments in the midst of a climate crisis?

Recognising (in this case) how the idea of a pristine nature is nowadays chimerical, Brady will analyse the distinction between moralism and autonomism¹⁴⁹ with reference to the pervasiveness and inevitability of human activity on the environment¹⁵⁰. Following her colleague's approach, the philosopher will attempt to deepen the idea of moderation, defining more accurately both moderate moralism and moderate autonomism. While pure moralism might lead us to evaluate aesthetically only by virtue of ethical considerations, moderate moralism recognises how moral values are embedded in the object, thus proving to be relevant components in the experience of appreciation. Similarly, while pure autonomism upholds the complete distinction between ethics and aesthetics, the moderate

¹⁴⁹ For a reading of other positions in the light of the opposition between moralism and autonomism see Brady, E. (2003). *Aesthetics of the Natural Environment*, pp. 248-251.

¹⁵⁰ Brady, E. (2014). Aesthetic value, ethics and climate change.

autonomism - to which Brady adheres¹⁵¹ - does not reject the possibility of evaluating objects of appreciation morally, but nonetheless believes that such considerations can be separated from aesthetic judgement.

In order to test this position in the field of ecology, the author proposes analysing three possible types of experience of the environment undergoing climate change: the *standard case*, i.e. an aesthetic experience located at a specific point in time and space with respect to a specific object or environment; the *narrative case*, i.e. an experience of the same object or environment at two different points in time by the same person; and the *pervasive case*, i.e. the totality of future experiences in which all objects and environments will inevitably be marked by climate change.

In the first case, Brady argues how the appreciation of, say, degraded corals, is impoverished or diminished not so much by moral considerations, based on an awareness of the climatic causes of degradation, but rather by the simple sensory comparison between such corals and what they looked like before or what others look like in better condition. Similarly, knowing that a certain bird has appeared thanks to conditions generated by climate change does not detract from the appreciation of its beauty. We thus see how aesthetic judgement and moral judgement can converge as well as diverge, thus demonstrating their relative autonomy.

In the second case, we see instead how transformations of the environment certainly entail losses in aesthetic terms, but can at the same time generate over time - as just argued - new species, objects and qualities of the environment that can be appreciated. In light of this, Brady therefore questions whether we should speak of environmental damage or rather of transformations. Does the fact that the environment in front of me has suffered some loss, and that this generates a sense of regret in me, detract from the experience of appreciating those aesthetic qualities potentially emerging as a result of climatic processes?

The last case presented, i.e. the future situation in which all natural environments and objects will be altered by climate change, helps Brady to

¹⁵¹ A similar position will be upheld in León, M. J. A. (2011). Morally wrong beauty as a source of value. *The Nordic Journal of Aesthetics*, 22(40-41).

further support the moderate autonomist position. In fact, in her view, moralism would lead us to a complete denial of aesthetic appreciation, as it would no longer be possible to experience anything that does not bear the mark of degradation caused by human beings. On the contrary, moderate autonomism makes it possible to maintain the possibility of appreciation and sympathetic attention towards natural elements, without at the same time condoning or supporting the damage that has informed them or setting aside all ethical concerns¹⁵².

Through this strategy Brady manages to promote her own version of the autonomist position, safeguarding aesthetic appreciation from possible dissolution. Here, too, however, some doubts emerge. Firstly, the author seems to regard aesthetic experience as more or less positive, moving on an axis that sees appreciation and beauty on the one hand and its opposite counterparts on the other. However, it is Brady herself who, in another of her articles, shows how the aesthetic experience is multiple and also unfolds in relation to other qualities - including ugliness - so that the worst outcome of the experience is not so much displeasure or disgust, but rather indifference, i.e. the lack of stimulating or productive aspects¹⁵³. Similarly, we might argue that the most worrying aesthetic response in relation to natural elements and environments modified by climatic processes is precisely indifference, rather than repulsion or discomfort (perhaps even preferable to pleasure and appreciation).

Secondly, the discourse seems to abstract from actual experience, in particular the experience of those who, due to issues of gender, class, race or species, suffer most from the effects of the crisis on their living environments. Matthew Auer attempts to highlight this problem¹⁵⁴ with reference to both Brady's and Nomikos' discourse¹⁵⁵. The latter, like her

¹⁵² As already argued in Brady, E. (2003). *Aesthetics of the Natural Environment*, p. 115.

¹⁵³ Brady, E. (2011). The ugly truth: Negative aesthetics and environment. *Royal Institute of Philosophy Supplements*, 69, 83-99. Indeed, she will revise the discourse in Brady, E. (2022). Global climate change and aesthetics.

¹⁵⁴ Auer, M. R. (2019). Environmental aesthetics in the age of climate change.

¹⁵⁵ Nomikos, A. (2018). Place matters. *The Journal of Aesthetics and Art Criticism*, 76(4), 453-462.

colleague, seeks to maintain the possibility of positive aesthetic experiences, in particular by focusing on the pleasure felt through routine activities that produce a sense of predictability and security. If the environment around us changes and degrades, according to the author one possible solution is to adapt our habits accordingly, so that even if the objects or environments that provide the material conditions for appreciation start to decline, the pleasure felt in the repetition of our new activities can bring us relief.

At this point, Auer reminds us how a simple glance at the IPCC (*Intergovernmental Panel on Climate Change*) is capable of undermining the proposal, in particular by showing how those who will have to adapt the most are also those with the least resources and capacity to do so¹⁵⁶. Taking Nepal and Malawi as examples, we see how dry seasons, reductions in agricultural production, increased food insecurity and deforestation will force women to take on new roles and tasks, spending more of their day searching for scarce resources and energy supplies, taking time away from other activities such as food preparation, farming, education and leisure. A similar situation will also arise in developed countries, where problems such as disruptions in communications, transport and food distribution may arise, which will then obviously impact those sections of the population that are marginalised (particularly by class and gender). According to Nomikos, adapting habits makes it possible to maintain aesthetic pleasure. But we might ask: is it possible to find aesthetic pleasure in the activity of adaptation when it is no longer given as a gradual and relatively free process, but rather as the only option for survival? No longer as a simple action of occasional adjustment, but rather as a permanent state of adaptation and problem-solving, of stress and worry?

As for the argument advanced by Brady, Auer will point out that it can only hold if the transformations and damage have not reached such a scale as to endanger the conditions of life and survival (which does not seem so

¹⁵⁶ The following objection can be also moved against the adaptational approach proposed in Di Paola, M., & Ciccarelli, S. (2022). The disorienting aesthetics of mashed-up Anthropocene environments.

remote for many parts of the globe today). In that case, how will it be possible to convince people that they should appreciate the compromised environment around them in a disinterested way, setting aside all their interests, in the name of Aesthetics? The situation would perhaps highlight a certain detachment of the academia and the countries of the global north from the living conditions of people much more affected and afflicted by climate change. Again, we could ask ourselves: how to appreciate the view I enjoy from my balcony, knowing that it was made possible by a flood that destroyed the most fragile houses around me? How to enjoy the view while putting aside the awareness of my involvement in the process at hand and the privileges that others are not lucky enough to have? And again, in case we ourselves were to lose our homes, how could we appreciate that landscape in a disinterested manner, putting aside our own interests and desires?

In years of full-blown climate crisis, the supposed distinction between ethics and aesthetics seems to waver, calling into question some of the main positions of environmental aesthetics. And alongside this fundamental distinction, the separations between matter and meaning, as well as between body and narratives, are also slowly dissolving. In the hope of a fruitful overcoming of such dualisms, we therefore open to the next chapter, capable of finding effective strategies for the enterprise within spaces that are distant and unexplored – if not actually hostile and feared by the many voices that have accompanied us so far.

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CHAPTER 2



*Against Universalism in Environmental
Aesthetics*

2 AGAINST UNIVERSALISM IN ENVIRONMENTAL AESTHETICS

Almost half a century after Hepburn's seminal article, Jonathan Maskit published *On Universalism and Cultural Historicism in Environmental Aesthetics*¹⁵⁷. The text opens by arguing how his colleague's paper, dating back to 1966 and often referred to as a "rebirth" (following the so-called neglect) of nature aesthetics, should rather be conceived as a debut, an inauguration. Indeed, prior to this intervention, it is not possible to speak of an aesthetics of nature as we know it today; rather, nature was embedded within an aesthetics of indistinction, focused on the judgement and experience of the subject and paying little attention to the ontology of the perceived object. Discussing perceptual experience in general terms, moving freely between art and nature was somewhat simple and agile. However, in the course of the 19th century, the focus shifted to the object of fruition, and in particular to the work of art, developing an arsenal of concepts, tools and discursive strategies with which the emerging environmental aesthetics would later have to deal – and to draw upon. Indeed, from the 1960s onwards, the authors of the field, although motivated by the desire to open up a privileged space for the aesthetics of nature, could only rely on the creations of the philosophy of art: for the new field to call itself "aesthetics", the discontinuity it wished to claim needed to be inserted within the (typically analytical) tradition from which it wished to

¹⁵⁷ Maskit, J. (2014). *On Universalism and Cultural Historicism in Environmental Aesthetics*.

detach itself¹⁵⁸. At this point Maskit warns us: this is only *one* possible story of environmental aesthetics.

Listening to those voices outside the English-speaking conversations, the author invites to a complication of linearity, to a reinterpretation of the field capable of tracing alternative paths: philosophers such as Schopenhauer, Nietzsche, Heidegger, Adorno and others transport us away from analytical circles, leading us to a region that has yet to be explored, that is, to an aesthetics of nature capable of germinating within continental philosophy. New origins, new leading figures and new decisive turning points, as well as renewed approaches of philosophical enquiry, may slowly unfold, challenging the implicit and problematic assumptions of the discipline.

According to Maskit, in fact, the environmental aesthetics discussed so far is characterised by two main questionable attitudes: firstly, although it rejects formalism and recognises the importance of genesis and the natural context in which the object is formed and located, it refuses to take into serious consideration the historical-cultural dimension within which the aesthetic experience is realised; secondly, it maintains a normative and individualistic approach, often focusing on the search for an "appropriate" or "correct" appreciation of an object (or, possibly, environment or group of objects) by a subject.

Let us therefore start with the first of the two issues. Maskit, in a clear and simple manner, states:

"For the universalists, it is clear that when we speak about human beings or nature we are talking about stable concepts. [...] For the cultural historicists, to the contrary, it is clear that terms such as 'human being' or 'nature' are far more fluid and doubly so."¹⁵⁹

If for the universalist, the object of enquiry is characterised by stability and univocity, moving to the other side of the fence we see how nature takes on

¹⁵⁸ Similarly, for this thesis to be able to open up an "ecological crisis aesthetics", strongly critical of the field of study conventionally devoted to environmental experiences, it was clearly necessary to devote a chapter to the exploration of that same field, as well as to take up – in the pages to come – some of its main texts and positions.

¹⁵⁹ Maskit, J. (2014). On Universalism and Cultural Historicism, cit., p. 47.

shapeshifting and prismaticity as its distinctive properties. According to cultural-historical philosophers, it is in fact always necessary to consider the ontology of the referent as situated within a network of variable meanings, references and interpretations. Moreover, even with regard to the percipient subject, although it is possible to trace lines of common lineage or inter-cultural exchange and, therefore, similarities in the possibilities opened up to aesthetic experience, "it remains the case that cultures such as Japan's, India's, or Morocco's, to name only three, are markedly different in their understandings of many of the terms the universalist takes to be universal"¹⁶⁰.

The second question leads us instead to the field of ethics. As the author points out, echoing the work of several colleagues, the adoption of a continental approach to aesthetics often results in a position that rejects both the universality of truth, morality and judgement, as well as the individualistic character of the search for and configuration of the same¹⁶¹. Ending the previous quotation, the author thus argues how "cultural difference from this perspective is not to be explained away as the consequence of one or both sides being mistaken. Rather, it is to be accepted and confronted as a part of the human condition that requires understanding and perhaps negotiation"¹⁶².

After presenting the main positions of English-analytic environmental aesthetics, as well as some internal and external possibilities that have been able to move away from the recurring universalistic approach, the author concludes by emphasising the three main points of the discourse, namely the ontological indeterminacy of the natural environment, the multiplicity of possible perceptual experiences, and the responsibility of a judgement

¹⁶⁰ *Ivi*, cit., p. 48.

¹⁶¹ Despite the fact that Maskit defines the opposition in terms of analytic versus continental philosophy, he actually traces the development of the latter, showing how its father, Immanuel Kant, actually maintained an intermediate position (defining pure concepts as universal, while remaining vaguer and more open with regard to empirical concepts). It was then through the work of Hegel and Heidegger that the cultural-historical component of concepts came to emerge more and more strongly (pp. 46-50).

¹⁶² *Ivi*, cit., p. 48.

that must be negotiated and articulated, rather than accepted as an indisputable certainty:

"For the cultural historicist, reifying nature as a noncultural category is simply untenable. Just what would it mean to encounter nature *directly*? And once we admit that we can't encounter nature directly, *of course*, it is human beings who encounter nature and of course we do so using *our* senses, *our* language, and *our* concepts, it's not far to the recognition that those concepts and languages themselves have histories and that they vary from one time and place to another.

And it's only one small step further to the realization that our senses, too, are culturally shaped; aesthetics teaches us this quite clearly. One has to learn to look, to listen, and to taste, and one can learn to like and enjoy many things that one would not have thought would be appreciable.

Even the cognitivists admit that some cultural institutions can play an important role in shaping our aesthetic judgments. Their mistake is in insisting that there is only one such cultural institution (science) and it holds universally. The history of both environmental aesthetics and environmental ethics (not to mention of philosophical aesthetics and ethics more generally) ought to teach us that we would do well to give up the search for the one, true way."¹⁶³

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Following Maskit's advice, I would therefore like to listen to different voices, capable of questioning the ontological and perceptual universality of nature as well as the corresponding universality of aesthetic judgement. Such are the voices so much criticised and feared by authors such as Carlson and Brady, constantly ready to remind us how historical and cultural approaches, particularly in their postmodern guise, represent the most dangerous drift for environmental aesthetics: the alluring and insidious siren song, the risk of shipwreck, confusion and bewilderment to be avoided at all costs. But what do these vague postmodern strategies really consist

¹⁶³ *Ivi*, cit., p. 58.

of? And, above all, how do they undermine the three dimensions – ontological, perceptual, ethical – outlined above for our field of aesthetic investigation?

Rather than retracing the historical track, going back to the philosophical origins of the term¹⁶⁴ or its textbook definitions¹⁶⁵, I propose here to rely on an author who in recent years has tried to critically reflect around this concept: part of a broader group of philosophers and thinkers, Jason Josephson Storm attempts to map what has been the cultural, artistic, philosophical and political climate of postmodernism¹⁶⁶, identifying its limits and emerging responses. In his book *Metamodernism: The future of theory*¹⁶⁷, Storm attempts to take a perspective that traces some of the changes that have occurred in disparate disciplines in recent decades. Indeed, what the author argues is how an eclectic and non-linear reading of seemingly distant texts can help to grasp similarities and iterations that are being overlooked by devotion to discipline and hyper-specialisation. If postmodernism has concentrated its efforts on the deconstruction of grand narratives or the analysis of microscopic case studies - that are comparable but difficult to

¹⁶⁴ Lyotard, J. F. (1979). *La condition postmoderne: rapport sur le savoir*. Les Éditions de Minuit.

¹⁶⁵ This is the definition offered by the *Encyclopaedia of Activism and Social Justice* (2007): “[Postmodernists argue that] language does not reflect reality outside of it and no theory—scientific or not—can objectively represent the social and natural world which solely consists of texts, inter-texts, interpretations and discourses. Postmodernism can be philosophically associated with an unsystematic skepticism against faith in rationality, objectivity, and scientific knowledge. The rise of epistemological anti-realism and ethical relativism seem to be the main characteristic features of Postmodernism in philosophy” (Çelik, S. K. (2007). Postmodernism. In Anderson, G. L., & Herr, K. G. (Eds.). *Encyclopedia of activism and social justice*. Sage Publications).

¹⁶⁶ Here is a possible point definition offered by the author: “Although not always with the same succinctness, postmodernism in philosophy is typically associated with: 1) antirealism; 2) an emphasis on endings, which has often included disciplinary autocritique; 3) an extreme version of the linguistic turn that characterizes the world in terms of texts; 4) a broad climate of skepticism; and 5) ethical relativism (sometimes called ‘ethical nihilism’)” (Storm, J. A. J. (2021). *Metamodernism: The future of theory*. University of Chicago Press, cit., p. 9).

¹⁶⁷ The term metamodernism can be traced back to Vermeulen, T., & Van Den Akker, R. (2010). Notes on metamodernism. *Journal of aesthetics & culture*, 2(1), 5677, cit., p. 2.

replicate or generalise -, it is now necessary to sharpen our gaze so that something new can be constructed, something capable of emerging not so much from a single subjective intuition, but rather from the unexpected interweaving of disparate thoughts and discourses.

Storm focuses his attention on the human sciences¹⁶⁸, highlighting the postmodern disintegration of the disciplinary objects around which they were constituted, as well as the loss of utility of these objects as analytical categories. Starting from his own field of study, he shows how religion has gone from being considered as a “natural” essence - a function common to multiple human groups and, therefore, analysed as a social *apriori* - to a mere categorical construction and epistemological imposition (modelled on Euro-American Protestantism, taken as a reference model to initiate the cataloguing). Noting the non-existence of the term in past times and in non-European communities, Wilfred Cantwell Smith¹⁶⁹ argues that religion can be considered as a double abstraction: firstly, the subsumption of disparate practices, beliefs and institutions within a given religion (such as Buddhism, Hinduism, Taoism, Zoroastrianism, Confucianism, categories introduced over time by Western scholars and never fully corresponding to native categories); secondly, the subsumption of these different religions within the umbrella term “religion”¹⁷⁰.

Besides the concept of religion, the author will also analyse the

¹⁶⁸ The author defines them as the sum of humanities and social sciences.

¹⁶⁹ Smith, W. C. (1991). *The Meaning and End of Religion*. Fortress Press. (The first edition dates back to 1962).

¹⁷⁰ In further support of his thesis, the author points out that the current generalised acceptance of the term “religion” undermines several so-called religions: the analytical category implies the existence of more than one religion (there would be no need for the category if there were only one), which undermines the assumption of most religions that there is incompatibility between different beliefs (e.g. the world can only have been created in one way, by a particular entity according to a particular narrative). To claim today to belong to the “Catholic religion” becomes in a sense a contradiction, when one claims to believe in a God and a specific narrative and, at the same time, to recognise these same elements as mere declinations of “religion” - thus existing next to other alternative and equally valid configurations. The relativisation of perspectives then becomes a kind of denial itself of any religion that presumes to be the one and only true narrative of reality.

deconstruction of the concept of “art”, before generalising and moving on to a broader reflection. The discussion on art will highlight the political aspect of category construction, showing how the expansion of the concept capable of including new works only occurs if the critic or those in a position of authoritative judgement (i.e. those with a certain kind of influence and power) deem it necessary. Therefore, it is not the works of art that meet a certain criterion of “artfulness”, but it is the holders of power who determine what is indisputably and intrinsically artistic¹⁷¹.

After analysing some particular referents, the author will therefore try to construct a discourse capable of condensing the various postmodern upheavals, extrapolating and abstracting from a plurality of texts three main strategies¹⁷² of critique and “demolition” of disciplinary objects:

- 1) First, we find the immanent critique, which can be implemented in different ways:
 - collecting multiple different definitions of the object of enquiry. Disciplines are defined by their objects, pivots around which it is possible to debate; if no one agrees, however, on what the object actually “is”, then perhaps it is not even possible to establish a collective discussion on a shared referent;
 - exposing internal contradictions, i.e. showing how a traditional definition, based on necessary and sufficient conditions, consistently fails, sometimes generating unexpected inclusions or excluding normally accepted referents;
 - disaggregating the object, i.e. showing how the object itself is the result of a mere and contingent interweaving of similarities between heterogeneous elements, rather than a pre-existing category;
 - collapsing binarism. Objects are often formed from constitutive oppositions (of course, the example given by Storm himself is that of nature and culture, just as that of nature and art has been central to

¹⁷¹ In particular, he will refer to Weitz, M. (1956). The role of theory in aesthetics. *The Journal of Aesthetics and Art Criticism*, 15(1), 27-35.

¹⁷² Storm, J. A. (2021). *Metamodernism: The future of theory*, cit., pp. 66-77.

the articulation of environmental aesthetics), which, however, are always problematised, highlighting how the line of demarcation is arbitrary and much more blurred and indefinite than one might think;

- introducing a nominalist scepticism, i.e. arguing how the object in question is merely a linguistic construction produced to subsume part of reality through a fictitious process.

2) A second order of criticism is then the relativising one, which unfolds through various other techniques:

- historicization, i.e. demonstrating the temporal transformation of the meaning and uses of the concept;

- victim identification. If the meanings of the object have changed over time, why and who has defined these turns? Being the result of human will, surely interests underlie the transformations and, surely, some groups will have benefited at the expense of others;

- culturalization, i.e. the demonstration of the immeasurable differences between different communities, which present different points of view and different meanings of the same object (which therefore cannot be considered equal to itself, except through the postulation of a privileged point of view with respect to others) or do not present a similar vocabulary at all from which to try at least a translation activity.

3) The last level of criticism, which brings together some of the strategies already highlighted, concerns ethical criticism. In this case, it is argued that the object is normative in its use or construction, i.e. it incorporates values that, going unnoticed, perpetrate dynamics of violence, discrimination and oppression. Indeed, it is impossible to construct a referent, an object of investigation, in a neutral manner and without making any personal contribution linked to one's own values and interests.

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Maskit challenged us: cast a critical glance at the ontological, perceptual and ethical universalism that structures environmental aesthetics – detect such possibilities within continental philosophy and its cultural-historical approaches. Storm then explored in depth the more recent developments of such approaches, thus providing us with strategies for a tripartite critique, namely: the deconstruction of objects, the contextualisation of perspectives, and the politicisation of both. In order for the two discourses to now converge, we only have to ask ourselves: which authors have developed (and, often, put into practice) such postmodern strategies in relation to our objects of investigation, namely nature, the environment and its elements, and, finally, the ecological crisis? Where can we find such critical voices in today's philosophical debate?

As Storm points out, the term “postmodernism” often overlaps and entangles with other familiar concepts such as deconstructionism, post-structuralism, “French Theory”¹⁷³. If we want to trace this philosophical atmosphere back to a particular incarnation, we cannot but recall the name of Michel Foucault, a philosopher who - willingly or unwillingly - initiated an endless proliferation of texts, reflections and critical thoughts, actions, strategies and political groups. In recent decades, the philosopher has in fact become a central figure in the development of a new critical theory of society, radically reconfiguring important categories of thought and thus animating the most diverse disciplines in the humanities (and beyond). If

¹⁷³ “Since the 1980s, four terms have been increasingly used in the Anglophone academy to chart a semi-overlapping and inconsistent terrain: deconstruction, poststructuralism, ‘French Theory’ and postmodernism” (Storm, J. A. J. (2021). *Metamodernism: The future of theory*, cit., p. 9). Although recognising the non-perfect overlap, like Storm, Cangiano also prefers to highlight the similarities, cross-references and common origins between French Theory, Critical Theory, post-structuralism and deconstructionism. According to his reconstruction (borrowed from Cusset, F. (2008). *French theory: how Foucault, Derrida, Deleuze, & Co. transformed the intellectual life of the United States*. U of Minnesota Press) French Theory would in fact consist in “the radical restyling to which French post-structuralism itself is subjected within American universities”; similarly, “the concept of deconstruction [...] gradually begins to be employed as a *useful* tool for a political use of *Theory* itself” (Cangiano, M. (2024). *Guerre culturali e neoliberalismo*. Nottetempo, cit., pp. 46-47. Translation mine).

the first wave of critical theory builds on Marxism and comes together under the name of the Frankfurt School, the variety of today's critical theory will find a shared pivot in Foucault's anti-universalism, that is, in the search for the social, historical and political dimensions, contingency and arbitrariness, of those objects, phenomena and assumptions that usually appear as more solid and stable.

While on the one hand the philosopher is recognised as the new representative of critical theory, it is important to note how he also introduces fundamental ruptures with respect to certain paradigms of the Frankfurt School. As we will see, he categorically rejects the universalist assumption that guided Marcusean critical theory, namely the idea that there is a *nuclear* and profound nature, *univocal* and shared by every human being, *foundational* for ethics and strategies of resistance. On the contrary, the very idea of nature and its universal, trans-historical and neutral character will be the new critical targets, in parallel with the processes of "naturalisation" that have over time supported and promoted deleterious and repressive social norms towards various minorities¹⁷⁴.

Indeed, as Storm suggests, postmodern and post-Foucauldian theories traversed various disciplines, deconstructing both social objects, as for example society, culture, science, politics, law, history, economics, as well as apparently "natural" objects, like sex, race, species and so on¹⁷⁵. Conceiving power as the force, the drive, the movement aimed at *naturalisation* and *universalisation*, the (Gender, Queer, Postcolonial, Decolonial, Whiteness, Subaltern, Disability, Animal...) Studies therefore fight for a fluid, nomadic, changing ontology, for an epistemology of the margin, for irreducible multiplicity, for an ethics detached from any universal and monolithic value or norm.

Drawing on this theoretical atmosphere and, specifically, on Queer,

¹⁷⁴ As the famous ecofeminist Gaard recalls, "appeals to nature have often been used to justify social norms, to the detriment of women, nature, queers, and persons of colour" (Gaard, G. (1997). Toward a queer ecofeminism. *Hypatia*, 12(1), 114-137, cit., p. 129).

¹⁷⁵ Storm, J. A. (2021). *Metamodernism*, p. 51. See also the notes on pp. 303-306.

Decolonial and Animal Studies¹⁷⁶, the aim of this second chapter will be to sketch a possible “postmodern critical theory of nature”, i.e. a critique of natural objects, as well as of natural sciences and their claim to unquestionable objectivity¹⁷⁷. The selection of authors, therefore, will not be limited by disciplinary boundaries, but will be determined by their usefulness for our enterprise: deconstructing the ontology of nature, natural environments and environmental crisis, situating the gaze that observes them, and showing the hidden interests and forces that continually shape both our objects and our sensibilities.

In order to do so, we will follow the tripartite analysis of environmental aesthetics previously advanced, as well as the dichotomies that structures the discipline. Therefore, we will show the problematic imbalances towards one of the two poles considered: the natural environment and its constituent elements are often conceived of as mere materialities waiting to be discovered by the hard sciences; perception is repeatedly presented as a passive and strictly corporeal reception of sensory stimuli that are only meaningfully processed in a subsequent stage; finally, sensibility is portrayed as a region separated - or, possibly, separable through disinterest

¹⁷⁶ Drawing on queer feminism, decolonial anthropology and animalist philosophies and practices, an attempt will be made to adopt an intersectional approach as far as possible, i.e. to hold together different vectors of power and domination in the critical analysis of the real (Crenshaw, K. (1989). *Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory, and Antiracist Politics. The University of Chicago Legal Forum*, 140, 139-167). Born within the field of feminism, out of pressure from black feminists who recalled the importance of class and race in the fight against a system that is not only patriarchal, but a “white supremacist capitalist patriarchy” (hooks, b. (1984). *Feminist Theory: From Margin to Center*. South End Press, p. 51), the intersectional project continues to expand to incorporate decolonial and indigenous instances, as well as systems of subordination such as ableism and speciesism (Calarco, M. R. (2020). *Animal studies: the key concepts*. Routledge, pp. 84-87).

¹⁷⁷ Montuschi also identifies three parallel criticisms levelled at scientific objectivity, namely the construction argument, the context argument and the value argument. Although the author then focuses on the humanities alone, we can say that her account concerns the generalised attack on scientific objectivity. We will go back to her proposal in the last chapter (Montuschi, E. (2006). *Oggettività e scienze umane: introduzione alla filosofia della ricerca sociale*. Carocci, pp. 37-55).

- from sociopolitical influences, thus highlighting the rupture that exists between ethics and aesthetics.

The first section, dedicated to the strategy of *deconstruction*, will open with Lorraine Daston's onto-epistemological reflections, aimed at affirming the fundamental intertwining of matter and meaning at the origin of scientific objects. We will then proceed by analysing the parallel process that has taken place in relation to our privileged referent: starting from Foucauldian intuitions on sexuality, we will see how the queer feminism of Judith Butler and, more recently, of Karen Barad, has been able to illuminate the material-semiotic character of bodies and nature. We will then conclude with Haraway's Chthulucene, a concept capable of reconfiguring the crisis itself as an indeterminate phenomenon: not just an aggregate of physical properties, but also a process of collective semiotic articulation.

The second section will instead attempt to *situate* perception, in other words, to deny the possibility of a direct, merely corporeal, universal and ahistorical perception, foreign to the context in which it unfolds. After having highlighted the unfolding of the reflection within sensory studies and anthropology of the senses, we will try to focus specifically on the perception of nature. In an attempt to "decolonize" their gaze, various exponents of contemporary anthropology – from Ingold to Descola to the broader movement of the ontological turn – are today claiming not just for a specificity and multiplicity of perception, but also (as the only way to guarantee the actual respect for all environmental perspectives) of the very nature perceived. Viveiros De Castro, one of the main figures of the group, will also show us the possibilities of extending the discourse to the climatic field, questioning the univocity of western and northern science and promoting the proliferation (and irreducible fragmentation) of experienced crises.

Finally, the third section will develop the strategy aimed at *politicising* the aesthetic dimension. Starting from the philosophical proposal of Rancière, fully aware of the working and unfolding of power within the sphere of sensibility, we will then move on to the field of *Animal Studies* and their

insistence on the production and “naturalisation” of difference, rather than the mere ascertainment of the same. Drawing on the systematisation proposed by Matthew Calarco, we will thus see how perception is not merely the passive reception of external data, but an activity capable of articulating identities and distinctions (in particular, between culture and nature, humans and animals). Again, we will conclude by applying the same ethical-aesthetic approach to more recent ecological issues, with reference to Stefania Barca's *Forces of reproduction*, aimed at integrating non-human sensibilities and interests in our climate struggles, as well as promoting a critical and partisan (re)view of the crisis, of its causes and of its possible resolutions.

2.1 (DE)CONSTRUCTING THE REFERENT

2.1.1 Against Mere Discovery

In *Appreciating Natural Beauty as Natural* Ronald Moore asks precisely what it means to appreciate our main object of inquiry “as natural”, noting how for many this means abandoning the canons, concepts, categories, standards and, in general, the knowledge and meanings *socially* attributed to the object¹⁷⁸. While for art these are essential, when I appreciate nature, I can (and, often, must) abandon this repertoire, in order to perceive in an unmediated way the pure and simple materiality of the environment that surrounds me and the elements that populate it.

Against this dualistic thesis, we can take a look at the ambiguous object presented by Moore: the glass flowers, in particular the glass flowers produced at the turn of the 19th and 20th century by Leopold and Rudolf Blaschka, now preserved in the Museum of Natural History at Harvard University. The author wonders whether, if we had appreciated a real chicory, we should equally, in the name of consistency, have appreciated the perfect glass reproduction of the same. Many might disagree, as the material properties of the two differ; the author then invites us to make an imaginative effort, comparing a real chicory and one created by a future laboratory capable of synthetically reproducing its physical properties, as well as its smell, taste and all related sensory properties. The dissent, however, does not cease, with some arguing that the two continue to differ, the former being generated by natural forces, while the latter by a process of human production.

Having reached this point, I would then like to return to the distinctions drawn in the previous chapter. In a way, through this strategy we see how the proponents of the separation between art and nature can only go so far as to ultimately affirm how both are fundamentally characterised by an indissoluble intertwining of matter and meaning. For even if the two

¹⁷⁸ Moore, R. (1999). *Appreciating natural beauty as natural*. *Journal of Aesthetic Education*, 33(3), 42-60.

chicories were to be perfectly identical in their material structure, at the same time the history and meanings accompanying them would characterise the two as different - natural and artificial -, revealing themselves as intrinsic dimensions of the object.

In recent times, this position has begun to make its way decisively not only into humanistic, aesthetic or artistic fields, but into the heart of epistemology and the theory of science. Amongst its main exponents we certainly find Lorraine Daston, former director of the Max Planck Institute for the History of Science, who, in the wake of Foucauldian reflections, attempts to promote a postmodern perspective towards historical epistemology¹⁷⁹, showing how the materiality of objects always necessarily takes shape through (1) discourses and meanings, (2) images and representations and, finally, (3) practices of manipulation and interaction.

Discourses and Meanings

Let us therefore start with the first – linguistic and discursive – dimension. In *Things that Talk*, the author brings together various studies in the history of art and science to show how “things” are always the result of a mixture of matter and meaning and how, when the latter fades, they “mute” and, falling into silence, disappear. It is only thanks to our talking and discussing that the world is granted definite contours, vivid colours and different consistencies, populating itself with “things” that can be talked about, described, explained, interpreted, debated, as well as visualised, avoided, paid attention to, manipulated and used.

The collection of contributions is thus meant to be a challenge both to the distinction between art and nature or, rather, to our distinction between

¹⁷⁹ The other two historical directors are Rheinberg and Renn, the former more closely associated with Althusser, Bourdieu, Derrida and French structuralism, and the latter with Kuhn's approach and structural and paradigmatic shifts in knowledge. For a review of the three approaches, see Omodeo, P. D., Ienna, G., & Badino, M. (2022). *Epistemologia storica: correnti, temi e problemi*. Carocci, pp. 118-129.

production and discovery according to which "*artificialia* are made, *naturalia* are found"¹⁸⁰, as well as to the deeper split between matter and meaning:

"Once again, the opposition between matter and meaning (sometimes tricked out as that between nature and culture) is reproduced. On the one side, there are the brute intransigence of matter, everywhere and always the same, and the positivist historiography of facts that goes with it; on the other side, there are the plasticity of meaning, bound to specific time and places, and the corresponding hermeneutic historiography of culture. This Manichaeian metaphysics is, of course, a caricature, which the work of historians of art and of science often shades and softens. But the metaphysics nonetheless exerts a powerful influence on how practitioners of both disciplines grapple – or fail to grapple – with things, those nodes at which matter and meaning intersect. Entities that lie precisely at the fault line of a great metaphysical divide tend to appear paradoxical for just that reason."¹⁸¹

As we will see at the end of the section, entities such as the climate crisis inhabit precisely this dividing line in a superb manner, thus undermining our habitual certainties regarding the distinction between matter and meaning; but even before these great entities, it is perhaps the case to turn our gaze towards the everyday that surrounds us.

Taking up exactly the same objects analysed by her fellow aesthetician, Daston suggests we think of the Blaschkas' glass flowers in her personal contribution to the volume¹⁸². In order to be able to grasp such objects, the

¹⁸⁰ Daston, L. (Ed.) (2004). *Things that talk: Object lessons from art and science*. Zone Books, cit., p. 20.

¹⁸¹ *Ivi*, cit., pp. 15-16.

¹⁸² Daston, L. (2004). *The Glass Flowers*. In Daston, L. (Ed.). *Things that talk*, pp. 223-256. Similarly, we see how the two authors employ the same metaphors to explain their position: "[...] in our experience of nature, the object of contemplation is often not a thing that has a scientifically recognized type, but rather an *indefinable constellation of features*. Nature does not consist of a sum of natural kinds. Much of what we admire in nature is nameless, not because a category is missing in our repertory, but because it is a combination of looks, sounds, smells, glints, hues, swirls, and so on that simply have no names. These various features are *drawn together* into a conspectus of appreciation not by an organizing category, but by one or another informal framing device we call upon. [...] In each case, the framing at work is temporary and malleable; but, even as we move about in it and reposition the frame ('Now look at the lake from this side!'), we draw upon

scholar invites us to understand them both within their dynamics of production and reproduction, as well as in the interest aroused by experts and the public. On the one hand, we see how they came to light thanks to the experience handed down by members of the Blaschka family, who were able to interweave the techniques acquired through the decorative arts and jewellery production with the careful analysis of scientific representations: after Leopold's death (1895), his son Rudolf decided to abandon representations and move on to the analysis of plant anatomy through a microscope, which would enable him to give shape to reproductions of the originals, rather than the previous reproductions of ideal-types; as the years went by, he then decided to start producing both glass and pigments on his own, increasing the quality of the creations even more.

While on the one hand we find a stratified production history, professional work on the part of both the Blaschkas and all those who were involved in the various techniques of transporting, preserving and displaying flowers, on the other hand we have what Daston, in the wake of Miguel Tamen, defines as a "society of friends"¹⁸³. For something to be able to speak, in fact, it requires a certain capacity to attract attention, to aggregate a community of people willing to represent, discuss and condense interest within a peculiar object (as well as enemies interested in criticising it). In this way, it is enriched, becomes salient and, above all, becomes recognisable and increasingly defined, even for the uninitiated and the distracted. Moreover, such a community is able to keep it visible and accessible to the public through various strategies, as well as to maintain its integrity in extreme cases where there is a risk of decay or destruction.

Returning to our example, we can certainly say that the best friend of the glass flowers was George Lincoln Goodale, a professor of botany at Harvard who, on the verge of founding the Cambridge Museum of Natural History

it to give us a *something-here-and-now* as the *object of our aesthetic awareness*" (Moore, R. (1999). *Appreciating natural beauty as natural*, cit., pp. 51-52); "As in the case of constellation of stars, the trick is to connect the dots into a plausible whole, a thing. Once circumscribed and concretized, the new thing becomes a magnet for intense interest, a paradox incarnate. It is richly evocative; it is eloquent. Only when the paradox becomes prosaic do things that talk subside into speechlessness." (Daston, L. (Ed.) (2004). Introduction to *Things that talk*).

¹⁸³ Tamen, M. (2004). *Friends of interpretable objects*. Harvard University Press.

and fascinated by the glass creations, decided to buy hundreds of them to populate the new institution. In fact, his approximation to perfection convinced him that such replicas were excellent to educate his students, who were finally freed from the two-dimensional and distorted representations of reality, as well as from the perishable reality itself: it is thanks to Goodale's intervention that the Blaschkas' productions were thus transformed from decorative creations into "Glass Models". In this way art and nature intertwine in a stringent manner, the former modelled from the careful observation of the latter, the latter studied and perceived through the models generated by the former. However, with the death of the professor and the passing of the years, the society of friends is changing and, with it, our objects, which gradually evolve into the "Glass Flowers", now much appreciated by tourists and visitors of the centre and certainly no longer relevant to the academic and scientific community.

At this point, however, the objections that opened the discourse resonate, namely that glass flowers are ambiguously positioned, but certainly cannot but be classified as artefacts. It is therefore obvious that their materiality is inextricably intertwined with a history of production and a network of meanings produced, reproduced and revisited by one or more human communities. But can the same really be said of natural elements?

Let us then take two other examples from the book¹⁸⁴, which are closer to our idea of nature. The first is proposed by Norton and Elaine Wise, and concerns the island Pfaueninsel, also called Peacock Island, located on the Havel river in Berlin's Wannsee district. Starting in 1793, the island was acquired by Frederick William II of Prussia and then remained in the hands of his successors for a long time. Rather than being conceived as a "mere space", a natural place perfect for weekend excursions, the two authors show us how in the course of time it underwent major modifications, which led it from being experienced as a paradise-like place, to an innovative model for agricultural cultivation, a garden to be admired, then to be merged with a productivist and industrial ideal, and finally to become a theatrical setting. Throughout time, the island "spoke" according to different

¹⁸⁴ In addition to those already mentioned, we also find Bosch's paintings, the column, photographs used as evidence in legal settings, the Rorschach test, newspaper clippings and Pollock's paintings interpreted by Greenberg.

registers, not so much as an isolated and enclosed object, but as a network of elements in relation to a wider world, a world from which it acquired meaning and became intelligible to the public. The different owners of the island thus gave "its physical form different languages that different people could understand in its presence"¹⁸⁵; the experience of the island was thus never that of a mere natural and material object, but rather a depth of socially distributed and voluntarily condensed references and meanings. The second example is proposed by Simon Schaffer, who discusses soap bubbles¹⁸⁶. Born within the culture of mass consumption, these entities went from being considered commercial objects to exemplifications of scientific principles; born from the hand of man at a precise moment in history, they became a prism capable of shedding light on the immutable and universal laws of nature¹⁸⁷. After the two biggest soap manufacturers, Thomas Barratt and William Lever, spent huge amounts of money on advertising to hold soap bubbles together with a sense of cleanness and a guarantee of happiness - often relying on the work of artists such as John Everett Millais¹⁸⁸ - scientists were just as busy demonstrating how the size, colour and oscillation of soap bubbles could reveal the basic structures of matter. Starting with various public demonstrations of the properties of bubbles, they then became interested in image-capture devices capable of showing (with a certain amount of wonder and entertainment) the movements and explosions that soap was capable of generating. It was thanks to such interventions that soap bubbles were transformed from a commodity, a lens or a child's game, into an exquisitely natural phenomenon.

¹⁸⁵ Wise, M. N. & Wise, M. E. (2004). *Staging an Empire*. In Daston, L. (Ed.). *Things that talk*, cit., p. 144.

¹⁸⁶ Schaffer, S. (2004). *A Science Whose Business Is Bursting: Soap Bubbles as Commodities in Classical Physics*. In Daston, L. (Ed.). *Things that talk*.

¹⁸⁷ Schaffer points out how in the early 20th century soap bubbles became a recurring example of scientific reasoning and proof even within philosophical discourse. See for example Dewey, J. (1910) *How We Think*, D. C Heath & Co Publishers: Chicago, pp. 70-71. Even Tim Ingold, the anthropologist we will meet in the next section 2.2.2, admits to having experimented mathematics on soap bubbles (Ingold, T. (2001). *La formazione di un antropologo*. In *Ecologia della cultura*. Meltemi, p. 40).

¹⁸⁸ Bubble (1886), a painting of a child admiring a soap bubble, was printed in engravings, posters, puzzles, postcards and massively distributed by Barratt, owner of Pears Ltd.

Here again, however, the doubt arises: the Pfaueninsel island is certainly today a stratification of multiple meanings and stories, but when it was discovered, still unnamed and untouched, was it not a mere aggregation of natural elements, simple matter stripped of any meaning? Similarly, soap bubbles have acquired different meanings over time, to the point of presenting themselves as phenomena that exemplify various laws of nature, but they are a product of human beings¹⁸⁹, i.e. they are born in a context that is already social in itself and since their appearance cannot but be given meanings that make them intelligible in some way. What can we say, however, about the natural elements that existed before our advent, intervention and our recognition of reality? Can the same discourse be extended to properly natural environments and objects, i.e. to those elements that have been neither altered nor generated by human beings?

Images and Representations

To answer this question, let us consider the conclusion of Schaffer's contribution, where the author emphasises how the capture of bubble movements was accompanied by the capture of another phenomenon, namely that of falling drops. Agreeing that drops of various liquids fell even before the advent of humans and that, therefore, they can now serve as a "purely natural" referent, let us proceed with the discussion. One of the main protagonists involved in the enterprise was the English physicist Arthur Worthington who, for several years, attempted to depict the moment of encounter between a drop and a surface, as well as the instants before and after it, in order to grasp the fundamental structure of the phenomenon in question. He wanted to convince the scientific community and the public that "even in such seemingly random phenomena as drops

¹⁸⁹ In his best-known book, Schaffer had already showed how the air-pump had introduced science into a new phase, moving from the explanation of phenomena provided by nature to the explanation of those phenomena that were artificially created, i.e. generated within the human space of the laboratory (Shapin, S., & Schaffer, S. (2011). *Leviathan and the air-pump: Hobbes, Boyle, and the experimental life*. Princeton University Press). For some ontological and epistemological reflections on the text see Hacking, I. (2008). *Scientific Reason*. Taiwan University Press, pp. 104-121.

and bubbles, 'we are dealing with an exquisitely regulated phenomenon'¹⁹⁰. The story continues in the introduction of *Objectivity*, a monumental work written four-handedly by Lorraine Daston and Peter Galison, capable of leading us towards the second dimension under scrutiny, i.e. the intertwining of materiality and visual representations of the same. The two authors take Worthington's story as an exemplary case of a fundamental turning point within scientific (representational) practice.

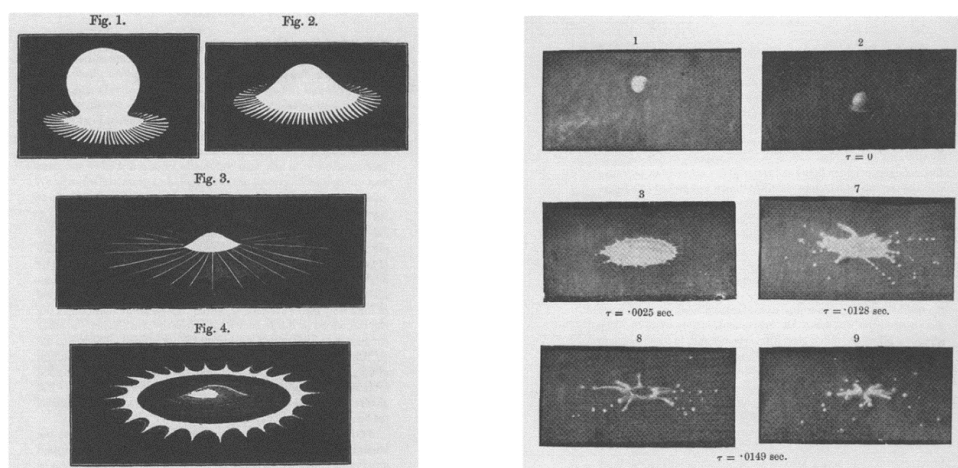


Figure 3. Arthur Worthington, "A Second Paper on the Forms Assumed by Drops of Liquids Falling Vertically on a Horizontal Plate", *Proceedings of the Royal Society* 25 (1877), p. 500, figs. 1-4; Arthur Worthington, "The Splash of a Drop and Allied Phenomena", *Proceedings of the Royal Institution* 14 (1893-95), p. 302, ser. 13.

After years spent sketching drops and distributing evidence of the perfect symmetry that the sketches presented in a systematic manner, thus shedding light on a new undoubted regularity of nature, in 1894 the scholar succeeded for the first time in capturing the sketch of a drop with a photograph. Shot after shot, he realised how irregularities dominated the scene, putting the much desired symmetry out of play. The new "objective view" led the physicist to wonder how it had been possible to perpetuate the error for so long. Recovering the drawings, he realised how the

¹⁹⁰ Schaffer, S. (2004). *A Science Whose Business Is Bursting*, cit., p. 186.

irregularities were also present before, they were simply discarded in pursuit of the ideal of a symmetrical and perfect fall:

"I have to confess that in looking over my original drawings I find records of many irregular or unsymmetrical figures, yet in compiling the history it has been inevitable that these should be rejected, if only because identical irregularities never recur. Thus the mind of the observer is filled with an ideal splash — an Auto-Splash — whose perfection may never be actually realized."¹⁹¹

In order for the ideal to be produced and reproduced, a careful work of selection and removal was necessary, thus showing how behind the supposed "naturalness" of symmetry and regularity flaunted to the public, an "artificial" will to adhere to the ideal was instead hidden:

"Some judgment is required in selecting a consecutive series of drawings. The only way is to make a considerable number of drawings of each stage, and then to pick out a consecutive series. Now, whenever judgment has to be used, there is room for error of judgment, and... it is impossible to put together the drawings so as to tell a consecutive story, without being *guided by some theory*... You will therefore be good enough to remember that this chronicle of the events of a tenth of a second is not a mechanical record but is presented by a fallible human historian."¹⁹²

It is from these uncertain first steps that, from the second half of the 19th century onwards, a certain way of portraying (and grasping) nature first came to merge, then to blur, and finally to be abandoned in favour of a new practice: from "truth-to-nature" to "objectivity".

For a long time, the creators of scientific atlases in fact represented nature not so much by reflecting the entity or individual in front of them, particular and characterised by flaws and idiosyncrasies, but rather through a fidelity to the *idealised* image of the characteristic specimen of the species or category, thus intervening on the starting model to correct and purify it.

¹⁹¹ Worthington, A. M. (1895). *The splash of a drop*. Society for Promoting Christian Knowledge, cit., p. 74.

¹⁹² *Ivi*, cit., p. 57-58. Emphasis added.

With the advent of photography, which is accompanied by other social, technical and cultural transformations, a new way of representation comes into play, assuming automatism, the purging of intervention and the absence of subjectivity as its founding characteristics. Objectivity thus makes its way mixing different criteria: emotional detachment; automatic data recording procedures; strictly quantitative approach; belief in an underlying reality independent of the observer; promotion of a single synthetic and antithetical term to the emerging concept of “subjectivity”; habits, cognitive and bodily techniques capable of giving shape to a certain mode of existence, perception and action, that is to say, to a certain “scientific self”.

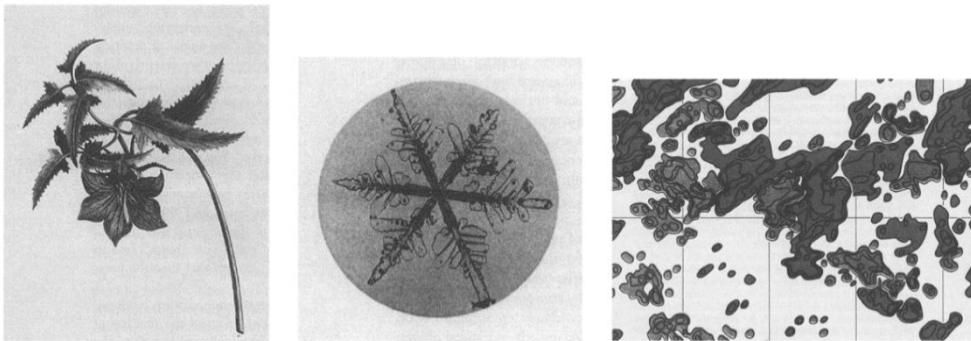


Figure 4. In order, the three images given by Daston and Galison as emblematic of the three different epistemic virtues, truth-to-nature, objectivity, trained judgment:

- *Campanula foliis hastatis dentatis*, Carolus Linnaeus, *Hortus Cliffortianus* (Amsterdam: n.p., 1737), table 8;
- *Snowflake*, Gustav Hellmann, with microphotographs by Richard Neuhaus, *Schneekrystalle: Beobachtungen und Studien* (Berlin: Mückenberger, 1893), table 6, n.10;
- *Sun Rotation 1417, Aug.-Sept. 1959 (detail)*, Robert Howard, Vaclav Bumba, and Sara F. Smith, *Atlas of Solar Magnetic Fields, August 1959-June 1966* (Washington, DC: Carnegie Institute, 1967).

It was only during the first half of the 20th century that we would then see the emergence of a new *epistemic virtue*, namely “trained judgement”, capable of overcoming objectivity by working on mechanical

representations to separate signal from noise, refining the image and removing machine errors, as well as highlighting relevant patterns that make the data more intelligible and meaningful¹⁹³.

This is the main thesis of *Objectivity*: the reconsideration of objectivity as practice among practices, no longer the preferred mode for representing the mere materiality of the world around us, but rather a possible, historical, situated and contingent mode of representation¹⁹⁴. Moreover, no longer a transcendental ideal or paradigm, but rather an embodied, enacted and distributed practice of representation, always in action, migration and reconfiguration:

“It is by performing certain actions over and over again — not only bodily manipulations but also spiritual exercises — that objectivity comes into being. To paraphrase Aristotle on ethics, one becomes objective by performing objective acts. Instead of a preexisting ideal being applied to the workaday world, it is the other way around: the ideal and ethos are gradually built up and bodied out by thousands of concrete actions, as a mosaic takes shape from thousands of tiny fragments of colored glass. To study objectivity in shirtsleeves is to watch objectivity in the making.”¹⁹⁵

Focusing in particular on the evolution of scientific atlases, considered as collections of “images at work”, the two authors emphasise their productive

¹⁹³ Similarly to Fleck and against Kuhn, Daston and Galison do not think in terms of radical ruptures and paradigms, but rather in terms of superimpositions, interweavings, recombinations and reconfigurations: “Ours turns out to be less a story of rupture than one of reconfiguration. We nonetheless came to believe that the history of objectivity had its own coherence and rhythm, as well as its own distinctive patterns of explanation”; “In contrast to the static tableaux of paradigms and epistemes, this is a history of dynamic fields, in which newly introduced bodies reconfigure and reshape those already present, and vice versa”; “The new did not always edge out the old. Some disciplines were won over quickly to the newest epistemic virtue, while others persevered in their allegiance to older ones. The relationship among epistemic virtues may be one of quiet compatibility, or it may be one of rivalry and conflict. In some cases, it is possible to pursue several simultaneously; in others, scientists must choose between truth and objectivity, or between objectivity and judgment. Contradictions arise” (Daston, L., & Galison, P. (2021). *Objectivity*. Princeton University Press, cit., p. 10/19/28).

¹⁹⁴ Omodeo, P. D., Ienna, G., & Badino, M. (2022). *Epistemologia storica*, p. 121-124.

¹⁹⁵ Daston, L., & Galison, P. (2021). *Objectivity*, cit., p. 52.

capacities: prescribing what's important to look at, how it should be looked at, how it should be described, depicted and, above all, how it appears and should appear, that is, "how it looks". In this way, the essential characters to pay attention to and the incidental ones to avoid, the typical and anomalous objects, the range and limits of the variability of nature are fixed¹⁹⁶. Not only, therefore, a disposition and organisation of perception, but also a collective activity of articulation of nature: what it "is" and how it "should be". In a nutshell, nature's ontology can never be said to be completely separate from the shared, historical and enacted practices of representation:

"These images represent knowledge about nature, as well as *nature itself*—indeed, they represent distinct visions of what knowledge is and how it is attained: truth-to-nature, objectivity, trained judgment. Finally, they represent the knower. Behind the flower, the snowflake, the solar magnetogram stand not only the scientist who sees and the artist who depicts, but also a certain collective way of knowing. This knowing self is a precondition for knowledge, not an obstacle to it. Nature, knowledge, and knower *intersect* in these images, the visible traces of the world made intelligible."¹⁹⁷

Manipulation and Interaction

If *Things that talk* places the emphasis on narratives and discourses and in *Objectivity* we find a focus on visualisations and representations, in *Biographies of scientific objects* the attention shifts to the third dimension, namely collective practice and manipulation. Daston again brings together a diverse group of scholars to launch a further attack on the distinction between discovery and invention (which, according to the scholar, emerged

¹⁹⁶ Today's reverberations of this approach in environmental aesthetics are more than evident in the texts of Carlson, who speaks of standard, variable and counter-standard characters depending on the category, as well as in Budd and Brady, who argue for the existence of negative or "ugly" aesthetic qualities based on the fact that there is a "normal" nature and a malformed or "out of proportion" one. (Carlson, A. (1981). *Nature, aesthetic judgment, and objectivity*; Budd, M. (2000). *The aesthetics of nature*, p. 149; Brady, E. (2011). *The ugly truth: Negative aesthetics and environment*, p. 89).

¹⁹⁷ Daston, L., & Galison, P. (2021). *Objectivity*, cit., p. 53. Emphasis added.

in the 18th century), through a particular ontological-metaphysical proposal:

“Each of the eleven essays documents in detail how a heretofore unknown, ignored, or dispersed set of phenomena is transformed into a scientific object that can be observed and manipulated, that is capable of theoretical ramifications and empirical surprises, and that coheres, at least for a time, as an ontological entity.”¹⁹⁸

Scientific objects are not considered here as part of a static reserve constituting the world or nature, waiting to be accurately mapped and described by human enquiry, but rather ontological possibilities actualised through practice, entities that take on and lose consistency and firmness over time, making reality a matter of degrees. According to the “applied metaphysics”¹⁹⁹ proposed by the author, several dimensions characterise the historicity of scientific and natural objects. Indeed, in order to exist, they have to be:

- 1) Salient: the more science strives to create a coherent category, to establish criteria for inclusion and exclusion, to support new forms of representation that stabilise regularities, to intensively investigate evanescent phenomena in order to make them visible, the more an object becomes salient and, therefore, real. An example is brought by Daston herself who, in order to support “the intertwining of ontology, epistemology and sensibility”, speaks of preternatural objects which, unlike supernatural or unnatural objects, are nevertheless included in the natural realm²⁰⁰. If nature is characterised by regularity, preternatural entities are instead extraordinary, irregular, rare, capable of generating wonder and amazement but, nevertheless, always traceable to underlying natural laws (however bizarre, hidden, difficult to understand).

¹⁹⁸ Daston, L. (Ed.). (2000). *Biographies of scientific objects*. University of Chicago Press, cit., p. 5.

¹⁹⁹ For a more in-depth and critical analysis of Daston's applied metaphysics, see Montuschi, E. (2006). *Oggettività e scienze umane*, pp. 129-146.

²⁰⁰ Daston, L. (2000). *Preternatural Philosophy*. In Daston, L. (Ed.). *Biographies of scientific objects*.

Phenomena such as the apparition of three suns in the sky, the birth of conjoined twins, a small fish that could stop a moving ship and many others, attracted the interest of the scientific community and took shape from the 16th century onwards, only to disappear with the advent of natural philosophy developed between the late 17th and 18th centuries, capable of substituting uniformity to variability, simplicity to strangeness, diligence to astonishment, utility to curiosity.

- 2) Productive: the greater the results produced, practical implications, surprises, connections, emerging explanations, manipulations and possible applications, i.e. the greater the degree of productivity, the greater the existence of objects. In his intervention, Rheinberger proposes as an example the cytoplasmic cell: first used in medical research for cancer, then part of the biochemical analysis of protein synthesis in test tubes, and finally experimental tools for molecular biology and the investigation of the genetic code. These “epistemic objects” gain reality through their productivity within scientific research, when they generate unexpected events or allow hypotheses to be refuted or proven:

“It is not that there is no materiality there before such objects come into being, or that they would vanish altogether and shrink to nothing on their way into the future. But they can become, within a particular scientific context, altogether marginal, because nobody expects them to be generators of unprecedented events any more.”²⁰¹

- 3) Embedded: according to Bruno Latour, the reality of scientific objects also depends on their embeddedness within material, localisable networks, made up of tools and apparatuses, individual practices and collective structures, within which objects can consolidate and sustain themselves. The author opens the article by asking whether or not Ramses II died of tuberculosis, when the bacterium was only identified and described, i.e. discovered, in 1882.

²⁰¹ Rheinberger, H. J. (2000). *Cytoplasmic Particles. The trajectory of a scientific object*. In Daston, L. (Ed.). *Biographies of scientific objects*, cit., p. 274.

In his view, the question only makes sense if we believe that facts can escape their networks of production and reproduction, that is, existing “always and everywhere”, extending their reality into the past, thus proceeding by inertia into the future²⁰²:

“When a phenomenon ‘definitely’ exists this does not mean that it exists forever, or independently of all practice and discipline, but that it has been entrenched in a costly and massive institution that has to be monitored and protected with great care. [...] ‘Inertia’, obviously, was no protection against reopening of controversies.”

He therefore invites us to rethink objects as constantly “performed”, that is, not so much as autonomous substances that underlie appearances, but rather as articulations produced and sustained in their reality thanks to the continuous involvement with apparatuses and instruments of investigation, actions, interactions and institutions, characterised by controversies and contrasts that regulate the relative intensity of existence, thus making different entities appear, evolve, disappear and coexist²⁰³.

To conclude, let us then return to our initial question, namely the distinctions between art and nature, matter and meaning. We have seen how Daston's proposal, disseminated in various texts and supported by various colleagues, attempts to give form to a particular ontology-metaphysics capable of encompassing various phenomena, ranging from

²⁰² Placing emphasis on the modes of articulation and organisation of symptoms, Deleuze will also argue: “As they say: so, what, there was no AIDS before? That's a key question. We must be able to show how the question makes no sense. Of course, AIDS existed before; it was simply distributed differently, it was distributed in another way. Some symptoms belonged to one disease, others to another” (https://deleuze.cla.purdue.edu/wp-content/uploads/2022/04/05a-Foucault-111985-Eng-Rev-2022_0.pdf, cit., p. 17).

²⁰³ Finally, in addition to the variation in the degree of reality, a final proposal configures objects as *emergent*, i.e. created *ex nihilo* by science to render complex phenomena, such as society or culture, intelligible. We avoid the discussion here as these objects are not usually considered “natural”.

art to nature, from the referents of the hard sciences to those of the human and social sciences. The philosopher's operation fully pursues the Foucauldian onto-epistemological outline, according to which "I can perfectly well say 'I see something', but this something is internal to knowledge, it's not an object that would exist independently of knowledge or that would pre-exist knowledge"²⁰⁴.

According to the strategy developed, it is therefore necessary to think of the things that populate the world - be they phenomena, networks or objects - as characterised not only by a material dimension, but also by social meanings articulated on several levels. Firstly, we have a *discursive* dimension through which narratives, utterances, ways of conceiving and describing the world traverse it, defining its boundaries and consistencies, ensuring a certain solidity to the objects and environments that surround us. Secondly, *representations*: the ways we portray, circumscribe and visualise reality allow us to direct our attention and train our gaze and senses, establishing norms and standards capable of highlighting and bringing to light aspects of reality to the detriment of others, forgotten and rendered invisible. Finally, the environment that welcomes us acquires depth and intensity thanks to its *practical and functional involvement*, that is, through future projections, expectations, practices aimed at certain purposes and interactions guided by certain interests that constantly reshape the same and all its elements.

Although the subject of nature and the natural environment has begun to emerge in these early pages, let us now try to explore it further. In 1999 Ian Hacking – another central figure in the contemporary post-Foucauldian epistemological landscape²⁰⁵ – published *The Social Construction of What?*.

²⁰⁴ <https://deleuze.cla.purdue.edu/wp-content/uploads/2022/04/02a-Foucault-102985-Eng-Rev-2022.pdf>, cit., p. 7. It is well understood that by knowledge we do not mean a conglomerate of statements, but rather a set of "discursive" and "non-discursive practices" (Ivi, cit., p. 9).

²⁰⁵ In the wake opened by Foucault's investigation of "historical ontologies" (Deleuze, G. (2020). *La soggettivazione. Corso su Michel Foucault (1985-1986)/3*. Ombre Corte, cit., p. 161. For English translation: https://deleuze.cla.purdue.edu/wp-content/uploads/2022/06/24a-Foucault-052086-Eng-Rev-2022_0.pdf, p. 9), the author developed a text of the same name, opening it, however, with a clarification: "The historical ontology presented here is indeed a generalization, but is in many respects

The text opens with a list of different entities that appear in various books entitled "The social construction of X" or "Constructing X". We find, for example, "Authorship", "Brotherhood", and "The child viewer of television", categories that we could, after all, commonly accept as socially constructed. The list goes on, however, to slowly encompass more and more fragments of reality: starting with "Emotion", "Illness", "Women refugees" and "Quarks", we arrive at our dear "Nature" and even at "Reality" itself²⁰⁶.

However, the first term the author will highlight as the most historically relevant pivot around which the constructionist critique of nature, matter and their intrinsic properties has developed most consistently, is that of "Gender". Let us therefore venture into the feminist reinterpretation of gender and nature, capable of extending and applying the critique of "mere materiality" traced so far, as well as providing us with the concepts and tools to better analyse and contextualise the following debate on the – unveiled or constructed – reality of the climate crisis.

2.1.2 Material-Semiotic Nature

It was 1976 when *The History of Sexuality: The Will to Knowledge* was published. A text around which discursive and intellectual production would ferment, in an unexpected succession of movements of thought capable of challenging some of the dominant paradigms of philosophical reflection. The author needs no introduction, as he ranks among the most quoted Western philosophers of our time, a thinker capable of radically renewing the questions of philosophical research, the modes of discourse, reasoning and conjunction, the ways of doing politics and of being together, of identifying and communicating, of speaking and writing. Having opened

vastly more limited than Foucault's vision. It lacks the political ambition and the engagement in struggle that he intended for his later genealogies. It is more reminiscent of his earlier archaeological enterprises" (Hacking, I. (2002). *Historical ontology*. Harvard University Press, cit., p. 5). We could say that the approach is similar to that of Daston and colleagues, equally distant from the political field; Hacking, however, specifies a difference, arguing that his work does not aim at the affirmation of a historical ontology of scientific objects alone, but of objects *tout court* (pp. 9-11).

²⁰⁶ Hacking, I. (1999). *The social construction of what?*. Harvard university press.

with Daston's onto-epistemological propositions, it is now imperative to shed light on the theoretical foundations of postmodernism that inform not only the philosopher's thought, but that of most of the authors that we will analyse in this entire chapter.

Foucault and Sexuality

Michel Foucault's reflections begin well before *The Will to Knowledge*, but for the sake of synthesis and clarity we will limit our focus here to that text, capable of condensing earlier insights and paving the way for the more recent queer philosophies of Butler and Barad – which we will discuss later. In order to understand the book's main thesis, it is useful to recall what, up to that point, was considered to be the main theory capable of linking sexuality and power, eros and politics. This interpenetration comes about through a dialogue between two of the dominant thinkers of the time, namely Freud and Marx. According to “revolutionary Freudomarxism”²⁰⁷, the critique of capitalist society is inextricably linked to that of sexual repression: sexuality is thought of as a core of primary instincts that, in contact with repressive society, is constricted and limited, if not totally annihilated; it is therefore necessary to free this energy so that society can be reconstructed through freedom and satisfaction of pleasure.

According to Marcuse, the main proponent of this position, the capitalist system produces an artificial “second nature”²⁰⁸ that grafts itself onto the primary core, the fundamental human nature and its instincts, in order to hijack them in favour of dominant interests – while at the same time concealing the origin of the production of these new needs:

“The restrictions imposed upon the libido appear as the more rational, the more universal they become, the more they permeate the whole of society. They operate on the individual as external objective laws and

²⁰⁷ Bernini, L. (2018). In *Le teorie queer: un'introduzione*. Mimesis, pp. 145-166.

²⁰⁸ Before being developed in *An Essay on Liberation* (1969), the term already appears in earlier texts. Marcuse, H. (2023). *Eros and civilization: A philosophical inquiry into Freud*. Routledge, p. 169 (first edition 1955); Marcuse, H. (2013). *One-dimensional man: Studies in the ideology of advanced industrial society*. Routledge, p. 20 (first edition 1964).

as an internalized force: the societal authority is absorbed into the 'conscience' and into the unconscious of the individual and works as his own desire, morality, and fulfillment. In the 'normal' development, the individual lives his repression 'freely' as his own life. [...] Repression disappears in the grand objective order of things which rewards more or less adequately the complying individuals and, in doing so, reproduces more or less adequately society as a whole."²⁰⁹

In particular, he identifies the *performance principle* as the core of contemporary additional repression, a reality principle based on competitiveness and the will to power, on efficiency and profitable productivity, defender of functional rationality at the expense of instincts and emotions, promoter of an uncritical adherence to the roles of worker and consumer²¹⁰. In opposition to this cultural and artificial principle, Marcuse therefore deploys a certain rooted morality, a natural, libidinal and biological essential core, "an instinctual foundation for solidarity among human beings"²¹¹.

If, according to Marcuse, "second nature" in a way envelops that primary core, obscuring it and severely reducing its potential, but still preserving a fragment of the same, capable of giving rise to a sexual, social and human revolution, Foucault completely rejects the existence of that core. Indeed, he even suggests that the promotion of a certain biological and natural foundation, intrinsic to the human being, is counterproductive to emancipation²¹². Sexuality is not concealed or discovered; sexuality is produced and reproduced:

"In actual fact, what was involved, rather, was the very production of sexuality. Sexuality must not be thought of as a kind of natural given which power tries to hold in check, or as an obscure domain which knowledge tries gradually to uncover. It is the name that can be given

²⁰⁹ Marcuse, H. (2023). *Eros and civilization*, cit., p. 34.

²¹⁰ Marcuse, H. (2006). Marxism and feminism. *Differences*, 17(1), 147–157, p. 150 (first published in 1974).

²¹¹ Marcuse, H. (1971). *An essay on liberation*. Beacon Press, cit., p. 10.

²¹² Although he almost never explicitly refers to his colleague, it is sometimes possible to detect the juxtaposition between Marcuse and the repressive hypothesis in some of Foucault's texts (Bernini, L. (2018). *Le teorie queer*, p. 165).

to a historical construct: not a furtive reality that is difficult to grasp, but a great surface network in which the stimulation of bodies, the intensification of pleasures, the incitement to discourse, the formation of special knowledge, the strengthening of controls and resistances, are linked to one another, in accordance with a few major strategies of knowledge and power.”²¹³

From sexuality as “nature” we therefore move on to the “naturalisation” of sexuality, i.e. the set of operations that, through an activity spread in time and space, distributed in techniques and on bodies, manages to stabilise certain desires, practices, values or characters *as natural*: devoid of sociality, “pre-discursive”, outside the field of possible contestation. New questions thus begin to emerge: who determines this core and what interests does it support through such an operation? What remains excluded from normality/naturality and what effects does this exclusion produce? Above all, if the subject is not composed of a first nuclear nature and a second artificial and repressive nature, in what other way can it be configured?

As the distinction between inside and outside²¹⁴, between nature and culture, between autonomy and repression is crumbling, the idea of subjectivity renews itself as the coexistence and overlapping of dynamics of subjectivation and subjectification, the interweaving lines that are not originating exclusively within the subject nor within society, the intermingling of processes and devices that the subject neither creates nor submits to, but in which it participates incessantly. According to Foucault, the *production of* subjectivity, which Marcuse already spoke of, is therefore no longer an exception to the norm, a repressive dynamic that takes over from the natural autonomous construction of identity, but rather the rule of constitution of the subject, of its desires and pleasures. Consequently, there is neither a place prior to sexual repression, nor a final situation of total liberation of pleasure to be achieved:

²¹³ Foucault, M. (1998). *The history of sexuality: Volume 1. The will to knowledge*. Penguin, cit., pp. 105-106.

²¹⁴ The critique of the boundary between “internal” and “external” will also be taken up and expanded upon by Judith Butler in the conclusion to her most important text (first published in 1990). Butler, J. (2002). *Gender trouble*. Routledge, pp. 163-180.

"Unlike Marcuse [...], Foucault and Butler do not prophesize the end of history in a definitively pacified society: in their view, resistance against the dispositif of sexuality and the dislocation of gender norms dictated by the heterosexual matrix are potentially infinite processes [...]"²¹⁵

Foucault will reject the so-called "repressive hypothesis"²¹⁶ (and the parallel perspective of total emancipation), asking whether such repression of sex is actually a historical reality or a possible interpretation, whether power always operates in the order of limitation, censorship, prohibition and law or, on the contrary, whether it is given through "circular incitements" and "perpetual spirals" with pleasure.

Indeed, Foucauldian power²¹⁷ is not considered as external to other relationships (economic, cognitive, sexual...) but it is *immanent* to them, in other words, not structural and repressive, but directly productive of these relationships; not held, acquired or removed, but rather *enacted*; not personified, that is, conceivable as a grammatical and metaphysical subject, but rather a repeated, *persistent* and, at the same time, *unstable* action; not coming from above, in a binary opposition between the dominant and the dominating, but produced at every moment, at every point, or rather *in every relationship* between multiple points; not founded by the will of an individual subject, but emerging out of a network of widespread *tactics and strategies*; not opposed to its resistance, as the ideal of the Great Refusal

²¹⁵ Bernini, L. (2018). *Le teorie queer*, cit., pp. 186-187. Translation mine. Again, the same reflection is taken up by Butler, who asks whether a time preceding patriarchy actually exists, whether the latter has a beginning and an end, whether the postulation of a "before" is not a kind of justification for the repressive hypothesis and whether such a postulation does not force "the future to materialize an idealized notion of the past or when it supports, even inadvertently, the reification of a precultural sphere of the authentic feminine", thus tending "not only to serve culturally conservative aims, but to constitute an exclusionary practice within feminism" (Butler, J. (2002). *Gender trouble*, cit., pp. 46-47).

²¹⁶ Although he almost never explicitly refers to his colleague, it is sometimes possible to detect the juxtaposition between Marcuse and the repressive hypothesis in some of Foucault's texts (Bernini, L. (2018). *Le teorie queer*, p. 165).

²¹⁷ Foucault, M. (1998). *The will to knowledge*, pp. 94-98. See also the reconstruction offered by Deleuze in Deleuze, G. (2018). *Il potere. Corso su Michel Foucault (1985-1986)/2*. Ombre Corte, pp. 40-55 (english version: https://deleuze.cla.purdue.edu/wp-content/uploads/2022/05/09a-Foucault-010786-Eng-Rev-2022_0.pdf, pp. 22-33).

wanted, but *coexisting* with the same - both moving in a network of points, fulcrums and hubs; not taking over from an earlier condition of freedom, nor ceasing to exist at the end of a (sexual) revolution, but *incessantly structuring* the experience of sexuality itself and coexisting with the incessant practice of freedom.

This radical reconfiguration of human nature and of its relationships with social forces, will reverberate slowly within different political movements, from those linked to the emancipation of women, to those with anti-racist and post-(/de)colonial, animalist and ecological dimensions²¹⁸. So let us start with the first of these fields and see how Foucauldian reflections contributed to the development of feminism at the end of the century. It is not difficult, in fact, to note a similar opposition to that sketched above between Marcuse and Foucault within the feminist debate, which first sees the promotion of a distinction between nature and culture, between the materiality of the body and culturally enacted meanings and attributes, that is, between sex and gender, to then proceed - contaminated by the postmodern atmosphere - to a critique of the same separation, aimed at invalidating its emancipatory character.

Queering Bodies

In her best-known text, Judith Butler reconstructs some fundamental aspects of the issue, acknowledging the achievements of her colleagues in order to then move beyond them. An emblematic figure capable of fruitfully sustaining the sex/gender difference is certainly Simone de Beauvoir who, with her “on ne naît pas femme: on le devient”²¹⁹, instructed and animated a generation of female thinkers, sustaining how from a natural or biological feminine one is then culturally transformed into “women” – that is, socially

²¹⁸ As Cangiano recalls: “At this point, the Foucauldian knowledge-power nexus imposes itself as the central axis of the new education. Indeed, if one starts from the view that every narrative, every ‘discourse of truth’, is grounded in a pre-prospective (pre-judicial) and domination-related vision, it is not surprising that the next step [...] is the translation of the dominant ‘discourses of truth’ to the level of race, gender and then species” (Cangiano, M. (2024). *Guerre culturali e neoliberismo*, cit., pp. 48. Translation mine).

²¹⁹ De Beauvoir, S. (1949). *Le Deuxième Sexe*. Gallimard.

subordinate subjectivity. In this framework²²⁰, sex would qualify the human being as its inescapable, necessary, “immutably factic” attribute, while gender would be the “variable cultural construction of sex, the myriad and open possibilities of cultural meaning occasioned by a sexed body”²²¹.

According to Butler, such a move makes it possible to think of sex and gender as radically distinct and, therefore, to open up the possibilities for the signification and expression of gender. If gender does not coincide with sex, with any biological facticity, then it is free to configure itself without any predetermination, free to multiply itself beyond the binarism imposed by the sexual matrix. If gender is not an immutable essence, a nominative or a stable marker, then it must be reconceived as an activity, a becoming, incessant, repeated and, above all, shared and socially intelligible action. Put in the new emerging terminology: gender is a *performance*²²². To sum up: one nature, several cultures; one biological facticity, several cultural possibilities; one physical body, several performative expressions.

At this point, however, the philosopher raises a first doubt: are the possibilities of expression and performativity actually proliferating and unlimited or, on the contrary, are there norms that delimit them? Butler

²²⁰ Interestingly, even within difference feminism (which, in a way, is on the opposite side of the queer indistinction approach, maintaining stable demarcations between male and female bodies and subjectivities), there is often a critique of the arguments of “naturalness”. In the *Manifesto di Rivolta Femminile* it is argued, for example: “They force us to claim the evidence of a natural fact. [...] They have justified in metaphysics what was unjust and atrocious in the life of women” (Lonzi, C. (2023). *Sputiamo su Hegel e altri scritti*. Baldini & Castoldi, cit., pp. 14-19. Translation mine).

²²¹ Butler, J. (2002). *Gender trouble*, cit., p. 142.

²²² An previous formulation of gender performativity theory can be found in the earlier article, Butler, J. (1988). Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory. *Theatre Journal*, 40(4), 519-531. Although Butler's approach to performativity develops more from Austin's theatre studies and reflections on performative acts, in the preface to the 1999 edition of *Gender Trouble*, Butler acknowledges the affinity between her notion of performativity and that of habitus proposed by Bourdieu. She will give an account of the resonance in Butler, J. (1997). *Excitable speech: A politics of the performative*. Routledge. In my view, Butler's conception of performativity comes closest to Dewey's concept of habits, given its always active, embodied, inevitably reconfiguring nature. For a comparison see Sullivan, S. (2000). Reconfiguring gender with John Dewey: Habit, bodies, and cultural change. *Hypatia*, 15(1), 23-42.

argues how the “different ways” of becoming a woman are terribly restricted through two main normative mechanisms. The first concerns the orientation towards “the best way” of becoming a woman: among the many possibilities, a certain model always seems to prevail and impose itself, in particular through punitive regulation of marginal, unusual, subversive behaviour²²³. According to the philosopher, therefore, performative and (re)signifying possibilities are not actually unlimited and constantly proliferating beyond binarism, quite the contrary:

“[...] as a strategy of survival within compulsory systems, gender is a performance with clearly punitive consequences. Discrete genders are part of what ‘humanizes’ individuals within contemporary culture; indeed, we regularly punish those who fail to do their gender right.”²²⁴

The second restrictive mechanism, instead, concerns the fact that having “different possibilities of becoming a woman”, is in a way a paradox, as I have *different* possibilities of expressing myself within *one* of the two binaries. If my anatomical body were to be recognised as female, what possibilities would open up to me and which ones would be precluded? Once biologically assigned female, would I also have at my disposal the “different possibilities of becoming a man” or, conversely, would all these performative possibilities remain accessible only to those biologically assigned male? In Butler's view, sexual binarism and sex assignment irretrievably foreclose the possibilities of gender: how can I, in fact, speak of freedom and multiplicity of expression, when the field of performative choices has already been “naturally” and inevitably divided into two sub-fields to which simultaneous access is not guaranteed? Moreover, even if I only have access to one of the two fields, how can I say I am free to choose, when a system of incitements and punishments always and in any case

²²³ Butler lives and is formed within a specific cultural climate: the experience of drag and parody, sexual indeterminacy and transsexuality, subversions practised by other subjectivities (butch/femme lesbians, gay appropriations of femininity and so on), remixes of pronouns, gestures and presentations, cannot but lead the philosopher to recognise how different non-conformist performances are constantly and invariably punished at different levels, from mockery to physical violence, if not even death. See Butler, J. (2004). *Undoing gender*. Routledge.

²²⁴ Butler, J. (2002). *Gender trouble*, cit., p. 178.

directs me towards a performative idealtype, towards the “best way” of becoming a woman?

The supposed theoretical distinction between sex and gender, nature and culture, matter and meaning, which was supposed to expand freedom within the terrain of social expression, reveals its inherent limitations. In the end, the infinite performative possibilities mostly unfold within a binary framework; the social expressions are limited by my attributes and the sex I am assigned; the meanings I’m conveying constrained by the materiality of my body. What is more interesting, however, is the unexpected move performed by Butler. Indeed, if it always seems possible to show how matter configures and limits the production of meaning, presenting itself as its necessary anchorage, the author will be able to show how matter too is fundamentally articulated from social and cultural meanings – in our case how sex has always been constituted within gender²²⁵ – within a spiral of infinite cross-references:

“Critics of structuralism such as Clifford Geertz have argued that its universalizing framework discounts the multiplicity of cultural configurations of ‘nature’. The analysis that assumes nature to be singular and prediscursive cannot ask, what qualifies as ‘nature’ within a given cultural context, and for what purposes? Is the dualism necessary at all? How are the sex/gender and nature/culture dualisms constructed and naturalized in and through one another? What gender hierarchies do they serve, and what relations of subordination do they reify? If the very designation of sex is political, then ‘sex’, that designation supposed to be most in the raw, proves to be always already ‘cooked’, and the central distinctions of structuralist anthropology appear to collapse.”²²⁶

So, let’s try to overturn the discourse and ask: how is (1) sex articulated by gender, (2) materiality configured by meaning, (3) nature and environment organised by the discursive and imaginary, social and cultural relations entertained with them?

²²⁵ As the colleague already argued: “matter constrains meanings and vice versa” (Daston, L. (Ed.) (2004). *Things that talk*, cit., p. 17).

²²⁶ Butler, J. (2002). *Gender trouble*, cit., p. 48.

Let us start with point (1), concerning the sex/gender dualism. The dismantling attempt is in this case advanced in *Gender Trouble*, where the author, in line with the criticism of the neutrality of the hetero-patriarchal gaze made in the STS by colleagues such as Harding and Haraway²²⁷, dedicates a paragraph to the analysis of the medical-scientific practices of sex assignment. The author takes up the story of a research published by MIT concerning the “discovery” of a master regulatory gene, a DNA sequence on the Y chromosome (decisive for the development of the testicles and, therefore, of being male) which, according to David Page and colleagues, makes it possible to overcome previous chromosomal criteria and finally determine the cause of sexual binarism²²⁸. In fact, the problem arises from the recognition of the chromosomal variations presented by a good 10 per cent of the population, whose sex is established in the opposite way to the usual (people with XX chromosomes defined as male and people with XY chromosomes defined as female). Leaving aside the inconsistency of the scientific results obtained²²⁹, Butler proposes some considerations. First, the research group attempts to overcome the use of chromosomes as a sex-categorising factor by trying to identify a better one (the master gene). At the same time, however, the research starts with the premise of an inconsistency between chromosomes and sex (XX males and XY females). A problem therefore arises: if chromosomes were not the criterion for defining the male-female character of persons and if the master gene (being at the beginning of the research) has not yet been identified, according to which criteria were the persons examined previously categorised as male and female? Not using the chromosomal criterion, it seems that the group

²²⁷ Harding, S. G. (1986). *The science question in feminism*. Cornell University Press; Harding, S. (1993). *Rethinking standpoint epistemology: What is ‘strong objectivity’?*. In L. Alcoff, E. Potter (Eds.), *Feminist epistemologies*. Routledge, 49-82; Haraway, D. (1989). *Primate visions: Gender, race, and nature in the world of modern science*. Routledge.

²²⁸ Page, D. C., et al. (1987). The sex-determining region of the human Y chromosome encodes a finger protein. *Cell*, 51(6), 1091-1104.

²²⁹ After arguing that the male-female distinction was not produced by the XX-XY distinction, but rather by the presence or absence of the master gene, it was discovered that the same was present on the X chromosome of some females. At that point, the research group corrected itself and, without definite proof, hypothesised that it was then the activation or non-activation of the master gene that determined the formation of the testicles, hence of being male, hence of sexual binarism.

decided to rely on primary and secondary physical traits, i.e. observation of the genital organs. But if the inconsistency between chromosomes and physical traits has already been resolved *beforehand* by relying on the genitals as a sufficient criterion for sex assignment²³⁰, why spend the effort to find a master gene to determine it? The operation thus becomes a scientific-objective (pseudo)confirmation of a cultural-subjective choice, namely gender binarism based on genital binarism.

This leads us to the second observation. According to Anne Fausto-Sterling²³¹, the people examined were “all but unambiguous” in relation to their genital, anatomical and reproductive constitution. The research team therefore actively decided to use two categories, rather than three, four or more²³², to catalogue the unexpected compositions of chromosomes, hormones, internal genitalia, external genitalia, overall body conformation and gonads²³³. Without (perhaps) fully realising it, the research thus starts with the premise of a genital binarism and its perfect correspondence with a sexual binarism first, and a gender binarism later. Rather than allowing strange and inconsistent bodies, intermediate conformations, other or contradictory conformations to the masculine and feminine to rearticulate

²³⁰ Similarly, reconstructing some milestones in the theories and technologies of sex assignment in the cases of intersex people, Preciado states: “For Money [and his colleagues], ‘maleness’ was not defined by a genetic criterion (possession of one Y and one X chromosome) or by sperm production, but by an aesthetic criterion, the possession of ‘an appropriately sized’ pelvic protuberance” (Preciado, P. B. (2018). *Countersexual manifesto*. Columbia University Press, cit., p. 115).

²³¹ Fausto-Sterling, A. (1989, January). Life in the XY Corral. In *Women's Studies International Forum* (Vol. 12, No. 3, pp. 319-331). Pergamon.

²³² Fausto-Sterling, A. (1993). The five sexes. *The sciences*, 33(2), 20-24. Preciado continues, arguing that even in the cases of intersex people, anatomical ambiguities never “problematize the stability of the sexual order. They did not constitute a third sex or, rather, an $n + 1$ sex. Instead, they bolstered the stability of the sexual order. Intersex organs were described as ‘bad’, ‘underdeveloped’, ‘malformed’, and ‘incomplete’. That is to say, in no instance were they recognized as true organs but rather as the pathological exceptions that proved normality’s rule” (Preciado, P. B. (2018). *Countersexual manifesto*, cit., p. 113).

²³³ These are the five factors (plus one) that determine biological sex according to the guide published by SIPSIS. Ferrari, F., Ragaglia, E. M., & Rigliano, P. (2015). *Il genere. Una guida orientativa*. Torino. SIPSIS (<https://www.sipsis.it/il-genere-una-guida-orientativa/>). For a critical analysis see Bernini, L. (2018). *Le teorie queer*, pp. 56-74.

the categories and assumptions we make about bodies, Page and colleagues decide that if something does not fit into the norm (sexual binarism) it is not the norm that is incomplete, expansible and reconfigurable, it is rather that body that must demonstrate why it - apparently - deviates from the norm, revealing some hidden character that had escaped us (the master gene in this case) that brings it back within the predictable range of binarism:

“The conclusion here is not that valid and demonstrable claims cannot be made about sex-determination, but rather that cultural assumptions regarding the relative status of men and women and the binary relation of gender itself frame and focus the research into sex-determination. The task of distinguishing sex from gender becomes all the more difficult once we understand that gendered meanings frame the hypothesis and the reasoning of those biomedical inquiries that seek to establish ‘sex’ for us as it is prior to the cultural meanings that it acquires. Indeed, the task is even more complicated when we realize that the language of biology participates in other kinds of languages and reproduces that cultural sedimentation in the objects it purports to discover and neutrally describe.”²³⁴

As already argued by Foucault and fellow thinkers such as Wittig, the author thus prompts us to reflect on how aesthetics and ontology are closely intertwined, recognising how “perception or observation not only assumes a correlation among characteristics, desires, and ‘orientations’, but creates that unity through the perceptual act itself”²³⁵. The materiality of bodies is

²³⁴ Butler, J. (2002). *Gender trouble*, cit., p. 139.

²³⁵ Butler, J. (2002). *Gender trouble*, cit., p. 64. Foucault argues: “[...] the notion of ‘sex’ made it possible to group together, in an artificial unity, anatomical elements, biological functions, conducts, sensations, and pleasures, and it enabled one to make use of this fictitious unity as a causal principle, an omnipresent meaning, a secret to be discovered everywhere: sex was thus able to function as a unique signifier and as a universal signified” (Foucault, M. (1998). *The will to knowledge*, cit., p. 154); similarly, Wittig: “Sex is taken as an ‘immediate given’, ‘a sensible given’, ‘physical features’, belonging to a natural order. But what we believe to be a physical and direct perception is only a sophisticated and mythic construction, an ‘imaginary formation’, which reinterprets physical features (in themselves as neutral as others but marked by a social system), through the network of relationships in which they are perceived” (Wittig, M. (1981). *One is Not Born a Woman*. *Feminist Issues*. 1(2), 47-54, cit., p. 48).

never presented in a direct manner, purified from culturally produced and subjectively felt meanings, but always and inevitably intertwined with them:

“As both discursive and perceptual, ‘sex’ denotes an historically contingent epistemic regime, a language that forms perception by forcibly shaping the interrelationships through which physical bodies are perceived. Is there a ‘physical’ body prior to the perceptually perceived body? An impossible question to decide.”²³⁶

Let us now move on to point (2), namely the dualism of matter/meaning. Following the critical considerations regarding the neutrality of the scientific gaze, Butler will be criticised on several occasions, due to her (alleged) forgetfulness of matter, of physical properties, of the body or, even worse, her insistence on the ability of language to construct, originate, and create the body. In *Bodies that matter*, the author will therefore try to clarify her position, going on to expand the discourse developed regarding the sex-gender distinction, turning towards the more generic binary distinctions of nature-culture and matter-meaning. The conception of nature as a passive space or surface, awaiting signification coming from culture or individual and social *agency*, a substratum that sustains the discourse, is thematised only to be then contested and rejected²³⁷. In fact, the philosopher tries to work on the meaning of “matter”, as well as that of “construction”, so as to dispel once and for all the accusation – levelled at the so-called “constructivists” – of denying the materiality of the world.

In the first place, we could say that Butler does not want to deny a whole series of “materialities” that belong to bodies (human and non-human), all of which are studied and analysed by various scientific (medical, biological, chemical and so on) disciplines; rather, as already seen in the previous scientific case, an attempt is made to show how these undeniable material properties nevertheless need to be affirmed, articulated, made intelligible in various *possible* and *alternative* ways. Acknowledging the need for affirmation and articulation, what is brought to light is thus the *non-univocity*

²³⁶ Butler, J. (2002). *Gender trouble*, cit., p. 146.

²³⁷ Butler, J. (2011). *Bodies that matter: On the discursive limits of sex*. Routledge, p. xiv and following (first edition 1993).

of the same²³⁸. It is always appropriate to ask: *how do* we affirm materiality, given the alternative possibilities of affirmation? *Which* materialities are we affirming and which are excluded from our affirmations? *Why* are we affirming such materialities in this way, that is, to what interests do they respond and what political effects do such affirmations entail?

“To ‘concede’ the undeniability of ‘sex’ or its ‘materiality’ is always to concede some version of ‘sex’, some formation of ‘materiality’. Is the discourse in and through which that concession occurs—and, yes, that concession invariably does occur—not itself formative of the very phenomenon that it concedes? To claim that discourse is formative is not to claim that it originates, causes, or exhaustively composes that which it concedes; rather, it is to claim that there is no reference to a pure body which is not at the same time a further formation of that body. In this sense, the linguistic capacity to refer to sexed bodies is not denied, but the very meaning of ‘referentiality’ is altered. In philosophical terms, the constative claim is always to some degree performative.”²³⁹

Secondly, it is possible to reject the clear-cut distinction between matter and meaning by considering the way in which the boundary is drawn between the two. That is, the moment matter is postulated as preceding meaning or separated from it, matter assumes this presupposition as its constitutive condition, an affirmation that guarantees its appearance. Drawing such a line of separation, between what is constructed and what is not, implies for the latter that it is inevitably limited and circumscribed through a signifying practice that establishes its boundaries: “And insofar as the extradiscursive is delimited, it is formed by the very discourse from which it seeks to free itself”²⁴⁰.

Such a movement allows us to rethink matter no longer as a surface or site, but as a “process of materialisation”, no longer a tabula rasa or a passive medium on which the psyche operates, but “the constitutive demand that mobilizes psychic action from the start”, “that abiding function of the world [that] persist as the horizon and the ‘that which’ which makes its demand in

²³⁸ *Ivi*, pp. 36-37.

²³⁹ *Ivi*, cit., p. xix.

²⁴⁰ *Ivi*, cit., p. xx.

and to language"²⁴¹. Linguistic activity is thus shown to be perpetually *anchored* to a material referent, inhabited by an instance that animates and interpellates it; at the same time, matter always gives itself as a *process* of materialisation, dynamised thanks to a signifying activity capable of guaranteeing its intelligibility.

We thus see how Butler seeks a way out of the constructivism-essentialism, idealism-materialism dichotomy, to rethink ontology and metaphysics according to a renewed vocabulary and grammar. In the same way that matter is reconsidered as a process of materialisation, construction will no longer be conceived as an incidental imaginative activity that projects meaning onto bodies, but rather as an inescapable condition of our thinking, acting and living, an activity that assumes a kind of necessity for us, like any other "biological" necessity:

"But is it right to claim that 'sex' vanishes altogether, that it is a fiction over and against what is true, that it is a fantasy over and against what is reality? Or do these very oppositions need to be rethought such that if 'sex' is a fiction, it is one within whose necessities we live, without which life itself would be unthinkable?"²⁴²

Queering Nature

Let us finally come to point (3) and try to ask: can the performativity of bodies and matter also be extended to our main referents of investigation, namely nature and the environment?

In a chapter of *Aesthetics of the Natural Environment*, dedicated to judgement and communication as inescapable activities for aesthetic experience, Emily Brady literally argues for the performative character of nature. The reflection opens with the usual distinction between realists and anti-realists, the former arguing for a metaphysical approach to properties as intrinsic to objects and non-relational or, in the more moderate versions, as distinct between intrinsic and supervenient, the latter arguing for a strong relationality of property and, therefore, the possibility of high

²⁴¹ *Ivi*, cit., p. xviii/37-38.

²⁴² Butler, J. (2011). *Bodies that matter*, cit., p. xv.

disagreement. Moving directly to the conclusions drawn by the author, we could mistakenly align her thinking with the second group. In fact, recalling Philip Alperson, Brady shows how our aesthetic activities, “viewing, hearing, reading, judging, scanning, surveying, discussing, criticising, and all the other activities involved in attending to, understanding, and evaluating works of art are themselves *performances*, not only in the sense that they are performed actions, but also insofar as they contribute to bringing a work to completion or at least to a fuller *realization* in some sense”²⁴³. From these considerations, the author extends the discourse to nature, arguing how our critical activity, of intersubjective evaluation and communication, is performative and creative, how our perception participates in the becoming of environments, how nature itself is expressive and performative²⁴⁴.

If the conclusions seem to move towards a relational and performative conception of the ontology of nature, taking a few steps back within the chapter, it is possible to see how Brady's position is much closer to that of the moderate realists. Referring to Frank Sibley's thought²⁴⁵, the author argues how aesthetic evaluation proceeds on three levels: first, a description of the non-aesthetic/primary properties of the object, where agreement is expected; then we have a description of the aesthetic/secondary qualities that raises disagreement; finally, there are the aesthetic verdicts, which force and demand agreement, particularly according to strategies of conviction and persuasion. What, then, does such a three-level distinction entail?

Brady tells us that Sibley does not want to describe his theory in terms of supervenience, nor does he want to argue that the qualities are real in a metaphysical sense; at the same time, her reading of Sibley's thought seems to go exactly in this direction. If we go back to the first pages of the text, we see how the author's thought is taken as the foundation for recent aesthetic theories of supervenience, according to which aesthetic qualities (second level) arise from non-aesthetic properties (first level), i.e. those “basic properties” that are described to us as “primary or physical qualities, those

²⁴³ Alperson, P. (1998). *Performance*. In Kelly, M. (Ed.). *Encyclopedia of Aesthetics* (Vol. 4). Oxford University Press, cit., p. 466. Emphasis added.

²⁴⁴ Brady, E. (2003). *Aesthetics of the Natural Environment*, p. 218.

²⁴⁵ *Ivi*, p. 201-202.

qualities that are intrinsic to the object, exist independently of an observer, and which a physicist could detect and measure through physical means, such as mass, volume and shape”²⁴⁶.

Similarly to Carlson's approach, which - as already shown in the previous chapter - promotes an account of nature that separates a core of physical and material properties from the incidental layers of meaning²⁴⁷, the performativity Brady speaks of does not reach the deepest ontological-metaphysical level, drawing a line between “real/material/unconstructed” nature that precedes, and “culturally perceived/signified/performed” nature that comes after. The former is thus autonomous and independent of the observer and the human gaze. But is this really the case? Or, perhaps, is there one gaze that is less of a gaze than the others? According to Brady, it would seem that the scientist, the physicist in particular, could prove to be the privileged observer capable of communicating the profound and intrinsic properties of matter, that is, of experiencing its “non-aesthetic” core.

This claim thus allows us to conclude our reflection on queer performativity through Karen Barad's revival and renewal of this concept. By interweaving feminist criticism with science - quantum physics, precisely -, the author will question the status of observation and the intrinsic character of the material properties²⁴⁸. This operation will be possible thanks to a recovery of both the previously discussed postmodern epistemology - in particular Ian Hacking's critique of representationalism - and Bohr's quantum physics experiments - aimed at the determination of the character of a particular entity, that is, the distinction between what is a wave and what is a particle. According to classical physics, in fact, by allowing a given “entity” to pass through a device with two slits, it is possible to verify whether it is a particle (should it find itself at one side or the other) or a wave (should it pass and find itself at both sides at the same time)²⁴⁹. Noting the variations in the

²⁴⁶ *Ivi*, cit., p. 18.

²⁴⁷ Carlson, A. (2000). *Aesthetics and the Environment*, p. 10.

²⁴⁸ For a review of Barad's performative thought see Caleo, I. (2021). *Performance, materia, affetti. Una cartografia femminista*. Bulzoni, pp. 128-130.

²⁴⁹ “According to classical physics, everything in the world could be definitively placed in one category or the other; the nature of every entity (although the nature of ‘entity’ is itself

result following variations in the experimental conditions and the measuring apparatus, Bohr will argue - contrary to Einstein's position - that identity is not pre-existent and given, waiting to be discovered, but always "performed differently given different experimental circumstances"²⁵⁰. In other words: the entity *behaves as* a wave or as a particle depending on the observation and the apparatus used for measurement. And, here, Barad adds: the alteration of the apparatus does not only entail an alteration of the entity's behaviour (from particle to wave and vice versa) but also of its very *ontological structure*.

Extending Bohr's epistemological reflections to the ontological level, the author in fact argues that what we often see as *epistemological uncertainty* is actually *ontological indeterminacy*. The referent of concepts such as "wave" and "particle" is not an object with intrinsic boundaries and characters, which we "see" in one way or another due to the *uncertainty* and partiality of our instruments of representation, unable to grasp the true underlying ontology. Rather, it will be conceived as a phenomenon that sees the inseparability between entity and device, that is, an indeterminate entity that performs and behaves differently (and thus *is* something different) depending on the shared practices of observation and interaction, measurement and representation, nomenclature and signification²⁵¹, practices through which boundaries and properties are continuously performed and *enacted*. Therefore, contrary to Brady's earlier claim, not only secondary properties, but also so-called physical, primary or non-aesthetic properties are ultimately unavoidably relational. Thus, a critique of the "mere materiality" of nature also emerges in Barad's writings, moving

in question here) was such that it was either (inherently) a wave or a particle" (Barad, K. (2011). Nature's Queer Performativity. *Qui Parle*, 19(2), 121–158, cit., p. 157).

²⁵⁰ Barad, K. (2010). Quantum entanglements and hauntological relations of inheritance: Dis/continuities, spacetime enfoldings, and justice-to-come. *Derrida today*, 3(2), 240–268, cit., p. 259.

²⁵¹ According to this approach, representations, measurements, words and images, are not to be thought of as a fluctuating "discourse" in an intermediate space between subject and object, but rather as discursive practices, i.e. "material (re)configurings of the world through which local determinations of boundaries, properties, and meanings are differentially enacted" (Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of women in culture and society*, 28(3), 801–831, cit., pp. 820–821).

again towards the inevitable intertwining of materiality and practices of intelligibility:

“The relationship between the material and the discursive is one of mutual entailment. Neither is articulated/articulable in the absence of the other; matter and meaning are mutually articulated. Neither discursive practices nor material phenomena are ontologically or epistemologically prior. Neither can be explained in terms of the other. Neither has privileged status in determining the other.”²⁵²

Moving finally towards Butler's last writings, we can conclude by arguing how the material-semiotic entanglement does not only concern bodies, sex, nature, but also the environment as a set of conditions of existence and life support²⁵³. In line with similar cultural-historical positions of environmental aesthetics²⁵⁴, she opposes a universalist and strictly physical-biological conception of environmental conditions of existence, stating rather how “those conditions are transformed over time, and so by definition subject to transformation, so too is the imaginary relation to those conditions. The key question is thus displaced from *what is man?*, or *what is essential to man?* – a question that belongs to a theoretically humanist version of philosophical anthropology – to the question, *what is the imaginary relation to the conditions of life?*”²⁵⁵. Similarly, in another interview, the author claims:

“I think there is always interdependence - am I being essentialist by saying that? Maybe [*laughs*]. But I think there is also a second dimension: this interdependence is always organised in different ways and you cannot extract an essence from it. I would like to try to hold these two dimensions together.”²⁵⁶

²⁵² *Ivi*, cit., p. 822.

²⁵³ See in particular Didier Contarini's introduction “Judith Butler, l’etica ambientale e la critica” in Butler, J. (2021). *Due letture del giovane Marx*. Mimesis.

²⁵⁴ Berleant, A. (2012). *The Aesthetic Politics of Environment*. In *Aesthetics beyond the arts: new and recent essays*. Routledge, pp. 181-194.

²⁵⁵ Butler, J. (2021). The inorganic body in the early Marx: A limit-concept of anthropocentrism. *Práxis Educativa*, 16, cit., p. 8.

²⁵⁶ Interview with Marion Leclaire, Solange Manche, Alice Vincent in Butler, J. (2021). *Due letture del giovane Marx*. Mimesis, cit., p. 83. Translation mine. The same reflection will

In contrast to the clear-cut opposition between realism and radical constructivism, Butler is able to situate herself ambiguously²⁵⁷, recognising discourse and ways of narrating, representations and visualisations, ways of acting and practising, as *co-extensive* with the sex and facticity of bodies, with matter, nature and the environment. From the metaphysics of substance, we thus move towards an ontology capable of considering the relational and sensible dimension as an indispensable condition for the very existence of any referent: "One 'exists' not only by virtue of being recognized, but, in a prior sense, by being recognizable"²⁵⁸.

2.1.3 Elusiveness of the Climate Crisis

After objects, bodies, nature and environment, we thus come to the last possible dimension of our investigation, namely environmental events and phenomena. And, again, we try to ask ourselves: is it possible to think about the crisis as *co-extensive* with the activity of measurement and nomenclature, representation and narration, selection and discrimination, organisation and configuration? Can the ontology of crisis be considered as relational and the crisis itself as a material-semiotic phenomenon?

Among the best known contemporary critical philosophers we certainly find Donna Haraway, an author capable of retracing and relaunching the trajectory sketched so far, interweaving epistemology, feminism and

be expanded in Butler, J. (2015). *Notes toward a performative theory of assembly*. Harvard University Press.

²⁵⁷ "Thus, a contingent vision of social construction emerges which, while on the one hand questions every presumed assertion of sexual, bodily, gender 'naturalness', on the other hand, however, also warns against a postmodernist orthodoxy - sociologically declined - according to which everything is the result of social convention. Contingent is every foundation, even that which posits the postulate of social constructivism as incontestable. Butler, one could say, is the most 'tragic' of the figures on the Anglo-American feminist scene, precisely because in her the conflict between nature and culture is not resolved simplistically but structures the entire discourse on gender and sexuality in a complex, circular, aporetically dialectical manner" (Guaraldo, O. (2023). *La disfatta del gender e la questione dell'umano*. Preface to Butler, J. (2006). *Corpi che contano. I limiti discorsivi del «Sesso»*. Castelveccchi, cit., p. 16. Translation mine).

²⁵⁸ Butler, J. (1997). *Excitable speech*, cit., p. 5.

ecology within a particularly original synthesis. Indeed, the philosopher argues for the material-semiotic character not only of scientific objects and nature, but of the climate crisis itself. Starting with the first point, we see how in a 1988 article Haraway, examining the critical situation in which epistemology finds itself at the time, defines bodies as “material-semiotic generative nodes”²⁵⁹, thus arguing how objects (including scientific ones) do not pre-exist as such, but are rather continually configured and negotiated as boundary projects. In order for matter to appear and become intelligible as an object, it needs - as already argued by her colleagues - to be continually mapped and limited, incorporating such arbitrary caesuras and boundaries as part of its very appearance.

Moving on, we see how the same statement is echoed in a 1992 intervention, transposed in this case to our second object of study, namely nature:

“[...] bodies as objects of knowledge are material-semiotic generative nodes. Their boundaries materialize in social interaction among humans and non-humans, including the machines and other instruments that mediate exchanges at crucial interfaces and that function as delegates for other actors’ functions and purposes. ‘Objects’ like bodies do not pre-exist as such. Similarly, ‘nature’ cannot pre-exist as such, but neither is its existence ideological. Nature is a commonplace and a powerful discursive construction, effected in the interactions among material-semiotic actors, human and not. The siting/sighting of such entities is not about disengaged discovery, but about mutual and usually unequal structuring, about taking risks, about delegating competences.”²⁶⁰

Rather than limiting the discourse to the experimental and scientific level alone - i.e. to circumscribed relations often related to what we conceive of as the knowing subject-known object relationship -, Haraway attempts an analysis of the material-semiotic (re)production of nature within a broader

²⁵⁹ Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14(3), 575-599, cit., p. 595.

²⁶⁰ Haraway, D. (1992). The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others. In (Eds.). L. Grossberg, C. Nelson, PA Treichler. *Cultural Studies*. Routledge, cit., p. 298.

social, spatial and temporal context, illuminating the ways in which nature materialises within diffuse and tumultuous interactions. Not only gender and sex, not only waves and particles, but also natural sites such as the Amazon rainforest are now refracted through renewed lenses, capable of showing us the discursive constructions that articulate the ontology, protection and preservation of endangered environments.

The ecological issue, so far only sketched out, returns powerfully within one of her most recent works. In *Staying with the Trouble*²⁶¹, the author rejects a conception of the crisis as a mere aggregation of physical properties, scientific data and numerical projections, a well-defined referent waiting to be discovered by the natural sciences, rather illuminating its social, relational and interpretative components. In this case, however, instead of acting from a deconstructive perspective and dismantling the toxic narratives of the crisis, the author attempts to describe the ways in which we can all contribute to the (re)configuration of the phenomenon, thus inviting us to get involved and stay within the ecological trouble.

First, Haraway shows how the ontology of the crisis is not *univocal*, reflected within the “exact representation” offered by the scientist - male, white, heterosexual and Western - but rather *prismatic*, that is, constantly (re)produced by a broader field of differentiated and unforeseen actors. Paying attention to alternative disciplinary perspectives, from anthropological to artistic ones, as well as marginalised subjectivities, be they indigenous, animal, vegetable or other-than-human, we see the crisis becoming increasingly plural in itself, articulated by multiple semiotic projects that intersect, overlap and alter each other. Moreover, even when assessing the field of climate knowledge produced by Western science alone, the author shows its internal multiplicity, a clot of different sciences all equally dedicated to the study of a complex phenomenon.

Secondly, Haraway will then affirm the inevitable activity of selection within

²⁶¹ In the same text, the author puts forward the now well-known proposal of the Chthulucene: not so much a geological epoch perfectly replacing the scientific proposal of the Anthropocene, but rather a way of thinking/acting capable of embracing the indeterminacy and openness of the crisis, leaving room for alternative ways of articulating and resolving it. The term will be defined as “an ongoing temporality that resists figuration and dating and demands myriad names” (Haraway, D. (2016). *Staying with the trouble*. Duke University Press, cit., p. 51).

this multiplicity. In other words, if the configurations of the crisis are plural and proliferating, if not at times exceeding the human capacity for joint and coherent perception of them, it will be necessary to select some at the expense of others, as well as to interpret, reconstruct, remove, juxtapose and compose the possible meanings within a framework capable of rendering the phenomenon consistent and readily perceptible²⁶².

Finally, recalling the approach of her fellow epistemologist, Haraway reminds us how no selection or configuration is ever neutral and innocent, i.e. how every interpretation supports the interests of specific and particular collectives:

“Latour aligns himself with the reports of the Intergovernmental Panel on Climate Change (IPCC); he does not believe its assessments and reports; he decides what is strong and trustworthy and what is not. He casts his lot with some worlds and worldings and not others. One need not hear Latour’s ‘decision’ discourse with an individualist ear; he is a compositionist intent on understanding how a common world, how collectives, are built-with each other, where all the builders are not human beings. This is neither relativism nor rationalism; it is sf, which

²⁶² Timothy Morton also insists on the need for the elaboration of tools capable of rendering the crisis intelligible. In this case, the indeterminacy is not so much due to the excess of semiotic projects and information, but rather to characteristics of the phenomenon itself, namely: - viscosity: phenomena such as the climate crisis adhere to our bodies (microplastics ingested through food, inhalation of air pollution, etc.) forcing us to abandon the safe and “sublime” space that allowed us to observe them at a safe distance; - non-locality: the crisis manifests itself through local phenomena (acid rain, rising sea levels, atmospheric events), without at the same time being irreducibly identified with any of these manifestations or with the sum of them; - inter-objectivity: the crisis is grasped only through the effect it produces on other objects (a crop that fails due to a new species whose migration has been forced by rising temperatures), so that every time I try to grasp it, it retracts and distributes itself over other phenomena and objects, showing itself only in its causal aspect; - temporal undulation: between the finitude that we are able to grasp (say 10, 100, 1000 years) and infinity, the climate crisis shows a “very large finitude”, i.e. a finite but extremely extended duration, so that its boundaries irretrievably escape our sensibility; - phasing: the crisis shows itself in phases, i.e. we perceive some meteorological phenomena as recurring moments according to different temporal phases or as extraordinary or unexpected events, without being able to perceive in a direct and immediate way the underlying coherence (Morton, T. (2013). *Hyperobjects: Philosophy and Ecology after the End of the World*. U of Minnesota P).

Latour would call both sciences and scientifiction and I would call both sciences and speculative fabulation—all of which are political sciences, in our aligned approaches.”²⁶³

In this way, Haraway allows the crisis to reconfigure itself as an elusive, prismatic and open referent, an unresolved and uncertain question, an instance that unfolds in multiple directions and towards multiple possible futures. It is not so much a problem to be observed and solved according to a predetermined sequence of logical, mathematical or consequential operations, but rather a trouble within which we are all enmeshed, a trouble to be experienced and faced according to different perspectives, alliances and strategies. If the scientific discourse defines the crisis as a collection of problems expressed according to certain technical and quantitative parameters, simultaneously defining the range of possible answers to them, Haraway proposes a “tentacular thinking”, capable of opposing reductionism and determinism, affirming the prismatic ontology and the unpredictable evolution of the crisis.

Indeed, this prismatic ontology opens up new political and social strategies. If, for example, the ecological crisis is defined as an excess of greenhouse gases in the atmosphere, then the solution can only lie in limiting emissions and managing atmospheric parameters. If, however, the crisis is also (re)configured in terms of unnecessary production or human's internalised dominion over nature, then the adoption of degrowth strategies or practices such as anti-speciesism and veganism - as we will see later - become not only possible, but also consistent with the problem. Thus, every time we question the nature of the climate crisis and engage in public discussion of it, we not only redefine what the crisis “is”, but simultaneously define a range of corresponding actions. Similarly, every time we engage in individual and collective practices aimed at addressing climate change, the ontological assumptions that guide our actions reverberate and spread, altering the (perception of) the ecological crisis itself.

Like scientific objects, like nature and the environment²⁶⁴, the crisis too is

²⁶³ Haraway, D. (2016). *Staying with the Trouble*, cit., p. 41.

²⁶⁴ In addition to nature and crisis, new research now attempts to show how other scientific referents, such as energy, are always articulated through artistic concepts, metaphors and imagery, as well as through social, economic and political pressures.

thus characterised as a radically elusive material-semiotic referent, always in the process of necessary social articulation and, perhaps, impossible to define and resolve in a conclusive and incontestable manner.

Jaime Vindel argues: “The problem we face is that although the material and symbolic dimensions of energy cannot be thought of independently, neither are they mutually reducible” (Vindel Gamonal, J. (2020). *Estética fósil: Imaginarios de la energía y crisis ecosocial*. Arcadia, cit., p. 28. Translation mine). The theme is then taken up and expanded in his subsequent text: “Nature appears to us, at the same time, as a cosmic reality conditioned by the laws of physics; as the substratum of the metabolic processes of the various societies that have succeeded one another throughout history; as the material background of the processes of capitalist valorisation; and as a cultural construction with a more or less marked ideological slant, opposed to that other entity we call society. Awareness of this should not dissuade us from discussing the interactions that take place between all these dimensions (material, historical and symbolic) of nature [...] What has been said about nature is applicable to other concepts. For example, although energy or entropy arose in the 19th century as two fundamental aspects of the materialist analysis of reality, their social understanding was accompanied by a whole series of ideological discourses whose motivations went beyond the field of scientific research” (Vindel Gamonal, J. (2023). *Cultura fósil. Arte, cultura y política entre la revolución industrial y el calentamiento global*. Akal, cit., p. 10. Translation mine). For information on the research group Estética fósil, headed by Vindel, see: <https://esteticafosil.csic.es/en/>

2.2 SITUATING THE GAZE

2.2.1 Against the Savage Body

In order to explore the postmodern turn in perception and modes of experience, let us start again from a minor intervention in environmental aesthetics, devoted in this case to the reception of sounds produced in and by the environment. The article in question is *What the Hills Are Alive With: In Defence of the Sounds of Nature* by John Andrew Fisher²⁶⁵. According to the author, the experience of natural sounds differs both from the experience lived in the urban environment, characterised by a continuous exercise of silencing the background sounds that surrounds us, which is too chaotic and disorienting, and from the learned practice of listening to music, understood in the artistic sense as a self-contained unit that must be received in silence and without environmental or background noise. Acknowledging the lack of theoretical attention paid to the sound dimension of nature by environmental aesthetics, Fisher therefore attempts to delve into this unexplored region, making particular reference to the sound experience of the Kaluli community in Papua New Guinea.

First of all, the author tries to define the object of investigation, noting how on the one hand we can refer to the concept of “soundscape”, as coined by Schafer²⁶⁶, and on the other hand how it is possible to turn our ear to the sounds of particular types of things in themselves, from birds to the wind to waterfalls. The author's median proposal is to focus on the set of sounds that occur within a particular soundscape, thus considering them situated rather than abstracted from the environment within which they unfold: despite the difficulty in determining what counts and what does not, he thus seeks to define the object as the set of “sound events” that we jointly hear within a soundscape, thought of as both the physical and temporal boundaries of sound.

²⁶⁵ Fisher, J. A. (1998). *What the hills are alive with: In defence of the sounds of nature*.

²⁶⁶ Schafer, R. M. (1977). *The tuning of the world: Toward a theory of soundscape design*. Alfred Knopf.

After an attempt to articulate the object, however, Fisher distances himself from the proposals related to strong objectivity, in particular the one put forward by Carlson. Where the latter move towards a true or false judgement, which is realised on the basis of the actual characteristics of the object and which presents itself as universalizable, Fisher's approach tries to move in the opposite direction. In the course of the article, he will in fact show how, in nature, the sound object and its properties are intrinsically dependent on the relationship with the listener, on his or her ways of articulating, framing and perceiving, and, therefore, how the universality of judgement cannot but fail. Aesthetic gratification and pleasure persist, not in a univocal and normative form, but in plural and co-existing forms.

Another factor that plays against strong objectivity is the problem of non-repeatability, i.e. the uniqueness inherent in nature's sounds, which does not allow us to establish a mode that is always and everywhere correct for articulating their perception. Unlike music, understood as a work of art composed and performed by a musician, nature does not provide for intrinsic modes of "framing", that is, social habits through which to discern sound from noise, through which to reactively direct attention and determine the duration of listening. Even if we wanted to draw a parallel in art with improvisation, according to Fisher it would not be possible to listen to it except within the background of broader conventions of musical production and listening. Indeed, nature gives us the possibility to listen through infinite and unpredictable associations, representations and projections of meanings and emotions. For these reasons, he argues that it is not possible to think of the sounds of nature in the same way as artistic sounds, that is, constrained by repeatable social conventions.

That said, is every experience of nature's sounds unique and unrepeatable? According to Fisher, it would seem so. The sounds are multiple, the ways of listening are plural: the complexity of sounds and the variety of ways of receiving and framing them give rise to an infinite variety of incomparable experiences. On one point, however, I find it necessary to disagree. Although I share the author's view on the deep indeterminacy and multiplicity of the sound experience, I cannot avoid noticing how he uses certain terms and invokes certain theoretical references capable of leading us towards different reflections and perspectives, so as to consider, in

addition to the (manifold) materiality of sound and the (manifold) personal listening choices, a shared and participated dimension. Indeed, we might ask ourselves: are listening modes strictly individual and unique or, perhaps, do they also depend on a certain sociality that harmonises and tunes them according to similar trajectories?

If we take the following statement as an example, “trained to listen to such music, I might find it natural to listen to sound events in nature in the same way”²⁶⁷, we see how Fisher in a way recognises a learned and trained component of bodily sensitivity, a way of listening to nature that derives from a refinement of musical listening. If sensitivity is trained through shared dispositifs and dispositions and, therefore, intrinsically composed of cultural and social strands, then we can argue how some conventions (not universal or universalizable, but rather situated, always in progress and more or less circumscribable) can be considered.

The Emergence of Sensory Studies

Looking closer at Fisher’s paper, we see how the entire discourse is revolving around the figure of Steven Feld, an ethnomusicologist that focused his attention on the sound perception of the Kaluli of Papua New Guinea²⁶⁸. Fisher’s reading tends to bring Feld’s reflections towards the infinite multiplicity of encounters that are generated between unique sound events and individual inclinations – so as to counteract an objective view based on the indisputable properties of the sound object or the universality of the bodily modalities of hearing. However, I would like to propose reinterpreting the Kaluli sound experience through the lens of sensory studies, a field of research that tries to overcome the subject-object dichotomy, extending the equation to a third element: community, that is, the historical and social dimension of perceiving.

One of the articles by Steven Feld that revolves around the same topic and

²⁶⁷ Fisher, J. A. (1998). What the hills are alive with, cit., p. 175.

²⁶⁸ Feld, S. (1982). *Sound and sentiment: birds, weeping, poetics, and song in Kaluli expression*. University of Pennsylvania Press; Feld, S. (1984). Sound structure as social structure. *Ethnomusicology*, 28(3), 383-409.

community, *Sound as a Symbolic System: The Kaluli Drum*²⁶⁹, was published within what we can consider to be one of the first, if not the very first, initiating texts of sensory studies: *The varieties of sensory experience: a sourcebook in the anthropology of the senses* by David Howes who, together with Constance Classen, can rightly be considered a pioneer of the field. In the first page of the article, Feld argues how:

“In this essay I wish to contribute an empirical example of how one class of sounds is socially structured to convey meaning. [...] By concentrating on the invention, performance, and understanding of drumming among the Kaluli people of Papua New Guinea (PNG) I will show that while these sounds overtly communicate through and about acoustic patterns, they are socially organized to do far more, by modulating special categories of sentiment and action when brought forth and properly contexted by features of staging and performance. This example illustrates how the study of sound as a symbolic system is situated at the intersection of acoustical and cultural analysis, in that such a study involves both an account of the physical or material conditions of sound production and the social and historical conditions of its invocation and interpretation.”²⁷⁰

Without forgetting the material dimension of sounds, the author will try to show us the importance of socially shared ways of experiencing the musical performance practised with drums.

While anthropology has focused on the analysis and exposition of instruments, their components and decorations, musicology has conducted research that sees the meaning of music in the notes, melody, metrics, and timbral organisation of sounds, rather than in the performative and receptive experience. On the contrary, throughout the text, Feld tries to bring attention to the process of drum-making, to the meanings produced and sustained within this practice, and to the moment of collective use and listening. He shows how the Kaluli perceive the sound of drums through “aesthetic strategies”, “interpretative actions” capable of creating an

²⁶⁹ Feld, S. (1991). Sound as a symbolic system: the Kaluli drum. In Howes, D. (Eds.). *The varieties of sensory experience: a sourcebook in the anthropology of the senses*. University of Toronto Press, 79-99.

²⁷⁰ *Ivi*, cit., p. 79.

"alignment of cultural knowledge and epistemology with the experience of sound"²⁷¹. In particular, the population has developed and cultivated a mode of reception whereby the sound of the drums is perceived as if it were that of the *tibodai*, a particular type of bird.

So far, however, Fisher's proposal seems to hold up, since, in this case, it is art (sound of drums) that is read through nature (sound of birds). If we continue reading, however, we see how the singing of the *tibodai* is in turn experienced through social conventions, both as the utterance of his own name and as the voice of a young child calling his father. The Kaluli in fact classify birds both morphologically and according to the sounds produced. There are seven sound groups within which they fall: birds that say their name; those that make a lot of noise; that simply make sounds; that speak the Bosavi language; that whistle; that cry; that sing. The *tibodai* is classified as a bird that says its name (the double pulsating sound it produces is perceived as onomatopoeic: "tibo tibo tibo"), as well as a bird that whistles. Whistling is considered by the Kaluli as a way for the dead to communicate with each other, as well as with the living.

We see then how the interpretation of art through nature from a unidirectional line becomes a spiral, showing how the interpretation of nature's sounds also unfolds through culturally shared meanings:

"Meaning does not reside 'in the notes' because the way the notes are formed, listened to, and interpreted derives from prior social imposition. Hearers of Kaluli sound share a logic for ordering their experiences. That logic says: hear sound as mediated, hear mediation as a bird, hear bird sound as a spirit voice."²⁷²

A deeper reading of Feld's reflections thus allows us to revise Fisher's thesis; without putting a brake on the infinite multiplication of the possibilities of experience, a shared and social component helps to find points of intersection and commonality. It is then possible to argue that "acoustic organisations are always, at a prior level, socially organized"²⁷³, not only with

²⁷¹ *Ivi*, cit., pp. 88-89.

²⁷² *Ivi*, cit., p. 99.

²⁷³ *Ivi*, cit., p. 81.

regard to so-called artistic performances, but also in relation to the sounds of nature.

What, then, does this field within which Feld moves consist of? As Pietro Conte reminds us, the field of sensory studies grasps and extends that proposal put forward by Plessner (and many others) to understand aesthetics as an anthropology of the senses²⁷⁴, recognising how “sensory modalities can change even radically depending on the spatial-temporal latitudes examined: if there is no supra-historical man, there is no supra-cultural man either, and the senses - their value, the way they are understood, the accentuation of some at the expense of others, their very taxonomy - appear always and in any case culturally situated”²⁷⁵. Not only Plessner but, recalling once again one of, if not “the” cornerstone of postmodern theory, we can see how the project developed within the field of *sensory studies* parallels perfectly with Foucault's aesthetic-perceptual position, continuing the path traced by him²⁷⁶. As Deleuze argues:

“According to Foucault, there is no experience that can be called ‘wild’ or ‘originary’. ‘Wild’ or ‘originary experience’ were terms used by Merleau-Ponty, and Foucault, on a number of occasions, signaled his departure from all phenomenology in this way: there is no originary experience. [...] What replaces phenomenology, is what? It is literally, says Foucault, an epistemology [*une épistémologie*]. An epistemology, that is, there is no experience that is not grasped in a knowledge.”²⁷⁷

²⁷⁴ Plessner, H. (2008). *Antropologia dei sensi*. Cortina.

²⁷⁵ Conte, P. (2022). *Aisthesis*. In Pinotti, A. (Eds.). *Il primo libro di estetica*, cit., p. 11. Translation mine.

²⁷⁶ The philosopher's name, not surprisingly, often appears at the beginning of the texts that launched the discipline. See for example the introduction (p. 6) and the first page of the first chapter (p.16) of Classen, C. (1993). *Worlds of sense: Exploring the senses in history and across cultures*. Routledge.

²⁷⁷ <https://deleuze.cla.purdue.edu/wp-content/uploads/2022/04/02a-Foucault-102985-Eng-Rev-2022.pdf>, cit., p. 6. It is important to emphasise that the historical conditions of perception, identified with “knowledge”, should not be understood from a propositional perspective (as the term might lead us to think) but rather from a pragmatic perspective: the conditions of language will not be abstract norms of speech, but the variegated way in which language is grouped together at a given moment, the “great murmuring”, the

Starting from such incitements, a new discipline has been developing since the 1980s, a true anthropology of the senses, which attempts to understand the historical and social conditions within which each sensory experience is grasped, questioning the senses in their differences between and within cultures²⁷⁸. As mentioned earlier, the first collection of contributions on this topic and the related anthropological approach, where the theoretical framework of “anthropology of the senses” will begin to take its first steps, will be offered to us by Howes in 1991 with *The varieties of sensory experience*. The preface to the text thus introduces us to the fundamental point of the field of study, namely the indissoluble intertwining of “sense” and “senses” or, returning to our dualisms, between narratives and body, between shared languages and bodily sensibility:

“But ultimately the book instructs us that all metaphor is based on the senses; indeed that metaphor is nothing but the selective ways in which we experience the world and conceptualize, report on, or attempt to solicit that experience in others. It demonstrates the intrinsic link between sense (reason, thought) and the senses. And further, if sensation is essential to living, so is selective attention. We know that we select phonemes from the range of sound, discarding other variation as noise and eventually not even hearing it.”²⁷⁹

Sensory studies will therefore attempt to:

- develop a social, historical, political and cultural approach to the senses;
- develop a sensory approach to the study of cultures. Overcoming the idea of culture as text or discursive formation, as well as a sum of mental images or representations, this approach will try to rethink culture - in the wake of

“enunciative regularities” that are given from *practices of language*; likewise, the conditions of sight will be identified with what the author defines as “visibility”, that is, again, the anonymous *practices of looking and noticing*.

²⁷⁸ Howes, D. (2013). The expanding field of sensory studies. *Sensory Studies*. Available at: <https://www.sensorystudies.org/sensational-investigations/the-expanding-field-of-sensory-studies/>. Other reconstructions show various important antecedents to the field of studies (Howes, D. (2022). *The sensory studies manifesto: Tracking the sensory revolution in the arts and human sciences*. University of Toronto Press, pp. 29-31).

²⁷⁹ Lambek, M. (1991). Foreword to Howes, D. (Eds.). *The varieties of sensory experience*.

Ong - in terms of the “organisation of the sensorium”²⁸⁰, thus “sensualising” phenomena rather than narrating or visualising them²⁸¹.

The second important volume to be published will be Constance Classen's *Worlds of sense*, where the connection between the senses and language will be fully addressed. In the chapter entitled “Words of sense”, the author will search for the sensible roots of various terms and expressions used in everyday language (having tact, cultivating good taste...), showing not only that the way we think is rooted in the sensible, but that, moreover, we think through the senses:

“Nonetheless, the way we feel and think is obviously deeply influenced by the language we speak and vice versa. To the extent that words express sensory experience and condition thought, consequently, the sensory basis of much of our vocabulary, and particularly of our intellectual vocabulary, indicates that we think through our senses.”²⁸²

In addition to the reciprocal influence between bodily perception and language in the strict sense, often claimed by other philosophical figures and movements²⁸³, the author will further extend the reflection, proposing to rethink language no longer as a mere phenomenon linked to the spoken or written word and received by the auditory or visual channel, but rather as a practice that involves all the senses, understood as inextricably producers and receptors. From being mere organs, the senses thus become “sensory practices”, languages that we continuously act, reinterpret and share with those around us. As she will argue in a later article, “sensory perception is a cultural, as well as a physical, *act*”, therefore, “sight, hearing, touch, taste and smell are not only means of apprehending physical

²⁸⁰ As Ong argues, cultures can be thought of in terms of the “organisation of the sensorium”, understood as “the entire sensory apparatus as an operational complex”, the organisation of which depends on culture and simultaneously produces that same culture (Ong, W. J. (1991) *The Shifting Sensorium*. In Howes, D. (Eds.). *The varieties of sensory experience*, cit., p. 28).

²⁸¹ Howes, D. (2022). *The sensory studies manifesto*, pp. 3-4.

²⁸² Classen, C. (1993). *Worlds of sense*, cit., p. 59.

²⁸³ Dreon, R. (2007) *Il sentire e la parola. Linguaggio e sensibilità tra filosofie ed estetiche del Novecento*. Mimesis.

phenomena, but also avenues for the transmission of cultural values"²⁸⁴. We speak and think through the senses, by virtue of the fact that the senses are acted and socially shared *practices*, not mere passive *apparatuses* of reception.

Contextualising the Senses

After these first two contributions a variety of texts would develop, culminating in the most recent *The sensory studies manifesto* which, echoing queer reflections on body and sex, states on its cover: "The senses are made, not given"²⁸⁵. As languages, techniques of the body, strategies of interaction with the world, sensibility and senses vary, are made and unmade, produced and rearticulated over time, space, across cultures, eras, societies and communities. Alongside the anthropological approach, we then see a development of sensory studies within various other disciplines, from history to sociology, from critical theory to geography to questioning approaches to psychology and neurobiology. The senses are thus gradually being socialised, politicised, culturalized, historicised and medially expanded.

Let us then briefly summarise the different trajectories:

(1) Regarding the historical contributions²⁸⁶, we see how Corbin breaks with Febvre's and the *Annales'* approach oriented to "mentalities" and with Foucault's and post-structuralism's approach oriented to "discourse", to engage instead in a "history of the sensible"²⁸⁷. He would indeed publish two fundamental texts for the discipline: *The Foul and the Fragrant* (1982), concerning the social life of the sense of smell in 19th-century France, and *Village Bells: Sounds and Meanings in the 19th-Century French Countryside* (1994), a new and in-depth research on the experience of sound. The

²⁸⁴ Classen, C. (1997). Foundations for an anthropology of the senses. *International social science journal*, 49(153), 401-412, cit., p. 401.

²⁸⁵ Howes, D. (2022). *The sensory studies manifesto*.

²⁸⁶ *Ivi*, pp. 45-52.

²⁸⁷ Corbin, A. (1990). Histoire et anthropologie sensorielle. *Anthropologie et sociétés*, 14(2), 13-24; Rauch, A. (2000). Corbin Alain, Historien du sensible. Entretiens avec Gilles Heuré. *Vingtième siècle. Revue d'histoire*, 68(1), 149-150.

historical approach can also be found in one of the chapters of Classen's "Worlds of Sense", where the author shows the decline in the West of the sense of smell in favour of sight through the evolution of the sensory experience of the rose²⁸⁸. Turning directly to more recent developments, it is impossible not to mention the six volumes of *A Cultural History of the Senses* edited under the direction of Classen herself from 2014 onwards, which, reviewing antiquity, the Middle Ages, the Renaissance, the Age of Enlightenment, the Empire and modern times, offer us an analysis of the historical evolution of sensibility that is as transnational and multi-sensory as possible.

(2) On the sociological side we certainly find Simmel, who focused on the social life of the senses in the metropolis²⁸⁹, as well as Bourdieu, who instead paid attention to how social and class distinctions always hold together with different modes of aesthetic and sensory discrimination and discernment²⁹⁰. According to the authors of one of the most recent systematisations of the sociology of the senses, *The senses in self, society, and culture*, the first movements in this direction can also be traced back to the sociological theories of the pragmatists (the act according to Mead, experience according to Dewey, emotion according to James), Becker's theses on jazz and Goffman's on the construction of gender²⁹¹. In the wake of rethinking the senses as "sensory practices", the three authors also introduce the idea of "somatic work" understood as "quotidian 'sense-making activity', which implies that we continuously fashion (and refashion) the senses in the never-ending process of sensing the world"²⁹². In a way, we could say that we socially stylise and refashion the senses simultaneously with the activity of socially stylising and refashioning the

²⁸⁸ Classen, C. (1993). *The odour of the rose: floral symbolism and the olfactory decline of the West*. In *Worlds of sense*, pp. 15-36.

²⁸⁹ Simmel, G. (1903). *The Metropolis and Mental Life*. In *The Sociology of Georg Simmel*. Free Press; Simmel, G. (1907). *Sociology of the Senses*. In D. Frisby and M. Featherstone (Eds.). *Simmel on Culture: Selected Writings*. Sage.

²⁹⁰ Bourdieu, P. (1979). *Distinction: A Social Critique of the Judgment of Taste*. Harvard University Press.

²⁹¹ Vannini, P., Waskul, D., & Gottschalk, S. (2013). *The senses in self, society, and culture: A sociology of the senses*. Routledge.

²⁹² Howes, D. (2022). *The sensory studies manifesto*, cit., p. 54

world.

(3) Transversal to these disciplinary approaches, we then find a certain posture that we could define as critical-political, that is, an analysis capable of taking into consideration the ways in which a given society regulates how and what to perceive, educating, training and orienting the senses, limiting and restricting the possibilities of their use - without forgetting the points of resistance and opposition to the widespread and imposed sensory regime²⁹³. One of the first texts to take on this task is *Sweetness and Power* (1985) by Sidney Mintz, which describes the evolution of a particular taste sensation, that provoked by sugar, revealing its political, social and economic implications. The author succeeds in demonstrating how the slave and capitalist system promoted the introduction of sugar into European and American eating habits, making it a popular, if not necessary ingredient, and using this strategy to sustain its cycles of production, exploitation and accumulation.

As we said, the organisation of the senses depends on culture, but at the same time produces that culture. Alongside the normative activity of the senses, it is then possible to analyse the ways in which this process constitutes society itself, its fragmentations and inequalities, then rooting them within the “neutrality” of the senses and thus naturalising them. The forerunner to more recent texts and articles aimed at analysing the way in which distinctions (particularly of race, gender and class) are reproduced through the learned modes of sensory perception²⁹⁴ can undoubtedly be seen in the chapter “The odour of the other. Olfactory codes and cultural categories” by Costance Classen, where the author reminds us how:

“Odours are symbolically employed by many cultures to serve as identifying marks of different classes of beings. The attractive/repulsive nature of olfactory experience makes odour a particularly useful

²⁹³ Howes, D., & Classen, C. (2013). *Ways of sensing: Understanding the senses in society*. Routledge, pp. 76-77.

²⁹⁴ See Smith, M. M. (2006). *How Race Is Made: Slavery, Segregation and the Senses*. Chapel Hill: University of North Carolina Press; Manalansan, M. F. (2006). Immigrant lives and the politics of olfaction in the global city. In *The smell culture reader*, 41-52; Berg; Jaffe, R., Duerr, E., Jones, G. A., Angelini, A., Osbourne, A., & Vodopivec, B. (2020). What does poverty feel like? Urban inequality and the politics of sensation. *Urban Studies*, 57(5), 1015-1031.

symbolic vehicle for categorizing different groups according to cultural values, as it invests classificatory systems with a strong emotive power. The inhalation of a foul odour, for instance, produces the immediate physical repugnance a society might demand its members feel in response to a particular class of people. To characterize a certain group as foul-smelling, therefore, is to render it repellent at a very basic physical and emotional level, and not simply at a cognitive level.”²⁹⁵

Classen and colleagues’ insistence on the political dimension of smell comes to the fore again in their next publication, *Aroma: The Cultural History of Smell* (1994), whose third chapter, entitled “Odour, Power, and Society”, analyses the ways in which social inclusion and exclusion are produced and reproduced through olfactory practices, as well as in “The politics of perception”, a chapter of the more recent *Ways of sensing*²⁹⁶.

(4) The last disciplinary partition is the geography of the senses, which studies the ways in which space and the environment shape bodily sensibilities, as well as the ways in which physical space becomes a place full of meaning through sensory interaction. Among the initiators of the discipline is Johannes Gabriel Granö, according to whom the true object of geographical research is given in the environment as sensorially perceived by human beings²⁹⁷. His insistence on the perceived as opposed to the physical, however, was not well received, leaving sense geography in the shadows, until it was revived by new authors²⁹⁸ a few decades later, notably by Rodaway, who theorised it explicitly²⁹⁹. Thus the concept of “sensescape” was introduced, itself then broken down into its various dimensions, from “smellscape” to “bodyscape”, up to the aforementioned “soundscape”. Howes, however, reminds us how, despite the openings to the environment made by the geography of the senses, an unexplored field for sensory

²⁹⁵ Classen, C. (1993). *Worlds of sense*, cit., p. 101.

²⁹⁶ Howes, D., & Classen, C. (2013). *Ways of sensing*, p. 69.

²⁹⁷ Granö, J. G. (1925). *Atlas of Finland*. Helsinki; Granö, J. G. (1929). *Pure Geography*. Johns Hopkins University Press.

²⁹⁸ Tuan, Y. F. (1974). *Topophilia: A Study of Environmental Perception, Attitudes and Values*. Prentice-Hall; Tuan, Y. F. (1977). *Space and Place*. University of Minnesota Press.

²⁹⁹ Rodaway, P. (1994). *Sensuous geographies: body, sense and place*. Routledge.

studies remains that of the climate crisis³⁰⁰ which, despite its urgency - but without too many surprises and similarly to environmental aesthetics - has still not acquired the importance it deserves³⁰¹.

(5) Alongside the partitions offered by the manuals in the field, I would like to add here a further possible line of development, relating to the relationship of the senses to technical and media devices. The tradition of "media studies" ranges from Benjamin to McLuhan, from Foucault to Kittler, from Huhtamo and Parikka to the more current reflections of authors such as Franco Berardi on the intertwining of sensibility, politics and new digital media³⁰².

In addition to media entanglements, we also have a parallel trajectory aimed at studying the relationship between bodily sensibility, images and cultural imaginaries, defined as "visual culture". After the birth of the term in the 1920s, the discipline developed according to different declinations in the American, German and French areas, and then spread to most of the academic and cultural world. The current massive production and circulation of images, the conversion of the main social networks and platforms to purely visual modes of communication, our new way of thinking and reasoning through images, make the field one of the most interesting and studied today. A possible definition of it is articulated by Pinotti and Somaini as follows:

"[...] to study the 'visual culture' of a given context means to place the emphasis on the cultural - and therefore constructed, artefactual, technically determined, socially, ideologically and affectively situated, historically variable - dimension of images and vision, adopting a point of view that differs, though without underestimating its importance, from those research perspectives that study images and vision in precultural and supra-historical terms."³⁰³

³⁰⁰ However, we find references to a sensory approach to the study of plastics and air pollution (Howes, D. (2022). *The sensory studies manifesto*, pp. 114-117).

³⁰¹ *Ivi*, p. 18.

³⁰² Berardi, F. (2021). *E: La congiunzione*. NERO.

³⁰³ Pinotti, A., & Somaini, A. (2016). *Cultura visuale: immagini, sguardi, media, dispositivi*. Einaudi, cit., p. XV. Translation mine.

The approaches that emerged from such theoretical turmoil became tools capable of investigating and dissecting multiple and disparate phenomena. Contrary to Howes' reproach of sensory studies, the more politicised field of visual and media studies has not spared from its analysis climate change and its current visual modes of apprehension and perception³⁰⁴.

Critiques to Scientific Accounts

Finally, let us close with the criticism levelled at somewhat antagonistic disciplines. In fact, the development of anthropological, historical, sociological, political and geographical approaches to sensory perception clashes with other theoretical trajectories that, on the contrary, have been much more oriented towards a mechanistic or naturalistic view of the senses. According to Classen, such approaches are rooted within the tradition of thought inaugurated by Descartes and Locke, according to whom perception is to be considered as a purely physical mechanism, to be studied therefore according to a strictly scientific framework³⁰⁵. Against the possible openings to a different angle made at the beginning of the 20th century (Febvre, Simmel, Benjamin and other authors) and by more recent sensory studies, first psychology and then neuroscience have succeeded in establishing a sort of hegemony in the understanding of perception, keeping common sense within the binaries of the aforementioned tradition. This system of thought can be criticised, according to the proponents of sensory studies, at least along two lines.

First, the senses cannot be thought of as already pre-compartmentalised. Just as Fausto-Sterling speaks of the five sexes, different authors urge us to

³⁰⁴ Mirzoeff, N. (2016). *How to see the world: An introduction to images, from self-portraits to selfies, maps to movies, and more*. Hachette UK; Doyle, J. (2009). Seeing the climate. *Ecosee: Image, rhetoric, nature*, 279-298.

³⁰⁵ Classen, C. (1993). *Worlds of sense*, p. 4.

think of the two senses³⁰⁶, the six senses³⁰⁷, the seven senses³⁰⁸, and more; the same scientific classification now recognises the presence of ten senses (in the more moderate versions), twenty-one (in those most popular in neurobiology) or even thirty-three or more (in the more radical ones)³⁰⁹. Again, just as queer feminism urges us to reflect on the constructed character of gender and sexual binarism, so sensory studies affirm from the outset the division of the five senses as arbitrary, that is, as a cultural construct³¹⁰. If children's books and introductory psychology texts educate us on the division of the five senses, it would perhaps be more useful to think of the "sensorium" as a kaleidoscope, where, just as with shapes and colours, the divisions and relationships between the senses vary with each historical, social and cultural shake-up and shift³¹¹. Even though sensory studies themselves sometimes operate according to the classical division into five senses (similarly to the related disciplines of sound studies or visual studies), they always remains aware of the division as contingent and possible, rather than predetermined and necessary. Similarly, the field of studies has shown how supposed sensory hierarchies, capable of conferring greater prestige or value on certain senses at the expense of others, are cultural formations useful in sustaining and promoting privileges and distinctions. In addition to the classification system, a second criticism raised by sensory studies concerns the understanding system of perception. What is called into question is the univocal and

MAKING SENSE OF THE SENSES
There are many opinions about how many senses we have

SENSORY MODALITY	Conservative	Accepted	Radical
Vision			
Light	■		
Colour		■	
Red			■
Green			■
Blue			■
Hearing	■	■	■
Smell	■	■	■
2000 or more receptor types			
Taste	■		
Sweet		■	■
Salt		■	■
Sour		■	■
Bitter		■	■
Umami		■	■
Touch	■	■	■
Light touch			■
Pressure			■
Pain	■	■	■
Cutaneous			■
Somatic			■
Visceral			■
Mechanoreception	■	■	■
Balance			■
Rotational acceleration			■
Linear acceleration			■
Proprioception – joint position		■	■
Kinaesthesia			■
Muscle stretch – Golgi tendon organs			■
Muscle stretch – muscle spindles			■
Temperature	■	■	■
Heat			■
Cold			■
Interoceptors	■	■	■
Blood pressure			■
Arterial blood pressure			■
Central venous blood pressure			■
Head blood temperature			■
Blood oxygen content		■	■
Cerebrospinal fluid pH			■
Plasma osmotic pressure (thirst?)			■
Artery-vein blood glucose difference (hunger?)			■
Lung inflation		■	■
Bladder stretch			■
Full stomach			■
TOTAL	10	21	33

³⁰⁶ Howes, D. (2022). *The sensory studies manifesto*, p. 68.

³⁰⁷ Howes, D. (2009). *Introduction: The Revolving Sensorium*. In *The Sixth Sense Reader*, edited by D. Howes. Berg, pp. 1–52.

³⁰⁸ Kivy, P. (2003). *The Seventh Sense: Francis Hutcheson and Eighteenth-Century British Aesthetics*. Clarendon Press.

³⁰⁹ Durie, B. (2005). Doors of perception. *New Scientist*, 185(2484), 34–36. Image taken from: <https://www.newscientist.com/article/mg18524841-600-senses-special-doors-of-perception/>

³¹⁰ Classen, C. (1993). *Worlds of sense*, pp. 1–2.

³¹¹ Howes, D. (2022). *The sensory studies manifesto*, pp. 69–70.

universal construction of the way perception works, of the way we figure and imagine its dynamics. On the one hand, the process has been - unexpectedly - unfolding within the humanities. Take, for instance, phenomenology³¹² which, in its attempt to rethink perception according to a pre-reflexive approach, did no more than extend the bodily experience of a single person (the philosopher, at best in dialogue with its colleagues) to human experience in general, often forgetting the multiple articulations of sensibility and its modes of functioning. We will return to this shortly thanks to the discourse on the decolonisation of the gaze in anthropology, but we already anticipate the critique, so advanced by Borghi who recalls how:

“[...] the westernised university privileges knowledge produced by men (not women) from only six countries. It is therefore the historical-social experience of 6% of the world's population that claims to account for the being, thinking and acting of the whole of humanity. [...] Not only does Western knowledge completely saturate the space of knowledge, but it also imposes reference models, lenses that make the world appear one colour. For everyone.”³¹³

On the other hand, we see how disciplines such as medicine and the hard sciences have enormously narrowed the field of articulation possibilities, rigidly defining perception and its “normal” operational trajectories. Jonathan Crary, another important post-Foucauldian scholar of perception, attempts a historical reconstruction of the ways in which we have variously described and articulated the functioning of vision. Analysing the developments of various sciences and knowledge of the same during the 19th century, the author highlights how the study of perception went on to produce a certain idea of perceptual “normality”, an image of the neutral/basilar and its possible divergences and pathologies:

“Crucial to the development of these new disciplinary techniques of the subject was the fixing of quantitative and statistical norms of behaviour. The assessment of ‘normality’ in medicine, psychology, and other fields became an essential part of the shaping of the

³¹² Howes, D., & Classen, C. (2013). *Ways of sensing*, pp. 8-11.

³¹³ Borghi, R. (2020). *Decolonialità e privilegio: Pratiche femministe e critica al sistema-mondo*. Meltemi, cit., p. 82. Translation mine.

individual to the requirements of institutional power in the nineteenth century, and it was through these disciplines that the subject in a sense became *visible*. My concern is how the individual as observer became an object of investigation and a locus of knowledge beginning in the first few decades of the 1800s, and how the status of the observing subject was transformed. [...] One result of the new physiological optics was to expose the idiosyncrasies of the 'normal' eye. Retinal afterimages, peripheral vision, binocular vision, and thresholds of attention all were studied in terms of determining quantifiable norms and parameters. The widespread preoccupation with the defects of human vision defined ever more precisely an outline of the normal, and generated new technologies for imposing a normative vision on the observer."³¹⁴

The scientific programme aimed at reductionism and normalisation does not, however, stop with the last century, but continues vigorously today. In recent decades, in fact, a powerful rival for sensory studies has taken shape, identifiable in particular in neurobiological perspectives, according to which perception is to be understood as a pattern of brain activity, neural processing of information, conversion of energy into bio-electric streams by specialised receptive cells. According to Raymond Tallis, a kind of "neuromania" is currently underway, i.e. an exponential growth of neuroscience that, by forgetting so many dimensions of experience, is leading us to a drastic impoverishment in our understanding of human consciousness³¹⁵. In a certain way, the famous "extended mind" hypothesis only intensifies the mentalist paradigm of cognitive approaches: rather than extending the mind to the world and seeing their mutual grasps, why not instead extend the entire sensibility³¹⁶?

³¹⁴ Crary, J. (1992). *Techniques of the observer: On vision and modernity in the nineteenth century*. MIT press, cit., pp. 15-16. A few pages later, he will also criticise a certain (falsely) unambiguous cataloguing of the senses and a certain "autonomisation of sight" functional to certain types of spectatorial consumption.

³¹⁵ Tallis, R. (2011). *Aping Mankind: Neuromania, Darwinitis and the Misrepresentation of Humanity*. Acumen.

³¹⁶ Howes, D. (2015). *The extended sensorium: introduction to the sensory and social thought of François Laplantine*. In Laplantine, F. *The Life of the Senses: Introduction to a Modal Anthropology*. Bloomsbury Academic, p. xiii.

The openings granted by sensory studies thus allow us to question not only the univocity of perception, showing its cultural, historical and social differences, but also the univocity of its construction and cataloguing, inviting us to explore new ways of understanding, articulating and structuring it. Having reached this point, a crucial question arises, namely: if every sensory experience is variously articulated, always situated within a different context, as well as enacted according to particular and variegated inclinations, then the interpretations and descriptions of the perceived object will also be different. Assuming the same as mere interpretations, however, cannot but give rise to a second fundamental concern: if each subject perceives in a specific manner, who will be able to objectively establish the boundaries and properties of the observed object? Will it be postulated as unknowable and elusive, or will its ontology be defined by a privileged subject, capable of accessing it directly and thus offering a universally valid description of reality? Will the variously described object always be fundamentally the same or, perhaps, as experiences and descriptions vary, will the object itself also vary and multiply?

It is from these considerations that we proceed from the anthropology of the senses towards the more recent ontological turn in anthropology, which, by attempting a decolonisation of the gaze and paying attention to other ways of perceiving the environment, has been able to question not just the univocity of perception and the predominant ways of conceiving it, but even the ontological univocity of nature – thus taking the insights of Classen and Howes to their extreme consequences: “It is not only how, and how much, we see that is shaped by culture, however, it is also *what we see*”³¹⁷.

2.2.2 Plural Natures

Edward Said opens his *Orientalism* by defining it according to three main trajectories. After the general academic notion of Orientalism as a set of

³¹⁷ Howes, D., & Classen, C. (2013). *Ways of sensing*, cit., p. 1. Emphasis added.

disciplines relating to the study of the culture of eastern populations, he continues with the following:

"Related to this academic tradition, whose fortunes, transmigrations, specializations, and transmissions are in part the subject of this study, is a more general meaning for Orientalism. Orientalism is a style of thought based upon an ontological and epistemological distinction made between 'the Orient' and (most of the time) 'the Occident'."

"Taking the late eighteenth century as a very roughly defined starting point Orientalism can be discussed and analyzed as the corporate institution for dealing with the Orient— dealing with it by making statements about it, authorizing views of it, describing it, by teaching it, settling it, ruling over it: in short, Orientalism as a Western style for dominating, restructuring, and having authority over the Orient."³¹⁸

Around the late 1970s, as the postmodern atmosphere was thickening and feminist studies proliferating, the field of Postcolonial Studies emerged in parallel. Thanks to his seminal text, Said opened up a new strategy of critical study, devoted to challenging "the tradition of Western knowledge, that is, the patrimony of scientific-humanistic knowledge that, due to *Western* domination over a large part of the globe, has surreptitiously been conveyed as universal knowledge, consequently articulating *other* knowledge only in negative counterpoint to itself"³¹⁹.

As Vasallo recalls, the definition of normality and deviance, progress and

³¹⁸ He then continues: "I have found it useful here to employ Michel Foucault's notion of a discourse, as described by him in *The Archaeology of Knowledge* and in *Discipline and Punish*, to identify Orientalism. My contention is that without examining Orientalism as a discourse one cannot possibly understand the enormously systematic discipline by which European culture was able to manage— and even produce— the Orient politically, sociologically, militarily, ideologically, scientifically, and imaginatively during the post-Enlightenment period. [...] How this happens is what this book tries to demonstrate. It also tries to show that European culture gained in strength and identity by setting itself off against the Orient as a sort of surrogate and even underground self" (Said, E. W. (1977). *Orientalism*. Penguin, cit., pp. 2-3).

³¹⁹ Cangiano, M. (2024). *Guerre culturali e neoliberalismo*, cit., p. 64. Translation mine.

backwardness, is indeed central for domination and colonisation to operate simultaneously on the epistemological and material levels:

“The winner eliminates all other ways of thinking that stand in its way and establishes a way of thinking about the world. An episteme. [...] Using the expedients of the technology of the time, the most marginal groups are branded as ‘backward’ by those who have conquered the age. By the masters of the moment. And this concept of backwardness is the spell to initiate the civilising mission. Because the label ‘backward’ in the universalist frame of thought, made of a single linear temporality and a binary conceptual construction (something exists as long as its opposite exists), deactivates the possibility of divergence and activates subalternity. The backward group must be educated, instructed and accompanied towards a future that it cannot decide for itself as a backward group.”³²⁰

By defining the idea of progress and the correct direction to follow within a certain linearity of history, the dominant group arrogates itself the right to lead and, possibly, exert violence on the dominated group in order to achieve this task³²¹. The operation works, however, not only by defining categories such as Progress and History, but similarly by defining what Nature “is” - as well as opposing the universality and advanced status of the Western-scientific gaze, to the specificity and backwardness of the native, indigenous, racialised gaze on the same.

Decolonizing the Anthropological Gaze

Precisely for this reason, some of the leading exponents of contemporary anthropology have decided to “decolonise” their gaze, considering other

³²⁰ Vasallo, B. (2023). *Linguaggio inclusivo ed esclusione di classe*. Tamu, cit., pp. 77-78. Translation mine.

³²¹ “Epistemic violence” is thus exercised, a set of practices through which “colonised space is moulded in such a way that it can become an object of knowledge on the part of the West, which arrogates itself the power to represent it and thus to control it” (Borghi, R. (2020). *Decolonialità e privilegio*, cit., p. 209. Translation mine). The term comes from Spivak, G. C. (1988). Can the Subaltern Speak?. In Nelson, C., & Grossberg, L. (Eds.). (1988). *Marxism and the Interpretation of Culture*. University of Illinois Press, 271-313.

ways of understanding nature not so much as mere interpretations of it (thus keeping the scientifically and Western understood Nature as the common substratum and univocal referent of the various interpretations), but rather as ontological possibilities in their own right. The so-called movement of the ontological turn thus leads the postmodern discourse to its radical consequences: the fragmentation of the univocal gaze (modern, western, rational, masculine, human, and so on) within the multiplicity of "other gazes" becomes here a multiplication of worlds and natures, thus shifting the focus "from questions of knowledge and epistemology toward those of ontology"³²².

One of the main exponents of the turn is undoubtedly Eduardo Viveiros de Castro who, over the years, has tried to overcome the idea of cultural relativism, closely associated with the concept of "point of view", through what he defines as perspectivism³²³. According to the author, anthropology has been founded so far on certain premises, certain "rules of the game", which allow for the simultaneous emergence of the two actors in the field, namely the native and the anthropologist³²⁴.

First of all, the latter holds a sort of "epistemological advantage": if both are acknowledged to be in relation to a specific culture, what changes is the type of relationship entertained with it. In the case of the native, this relationship is given as spontaneous and unconscious, a total identification with their own culture that does not allow for reflective and critical moments. On the contrary, the anthropologist is aware of the existence of different cultures, is therefore capable of disidentifying from their own and not being a slave to it, thus conducting the analysis on the native from a privileged condition of vision (purified of - certain - cultural influences).

³²² Henare, A., Holbraad, M., & Wastell, S. (Eds.). (2007). *Thinking through things: theorising artefacts ethnographically*. Routledge, cit., p. 8.

³²³ The idea of perspective proceeds broadly from Deleuzian insights, as well as from Nietzsche's proposal, from his critique of traditional Cartesian-Kantian epistemology and the myth of objectivity, in favour of a knowledge that is always impure, marked, situated (Brigati, R. (2019). In *Amazzonia e altrove, ovvero a cosa serve l'antropologia secondo Viveiros de Castro*. In *Prospettivismo cosmologico in Amazzonia e altrove*. Quodlibet, p. 13). For an in-depth discussion of Nietzsche's perspectivism see Gori, P. (2016). *Il pragmatismo di Nietzsche. Saggi sul pensiero prospettivistico*. Mimesis.

³²⁴ Viveiros de Castro, E. (2013). The relative native. *HAU: Journal of Ethnographic Theory*, 3(3), 473-502.

This leads us to a second intuition, namely the idea that the western or so-called "global north" anthropologist possesses certain "universal forms", first and foremost that of "nature", which the different cultures of the natives (and also that of the anthropologist itself) fill with their respective "particular contents". Given these forms, it is possible to proceed with the game: the anthropologist goes to the native and, already knowing what these universal forms are, sets out to explore the different cultural declinations and realisations of the same. On the one hand, there will therefore be a single "nature", a central referent and pre-constituted in its form, a single problem (posed by the anthropologist) that must be solved; on the other hand, we will then have different cultural "subjects", embodying different "points of view" on this same referent, i.e. different specific resolutions of the problem. The game of anthropology becomes, within this framework, an operation of a cognitive and psychological order, a problem of knowledge of the other's culture.

De Castro thus decides to mess up the rules of the game and ask: what happens if we take this question as an ontological and a political problem? In other words, what happens if the native is no longer an "other subject" within the game of points of view, but the expression of a different possible world where the idea of subject, of point of view, of nature might even disappear? What happens if problems do not arise before the encounter with otherness, if otherness is granted the capacity to alter our own theoretical, methodological framework, our own premises regarding "universal forms"? What happens if we explore and fully embrace the native's "point of view" on the "point of view"?

The typical relativism of cultural anthropology assumes (1) the existence of a single world, a single ("universal form" of) external nature, unified and prior to vision, (2) a universal and constant human bodily endowment and, finally, (3) a multiplicity of cultures, narratives, ways of representing that, mediating between "the" body and "the" world, generate different points of view, that is, different cultural interpretations. A natural world, a physical-biological body and different cultural ways of articulating and relating them. If the anthropology of the senses paved the way by contesting the univocity of the body, perspectivism expands the discourse, arguing that what differentiates us is not the way we think, see, narrate, represent, i.e. the so-

called “culture”, but rather the *body* through which we think and, also, *what* we think. We will thus have (1) different possible worlds, objects and natures, (2) different bodies living and experiencing them, and (3) perspective as the equal and shared capacity to occupy/act a point of view, i.e. the condition of possibility of the subject (human and non-human).

Point (1) thus leads us towards the so-called multinaturalism. According to the author, the main point that several anthropologists have failed to grasp is “that different kinds of beings see the same things differently only as a *consequence* of the fact that different kinds of beings see different things in the same way”³²⁵. What we should in fact be asking is: what do we mean when we say “the same thing”? The same for whom? The moment we deny the existence of a privileged, transcendental point of view (often attributed to the scientist), even the idea of the “thing in itself” begins to waver. Nature does not exist as a “thing in itself”, as a purely material entity³²⁶ to which “we”, the privileged, have direct access; rather, different natures *coexist* with different bodies that live, act and experience them:

“Nature is thus multiple in two senses, in this conception: on the one hand, the bodies of the subjects, their specific natures, are different, and the Western subjectivist-phenomenal perspectivism might also agree on this; but on the other hand, the realities, ‘the’ natures, that are disclosed out of these bodies are also different.”³²⁷

Let us then move on to point (2), perhaps the most substantial and interesting, and try to clarify what Viveiros means by bodies, bodily differences and, therefore, different natures. The author repeatedly argues that the differences between bodies (and perceptual systems) are not of a physiological, anatomical or biological order: rather the body is a bundle of “*affects*, in the old sense of dispositions or capacities, [...] an assemblage of affects or ways of being that constitute a habitus [i.e.] the origin of

³²⁵ Viveiros de Castro, E. (2012). *The Relative Native: Essays on Indigenous Conceptual Worlds*. HAU, cit., p. 252.

³²⁶ Resonating with the reflections in the previous chapter, Viveiros also argues that no rigid dualism can be established between meaning and matter, the mental world and the physical world (Viveiros de Castro, E. (2012). *Cosmological perspectivism in Amazonia and elsewhere*. HAU, p. 124).

³²⁷ Brigati, R. (2019). In *Amazonia e altrove*, cit., p. 20-21. Translation mine.

perspectives”³²⁸.

If the author distances himself from material and biological continuities, to focus instead on “ways of being”, would it then be possible to conclude that each individual body (and, thus, individual nature) is radically different from those of its fellows around it? On the contrary, it would seem to the author that there is a certain homogeneity within each species, given by the way it eats, moves, communicates, lives, socialises and so on. Does this then mean that there is radical discontinuity between one species and another? Here, too, Viveiros disagrees, arguing how “a human appearance could, for example, be concealing a jaguar-affect”, since what matters is not “genetic continuity or morphological similarity” but rather the continuity of the (body as) “behaviour”³²⁹.

Viveiros's insistence on affections, capacities, behaviours could fit into what he identifies as a kind of post-Bourdieu anthropology, according to which “all anthropological theory must be a theory of practice. And practice and its behavioural pre-conditions (which go by various names – schemata, presuppositions, premises, scripts, habitus, relational configurations, etc. – the important criterion here being that the name must not be a word that resembles ‘culture’ or ‘structure’) are quintessentially non-propositional”³³⁰. This mounting irritation with the conceptual-theoretical component is

³²⁸ Viveiros de Castro, E. (2012). *Cosmological perspectivism*, cit., pp. 113-114.

³²⁹ *Ivi*, cit., p. 113. We could here highlight the resonance with queer theories, where the author argues for “the performative rather than given character of the body” (cit., p. 125).

³³⁰ *Ivi*, cit., p. 65. In contrast to Ingold, who states: “For the Ojibwa, however, knowledge does not lie in the accumulation of mental content. It is not by representing it in the mind that they get to know the world, but rather by moving around in their environment, whether in dreams or waking life, by watching, listening and feeling, actively seeking out the signs by which it is revealed. Experience, here, amounts to a kind of sensory participation, a coupling of the movement of one’s own awareness to the movement of aspects of the world. And the kind of knowledge it yields is not propositional, in the form of hypothetical statements or ‘beliefs’ about the nature of reality, but personal – consisting of an intimate sensitivity to other ways of being, to the particular movements, habits and temperaments that reveal each for what it is. Indeed such knowledge, closely analogous to that which the skilled craftsman has of his raw material, is not easily articulated in propositional form, and would seem to be devalued by any attempt to do so – to disembody it from its grounding in the context of the knower’s personal involvement with the known” (Ingold, T. (2000). *A circumpolar night's dream*. In *The perception of the environment: essays on livelihood, dwelling and skill*. Routledge, cit., p. 99).

criticised by the author, according to whom there is no clear-cut distinction between concept and practice: on the one hand, there is always inherent in practice a kind of “virtual conceptuality”, “basic ideas”, a “cosmology”, “ontology” or “culture”³³¹ that sustains and nourishes it; at the same time, the native's thought is never given as an abstract proposition, but rather as an “an *activity* of symbolization or meaning *practice*”³³². The body is the site of perspective because the body *is* behaviour, practices, affections, and, at *the same time*, concepts, ideas, instances, problems: as these multiple components vary, so do the natures described and experienced, the worlds lived and faced, the planes of immanence articulated and inhabited³³³. It is from this corporeal multiplicity, indissolubly practical and conceptual, that so-called “multinaturalism” is thus generated.

Multiple natures and multiple bodies. We come to point (3) to find then the continuity in the condition of possibility of the relationship between natures and bodies. Viveiros de Castro repeatedly states how “the common condition of humans and animals is humanity not animality, this is because ‘humanity’ is the name for the general form taken by the subject”, by subject meaning “every being to whom a point of view is attributed”³³⁴. What binds every living being, what binds all human beings to each other, and the latter to the so-called animals (and, perhaps, to all the elements of the cosmos³³⁵),

³³¹ Viveiros de Castro, E. (2012). *The Relative Native*, p. 36.

³³² *Ivi*, cit., p. 26. Emphasis added.

³³³ When speaking of concepts and planes of immanence, the author explicitly refers to the Deleuzian framework. See Deleuze, G. (1991). *Qu'est-ce que la philosophie?*. Les éditions de Minuit.

³³⁴ Viveiros de Castro, E. (2012). *Cosmological perspectivism*, cit., pp. 99-100. In another text (Danowski, D., & De Castro, E. V. (2017). *The ends of the world*. John Wiley & Sons) the author explains this idea of “humanity” by arguing how every being and entity in the world derives from an original human condition of a “polynomic multitude”, i.e. a humanity in constant becoming-other, a humanity that took on the bodily forms and habits of animals, plants, rivers, mountains and that suddenly interrupted “the ceaseless becoming-other (erratic metamorphoses, anatomic plasticity, ‘unorganized’ corporeality) in favor of greater ontological univocality” (cit., p. 66). Thus, “each existing species sees itself as (anatomically and culturally) human, since what it sees of itself is its ‘soul’, that is, an internal image that is like a shadow or echo of the ancestral humanoid background common to all beings” (cit., p. 70).

³³⁵ “Tous les animaux et autres composantes du cosmos sont intensivement des personnes, virtuellement des personnes, car n'importe lequel d'entre eux peut se révéler

is neither a common material descent or shared biological-anatomical forms, nor a common “background”, world or nature, but rather the capacity to see oneself as a figure against a background, i.e. the capacity to occupy/act a perspective: different bodies revealing different natures through the same capacity of perspective.

Decolonizing Nature

Through the perspectivist proposal, Viveiros thus seeks to confront the hidden and problematic presupposition of cultural relativism, namely that sort of “practical ideology” which, with Latour, he defines as “particular universalism”: the idea that nature/culture dualism (or, rather, cultures) is subordinate to a broader cosmology, within which “our culture is the mirror of nature and other cultures are simply wrong”³³⁶. Put another way, if nature is identified as that which precedes culture, but apparently no one can access it in a non-cultural manner, then the condition of possibility that guarantees the existence of such “non-culturally marked nature” is that *at least one* culture can describe it through direct and immediate access. Clearly, it is the Western anthropologist (or scientist), possessing the “universal form” of nature, who will constitute such access.

According to Viveiros, the same problematic point has been perfectly illustrated by Tim Ingold³³⁷, another anthropologist who, although not

être (se transformer en) une personne” (Viveiros de Castro, E. (2009). *Métaphysiques cannibales*. P.U.F. Paris, cit., p. 22).

³³⁶ Viveiros de Castro, E. (2012). *Cosmological perspectivism*, cit., p. 91. The reference is to Latour, B. (1991). *Nous n'avons jamais été modernes. Essai d'anthropologie symétrique*. La Découverte.

³³⁷ Another important anthropologist of the turn is Descola who similarly criticises naturalism, understood as “the idea that nature exists, [...] a specific ontological domain, a place of order and necessity where nothing happens without a cause”, i.e. “a single unifying nature [as opposed to] a multiplicity of cultures” (pp. 276-277). To naturalism Descola adds a different option, animism, which brings us back to the previous three points. In this conception, in fact, we will have: - a continuity of souls, a “same type of interiority”, or, as we said earlier, “humanity as a general condition” (p. 275); - a discontinuity between bodies, again understood in a behavioural and acted rather than physical-anatomical way. For Descola, too, different bodies embody different “worlding”, i.e. different “styles of action and thought that appear immediately

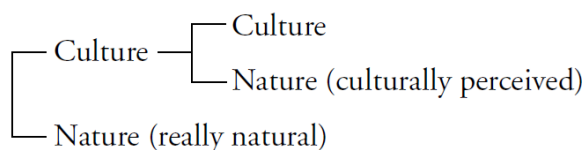
identifying himself with the group of the ontological turn, often shares its instances and problems. For example, although less politically situated than Viveiros, Ingold also attempts to show the colonial attitude behind the distinction between primary qualities/secondary qualities, between nature “as it really is”, that studied by biologists, and nature “imagined” or “cognised”, that studied by anthropologists:

“It should now be clear why natural science and cultural anthropology converge on a common vertex. The anthropological claim of perceptual relativism – that people from different cultural backgrounds perceive reality in different ways since they process the same data of experience in terms of alternative frameworks of belief or representational schemata – does not undermine but actually reinforces the claim of natural science to deliver an authoritative account of how nature really works. Both claims are founded upon a double disengagement of the observer from the world. The first sets up a division between humanity and nature; the second establishes a division, within humanity, between ‘native’ or ‘indigenous’ people, who live in cultures, and enlightened Westerners, who do not. Both claims, too, are underwritten by a commitment that lies at the heart of Western thought and science, to the extent of being its defining feature. This is the commitment to the ascendancy of abstract or universal reason. If it is by the capacity to reason that humanity, in this Western discourse,

distinctive, [...] cognitive and sensory-motor patterns of practice, in part innate, in part resulting from the actual process of interactions between organisms, that is, from the practical manners of coordinating human and nonhuman agencies in a given environment”, both as ‘*framing devices* [...] which organize skills, perceptions, and action without mobilizing a declarative knowledge. They are, to borrow Maurice Bloch’s words, ‘things that go without saying’, that is, cognitive schemata that regulate habitus, guide inferences, filter perceptions, [whose] fundamental function [...] is to ascribe identities by lumping together, or dissociating, elements of the lived world that appear to have similar or dissimilar qualities” (p. 274); - different “ontological domains” that correspond to different forms of worlding. Thus, not “a complete and self-contained world waiting to be represented according to different viewpoints, but, most probably, a vast amount of qualities and relations that can be actualized or not by humans according to how ontological filters discriminate between environmental affordances” (p. 273). Descola, P. (2014). *Modes of being and forms of predication*. *HAU: Journal of Ethnographic Theory*, 4(1), 271–280. For a comparison between Descola’s animism and Viveiros’ perspectivism see Viveiros, E. (2012). *Cosmological perspectivism*, pp. 83-103.

is distinguished from nature, then it is by the fullest development of this capacity that modern science distinguishes itself from the knowledge practices of people in 'other cultures' whose thought is supposed to remain somewhat bound by the constraints and conventions of tradition. In effect, the sovereign perspective of abstract reason is a product of the compounding of two dichotomies: between humanity and nature, and between modernity and tradition."³³⁸

The author continues the discourse in another of his articles, *Hunting and gathering as ways of perceiving the environment*, arguing how, according to various anthropologists, the environment and nature are cultural constructs. Culture would be the representation, the abstract plane of construction, while the environment or nature the constructed product. And, at this point, Ingold asks: what, then, is the construction material? For the argument to hold, it will be necessary to divide nature into two, a "culturally constructed/perceived nature" and a "real nature". Hence, the author highlights the paradox inherent in the dualistic idea of nature/culture: within a constructivist or cultural relativist approach, if "nature" is culturally constructed, "culture" will also have to be, as will the division between the two. But if the one, the other, and the separation are culturally constructed, then there will have to be an overarching culture that has altogether constructed them; and in order for this to exist as "culture", it will have to be set against an opposing realm that legitimises and sustains it, namely "real nature". This is how Ingold summarises it visually:



In doing so, however, we find ourselves back at square one and can only repeat the same operation, endlessly regressing:

³³⁸ Ingold, T. (2000). Culture, nature, environment. Steps to an ecology of life. In *The Perception of the Environment*, cit., p. 15.

"To attempt to apply this logic is at once to be caught in the vortex of an infinite regress: if the opposed categories of 'nature' and 'culture' are themselves cultural constructs, then so must be the culture that constructs them, and the culture that constructs that, and so on ad infinitum. And since, at every stage in this regress, the reality of nature reappears as its representation, 'real' reality recedes as fast as it is approached."³³⁹

Taking as an example a famous study conducted on the Mbuti Pygmies of the Ituri forest and other reflections by fellow anthropologists on the subject, Ingold notes how an imaginary line is often unconsciously drawn between such "culturally constructed/perceived nature" and "real nature". Specifically, the fact that such people refer to the forest as "father" or "mother" is usually interpreted as a metaphor, an (unconscious) projection of a social image onto the natural world, a cultural modelling/construction/perception of "real nature". What Ingold is proposing, then, is a challenge to our dualistic nature/culture framework, in order to enter a different lived world where parenting, "father" and "mother", are not mental representations, but ways of caring for, nurturing, sharing and offering resources, i.e. directly experienced and practiced modes of interaction with human and non-human entities. In this way, it would be possible to abandon the idea that the environment is grasped and experienced by constructing and projecting mental representations *of* it *upon* the same; rather, different environments are immediately grasped and experienced by being involved, by inhabiting, taking up positions and activities *in* them.

This last reflection thus allows us to expand the discourse opened with Viveiros de Castro, asking the following question: does ontological proliferation only concern nature, or does the natural environment also multiply as the bodies that experience it multiply?

After discussing the Mbuti community, we see how the author concludes with a paragraph on the Pintupi's perception of the landscape. The considerations are similar: anthropologists looking at others' ways of

³³⁹ Ingold, T. (2000). Hunting and gathering as ways of perceiving the environment. In *The Perception of the Environment*, cit., p. 42.

perceiving as a projection of *different* mental and cultural schemata onto a raw, purely material and empty space of meaning. Here too, assuming Pintupi's ontology instead, we see how between person and landscape there is a fundamental and indissoluble connection, how "phenomenal reality is open to direct perception"³⁴⁰. By "direct" however, we should not think of a univocal and generic human body that perceives landscape by freeing itself of cultural mediations, social participations and past experiences: this would lead us to the conclusion that there are no perceptive differences between different human beings. By "direct" we rather mean an abandonment of the conception of narratives/schemes/culture/representations as mediations floating between subject and environment in order to filter perception, packets of information learned and stored in the mind, as well as "layers of meaning" affixed to a mute and neutral environment.

"That we learn to see is not in doubt, but learning in this view entails the acquisition of cultural schemata for building representations of the world, in the mind, from data delivered by the senses. [...] [Instead,] knowledge of the world is gained by moving about in it, exploring it, attending to it, ever alert to the signs by which it is revealed. Learning to see, then, is a matter not of acquiring schemata for mentally constructing the environment but of acquiring the skills for direct perceptual engagement with its constituents, human and non-human, animate and inanimate. To recall a distinction I introduced in the last chapter, it is a process not of enculturation but of enskilment. [...] Far from dressing up a plain reality with layers of metaphor, or representing it, map-like, in the imagination, songs, stories and designs serve to conduct the attention of performers into the world, deeper and deeper, as one proceeds from outward appearances to an ever more intense poetic involvement."³⁴¹

When Ingold speaks of "direct perception", he therefore means a rethinking of narratives/schemes/representations - again echoing sensory studies³⁴² -

³⁴⁰ Ingold, T. (2000). *Hunting and gathering*, cit., p. 55.

³⁴¹ *Ivi*, cit., pp. 55-56.

³⁴² For a comparison between Ingold's approach and sensory studies, see Pink, S. & Howes, D. (2010). *The future of sensory anthropology/the anthropology of the senses*.

as skills, learned and practiced, incorporated and immediately enacted trajectories for the deployment of sensory activity, sensory techniques and abilities that lead and orientate the perceiver's attention and action in the world, enabling them to directly immerse in it and variously configure its meanings³⁴³. Thus, perceptual experience:

“[...] does not mediate between things in the world and representations in the mind, but is intrinsic to the sensory coupling, in perception and action, of the awareness of the self to the movement of those features of the environment selected as foci of attention. This view of experience calls for a quite different understanding of vision. It would be premised on the notion of the perceiver as an active participant in an environment rather than a passive recipient of stimuli, one whose vision penetrates the world rather than holding up a mirror to it.”³⁴⁴

There is thus a full interpenetration between subject/organism/person, and world/environment/nature, making the latter referent an “intelligible behavioral environment”³⁴⁵, a “task-scape”³⁴⁶, a kind of operational reality disclosed to the operating body. To conclude, we could therefore argue how the environment and its elements are always in relation, in correspondence, always with and for someone: in this way, not only nature but also “[the] ‘environment’ is a relative term - relative, that is, to the being whose

And responses. *Social Anthropology/Anthropologie Sociale*, 18(3), 331-340, cit., p. 335); Ingold, T. (2011). Worlds of sense and sensing the world: a response to Sarah Pink and David Howes. *Social Anthropology/Anthropologie Sociale*, 19(3), 313-317.

³⁴³ The notion of skills and bodily differences for Ingold can be explored further in another of his papers (focused on the ability of walking), where he states: “[...] two characters perceive their surroundings differently because they have been trained, through previous experience of carrying out diverse practical tasks involving particular bodily movements and sensitivities, to orient themselves in relation to the environment and to attend to its features in different ways. The difference, in other words, lies not in the ways people represent the environment inside their heads, but in the ways they discover what it affords for their activities” (Ingold, T. (2003). Three in One: On Dissolving the Distinctions between Body, Mind and Culture. in A. Roepstorff, N. Bubandt and K. Kull (Eds.), *Imagining Nature: Practices of Cosmology and Identity*. Aarhus University Press, 40-55).

³⁴⁴ Ingold, T. (2000). A circumpolar night's dream, cit., p. 105.

³⁴⁵ *Ivi*, cit., p. 100. Here Ingold takes the term from Hallowell.

³⁴⁶ Grasseni, C. & Ronzon, F. (2016). *Introduzione*. In Ingold, T. *Ecologia della cultura*. Meltemi, cit., p. 28.

environment it is. Just as there can be no organism without an environment, so also there can be no environment without an organism"³⁴⁷.

The Multiplication of Worlds

These considerations allow us to conclude with a comparison with some of the major positions in environmental aesthetics. First, we find the aforementioned distinction between primary and secondary qualities proposed by Brady. The author, relying on Sibley, differentiates between primary/non-aesthetic qualities, which are detectable by the physicist-scientist, and secondary/aesthetic qualities, which raise the level of disagreement insofar as they are characteristic of the relationship between a perceiver and the "sensitive data" received. Ingold, Viveiros de Castro and Descola take up the distinction³⁴⁸, arguing that the perception of the environment does not consist in the reception of data pertaining to the primary qualities of matter that, once received, are reworked or interpreted

³⁴⁷ Ingold, T. (2000). *Culture, nature, environment*, cit., p. 20. The term "correspondence" emerges in more recent works by the anthropologist. In "The life of lines", he argues for example that "the sun we perceive in the sky, and that lights the world of our experience, can exist only through its essential correspondence with the eye" (Ingold, T. (2015). *The life of lines*. Routledge, cit., p. 99). Aesthetic-ontological reflections on correspondence will continue in the book of the same name (Ingold, T. (2020). *Correspondences*. John Wiley & Sons) and will be taken up in the field of environmental aesthetics by Nicola Perullo (Perullo, N. (2020). *Estetica ecologica. Percepire saggio, vivere corrispondente*. Mimesis). Moreover, the idea of "environment-for" resonates with one of its many inspirations, namely the concept of *Umwelt* proposed by Uexküll. As Agamben remind us: "Where classical science saw a single world that comprised within it all living species hierarchically ordered from the most elementary forms up to the higher organisms, Uexküll instead supposes an infinite variety of perceptual worlds [...] There does not exist a forest as an objectively fixed environment: there exists a forest-forthe-park-ranger, a forest-for-the-hunter, a forest-for-the-botanist, a forest-for-the-wayfarer, a forest-for-the-nature-lover, a forest-forthe-carpenter, and finally a fable forest in which Little Red Riding Hood loses her way" (Agamben, G. (2004). *The open: man and animal*. Stanford University Press, cit., p. 40).

³⁴⁸ Ingold's main theoretical references (Gibson and Bateson) on the issue are made explicit in the introduction of Ingold, T. (2000). *The Perception of the Environment*, pp. 2-3; Viveiros de Castro, E. (2012). *Cosmological perspectivism*, p. 111; Descola, P. (2014). *Modes of being and forms of predication*, p. 272.

in the mind through representations, metaphors, analogies³⁴⁹, but rather in the immediate articulation through affections and concepts, skills, styles of action and thought: "qualities" do not reside in objects, and "meanings" do not reside in the head, but both unfold in the various practical, active, poetic and direct involvements in the environment. Not one level of primary qualities and different levels of secondary interpretations, but rather different natures, different operational realities, different qualitative actualisations that, more or less, depending on the various authors, overlap, intersect and alter each other.

At times Brady herself seems to approach such positions, recognising on the one hand how even the scientist cannot disentangle themselves from cultural perceptual abilities, and on the other hand how environmental perception is primarily intertwined and only secondarily disjointed into primary and secondary qualities:

"Another strenght of non-cognitive views [...] is their awareness that aesthetically valuing nature involves bringing ourselves to the natural world as *cultural* beings. We can never get around this state of affairs, and we ought not pretend that science will achieve a perspectiveless aesthetic valuing."³⁵⁰

"[...] we usually begin by identifying the overall aesthetic impact of a place, a first impression perhaps, and then we trace the particular aesthetic and non-aesthetic qualities that give it that character."³⁵¹

Secondly, we have Carlson's proposal concerning the perception of landscape in *Landscape and Literature*. Starting with the intention of overcoming the dichotomy between formalism and postmodernism, the former linked to mere physical form, the latter to the subject's imaginative projections alone, the article focuses on the division and in-depth examination of different types of information/descriptions concerning the landscape: formal, factual and cultural³⁵². If formal and factual information can be considered as already present in the landscape and gradually

³⁴⁹ Brady, E. (2003). *Aesthetics of the Natural Environment*, cit., pp. 72-73.

³⁵⁰ *Ivi*, cit., pp. 115-116.

³⁵¹ *Ivi*, cit., p. 236.

³⁵² Carlson, A. (2000). Landscape and Literature. In *Aesthetics and the Environment*.

discovered, cultural information, being “external” to it, would instead turn out to be mere social or individual projections³⁵³. What Carlson clearly differentiates as formal, factual or cultural “information” are instead, for the anthropologists of the turn, *skills of* attention, of framing, of participation, of articulation, enacted trajectories for the unfolding of multiple natures, environments, worlds.

In conclusion, the distinctions drawn in the last chapter (I.2) are dissolving. The first, between body and narratives: the body necessarily perceives through narrative modes that direct and arrange it, making sensory apparatus and mode of perception two intricate and inseparable components. There are not different cultures that add to a previous univocal body, but rather different bodily dispositions and affections, different sensory *skills* and modes of worlding that train and articulate bodies from the very first moment. In this sense, Berleant again seems to serve as a better support for our discourse, firmly criticising the idea of a universal and innocent, wild, pure and direct perception, referring rather to sensibility as “trained awareness”, “reconstruction”, “contribution”, “recognition”, as a sensible *activity*:

“As human beings we are cultural creatures, unable to sense without the presence of associations and meanings. The very process of *sensory development* is, in fact, a process of acculturation through which ideas and beliefs become *embodied* in our *direct* experience. These meanings and attitudes are not merely intellectual constructs or internal accompaniments of sensation but are subtly infused into our sensory experience. Through trained awareness the viewer can activate the perceptual qualities of colour, line, sound, and spatial relationships. By reconstructing the images that poetic discourse evokes, the reader can re-embodiment the poet's sentiment. By contributing the meanings and associations that surround dada and pop art, the beholder can reconstitute the aura of consciousness that lies at their center. And by recognizing the ingenious variety of self-reflexiveness that has become

³⁵³ On other occasions, the author will instead place science on the same level as other knowledge, arguing how perception and appreciation of nature are given through stories that are equally capable of making it “orderly” or of rendering a certain order intelligible (Carlson, A. (2000). *Appreciating art and appreciating nature*. In *Aesthetics and the Environment*, cit., pp. 121-122).

frequent in the arts of our day, several levels of awareness can work simultaneously in intriguing interplay.”³⁵⁴

Equally, there will not be a single world discovered by the natural sciences, pertaining to facts and a supposed universal (or universalizable) perception, and, subsequently, different cultural interpretations of the same, the so-called fictions produced by particular perceptions. Rather, even Berleant promotes a “perceptually grounded ontology” and a “theory of multiple experiential realities”³⁵⁵, which sees the necessary coexistence between perceiver and perceived:

“In aesthetic experience the spectator assists in revealing the aesthetic object, an object that is both a *thing* and its *meaning* and that exists through the perceiver and not independently. Yet it is only in perception that *the being* of the aesthetic object *is realized*. Not constituted by consciousness, it nonetheless *exists* only for a consciousness able to recognize it.”³⁵⁶

Once the myth of a universal perception and a univocal world has been dispelled, we might ask: can the unstoppable multiplication of natures and environments also extend to the most important environmental phenomenon experienced today? In other words, shifting the focus to the ecological crisis, can we equally reject its univocity, and instead move towards a radical ontological plurality of crises?

2.2.3 Fragmentation of Ecological Perspectives

Commenting on the reflections of the ontological turn, Roberto Brigati draws a parallel with the work carried out by Butler, that is, with the critique

³⁵⁴ Berleant, A. (1991). *Art and Engagement*, cit., p. 48. Emphasis added.

³⁵⁵ *Ivi*, cit., p. 6. Similarly, Hepburn states: “And, crucially, the aesthetic appreciation of nature - notably of landscape - is a prime means of enriching that experience, increasing our powers of discrimination, as members of the life-world: a world that has as great a claim to reality as the world of the physicist” (Hepburn, R. (1996). *Landscape and the metaphysical imagination*, cit., p. 194).

³⁵⁶ Berleant, A. (1991). *Art and Engagement*, cit., p. 317. Emphasis added.

of the binary systems depth-surface, essence-attributes, nature-culture and, of course, sex-gender³⁵⁷. In fact, the author reminds us that “if one merely says that, for instance, gender is a social construct, but does not deal with the body itself and leaves it in its presumed facticity and givenness, one performs in reverse the same operation of tolerance that naturalism does when it allows cultural manifestations to survive alongside it”³⁵⁸. Proceeding, we see how the critique of the nature-culture distinction, which leads the anthropologists of the turn to argue for the coexistence of multiple ontologies-worlds, is realised in parallel within Karen Barad's performative and queer new materialism³⁵⁹. As Elena Bougleux points out in the introduction to Barad's work:

“So there are as many realities as there are observers observing, as many as there are pairs (triads? tens, groups?) of measurer-and-measured, as many realities as there are intra-actions.”³⁶⁰

Queer reflections thus seem to resonate with the ontological turn, demonstrating the need to question the univocity of bodily materiality and perception as well as the univocity of perceived natures and environments. If feminist theorists insist on the intertwining of perception, practical activity, bodily performance, observation, thought, language and the materiality of the world, the anthropologists of the turn seem instead to place increasing emphasis on the possible multiplication of the latter. In a paragraph entitled “One or Several Wolves?” Viveiros de Castro argues how ontological differences now become highly political, implying a war situation: no longer a “war between words”, discourses clashing around the

³⁵⁷ Brigati, R. (2019). La filosofia e la svolta ontologica dell'antropologia contemporanea. In Gamberi, V., & Brigati, R. (Eds.). *Metamorfosi*, p. 306 - p. 320.

³⁵⁸ *Ivi*, cit., p. 309. Translation mine.

³⁵⁹ For a further comparison between OT and the new materialisms (including Barad) see Gamberi, V. (2019). *Metamorfosi: decolonizzazione vera o apparente?* In Gamberi, V., & Brigati, R. (Eds.). *Metamorfosi*.

³⁶⁰ Bougleux, E. (2017). Stati di sovrapposizione e di in/coerenza tra azione, politica e materia. Introduction to Barad, K. *Performatività della natura. Quanto e queer*. Edizioni ETS, cit., p. 20. Translation mine.

same world and referent, but a real “war of worlds”³⁶¹. The (political) problem that now arises within our discussion can thus be summarised as follows: one crisis and several interpretations or, on the contrary, a multitude of crises? After several brief allusions to the question of the ecological crisis, after arguing that “anthropology is bound to occupy in the present century the same role, as model science and epistemic paradigm, that physics played during the modern period”, thus providing us with a “new metaphysics of the Anthropocene”³⁶², Viveiros will return to the subject in a more systematic and in-depth manner with a whole dedicated text, co-written with Déborah Danowski and entitled *The Ends of the World*.

Rather than talking about the climate crisis in the strict sense, what the two authors are going to describe will be a mapping of the different variations of the end of the world, i.e. the different mythic fabulations, mythologies or narratives through which the end is posed as a problem and articulated³⁶³, especially considering the fact that the “end of the world” varies as the world under consideration varies:

“As for the ‘world’ whose end is imagined, it might refer to the totality of the terrestrial biosphere; to the cosmos as a ‘whole’ (the ensemble of spatiotemporal entities and processes, that is, the ‘world’ of physics); to Reality in its metaphysical sense, or even Being as such; but it might also denote human socionatural *Umwelt* or, more narrowly, some way of life seen as the only one worthy of true human beings (can we live without planes and computers, plastics and antibiotics?).”³⁶⁴

In their view, the complex ontology of the world and its end casts doubt on our metaphysical certainties and could lead us to reconsider the split between science and myth that characterises our Western system of thought, necessitating a critical exploration of the different narratives of the

³⁶¹ De Castro, E. V. (2015). Who is afraid of the ontological wolf?: Some comments on an ongoing anthropological debate. *The Cambridge journal of anthropology*, 33(1), cit., p. 9.

³⁶² *Ivi*, cit., p. 7.

³⁶³ The analysis is subdivided into four cases of humanity/world disjunction (humanity before the world, the world before humanity, humanity after the end of the world, the world after the end of humanity), which are in turn duplicated according to the affective tone, positive or negative, associated with that narrative.

³⁶⁴ Danowski, D., & De Castro, E. V. (2017). *The ends of the world*, cit., p. 22.

crisis circulating today.

Thus, on the one hand, articulations that are closer to us are analysed: from Chakrabarty's proposal to increase the temporal extension of the crisis beyond the recent period of globalisation (which, in a way, renders the critique of capitalism insufficient for analysis and instead leaves more room for Science as a "transcendent arbiter") through Anders' post-atomic proposal to Latourian revisitation of Gaia as "materialised history", that is, a rethinking of natural phenomena as part of an acted and contingent, intertwined and tumultuous history, rather than mere unfolding of predetermined laws and, therefore, radically distinct from human-cultural history.

On the other hand, there will be many allusions to Amerindian ways of conceiving the end, or rather endings, as "periodic apocalypses"³⁶⁵, as we see, for example, in Kopenawa's account of the falling of the sky as cycles of destruction and creation of a new world and a new humanity³⁶⁶. In the shaman's narratives, we see how the Yanomami and various indigenous peoples *associate* mining, extractive and industrial activities with the deterioration of the sky mantling: the ignorance and arrogance of the Whites will soon lead to the coming fall of the sky, the end of the world and the advent of a renewed humanity. This is told not only by (scientific proven)

³⁶⁵ Especially considering that "for the native people of the Americas, *the end of the world already happened* - five centuries ago. To be exact, it began on October 12, 1492. [...] The indigenous population of the continent, larger than that of Europe at the time, may have lost - by means of the combined action of viruses (smallpox in particular being spectacularly lethal), iron, gunpowder, and paper (treaties, papal bulls, royal encomienda concessions, and of course the Bible) - something of the order of 95 percent of its bulk throughout the first one and a half centuries of the Conquest. That would correspond, according to some demographers, to a fifth of the planet's population" (Ivi, cit., p. 104).

³⁶⁶ Kopenawa, D., & Albert, B. (2013). *The falling sky: Words of a Yanomami shaman*. Harvard University Press. As argued above, the world of perspectivism is always a world-for-someone, thus: "The destruction of the world is the destruction of humankind and vice versa; the re-creation of the world is the re-creation of some form of life, that is, of experience and perspective; and, as we have seen, the *form* of every life is 'human'. The idea of a final and definitive destruction of the world is equally rare, if at all existent, among these cosmologies. Humankind is consubstantial to the world or, rather, *objectively* 'co-relational' with the world, relational as the world" (Danowski, D., & De Castro, E. V. (2017). *The ends of the world*, cit., pp. 75-76).

signs such as extinctions, epidemics, droughts, floods, but also by the fact that, for example, in the words of a Guarani-Kaiowá healer from the state of Mato Grosso do Sul, "cockerels had begun to crow systematically out of time and - worst of all signs - she had overheard their chickens conversing 'just like people'."³⁶⁷

That Viveiros and Danowski use the term "associate" is no coincidence: as has already been said many times, to claim that indigenous peoples see the crisis "as if" it were the deterioration of the sky and the omen of its fall would reduce theirs to a "point of view" *on the* crisis, a (fanciful and erroneous) interpretation of it; on the contrary, our point of view would persist as a reflection of the true reality of the crisis. The same applies, then, to the "real" signs of the crisis and the "interpretations" of certain events "as if" they were signs: where our symptom of crisis is expressed through the measurement of rising average temperatures, the symptom of crisis in Mato Grosso may well be a talking cockerel. So:

"End of the world' only has a determinate meaning in these discourses - it can only be thought of as possible - on the condition that one determines at the same time for whom this world that ends is a world, who is the worldly or 'worlded' being who defines the end."³⁶⁸

Again, what is central to the ontological turn is to take others' views seriously as a possible world - and end of the world. By rejecting the univocity of the Western scientific perspective, new climatic possibilities emerge.

On the one hand, this strategy opens up a space to speak and listen to those who have long seen their voices silenced within the collective debate. An example is the documentary *Qapirangajuq: Inuit Knowledge and Climate Change* (2010) by Ian Mauro and Zacharias Kunuk, presented in 2010 at the imagineNATIVE Film + Media Arts Festival in Toronto:

"*Qapirangajuq* documents Inuit knowledge that has been ignored by southern scientists. That includes evidence that seal behaviour and fur thickness is changing, polar bear and raven populations are increasing,

³⁶⁷ Danowski, D., & De Castro, E. V. (2017). *The ends of the world*, cit., p. 78.

³⁶⁸ *Ivi*, cit., p. 20.

warmer winds are changing snow, overland navigation weather prediction difficult are more difficult, the sea is warmer, ice floes are thinner and ice is breaking up much earlier.”³⁶⁹

On the other hand, the multiplication of perspectives could remedy the violence - physical and epistemic - exerted on indigenous peoples on the basis of their alleged environmental ignorance. In this case, it is interesting to investigate the work carried out by the artistic duo *The Cool Couple*, who, after years of research on the practice of “conservation by utilisation” and at the conclusion of an artistic residency at the Nirox Foundation in South Africa, produced a video and a collection of articles entitled *The Cute and the Useful*. In the same, we find a text by the science communicator Fred Pierce³⁷⁰, who tells us how the conservation of animal species in South Africa, combined with the interests of capital, has led to the privatisation of almost one fifth of the country, given to philanthropists, corporations or conservation groups founded by them, owners of some 5000 private game reserves. While they make profits by claiming that the fees paid for the kills contribute to the (scientifically proven) conservation-management of wild species, the local human populations who know the land best are portrayed as poachers or destroyers of biodiversity, only to be driven off their land and become “conservation refugees”³⁷¹.

Thanks to the reflections of the ontological turn, Western science thus becomes more humble and less aggressive in the face of diversity, abandoning its own exceptionalism and embracing different perspectives on nature, as well as letting climate perspectives and possible visions, interactions, and resolutions of the crisis undergo a process of exponential multiplication and, perhaps, unstoppable fragmentation.

³⁶⁹ https://www.suzannemethot.ca/wp-content/uploads/2019/03/Inuit_Knowledge_and_Climate_Change.pdf

³⁷⁰ Pearce, F. (2023). Trophy Wildlife. In *The Cool Couple* (Ed.). *The Cute and the Useful*. NERO, 2023.

³⁷¹ For further discussion see Dowie, M. (2011). *Conservation refugees: the hundred-year conflict between global conservation and native peoples*. MIT press; Dawson, A., Longo, F., Survival International. (2023). *Decolonize Conservation: Global Voices for Indigenous Self-Determination, Land, and a World in Common*. Common Notions.

2.3 POLITICIZING SENSIBILITY

2.3.1 Against Aesthetic Autonomy

In *The Aesthetic Politics of Environment*³⁷², Berleant attempts to fund an environmental ethics from the perceptual conditions universally shared by human beings. He introduces the idea of “perceptual commons”, rooted in the conviction that the grounds of perception are necessary and immediate and must be universally present and accessible; having clean air to breathe in or a healthy space to live and move in are not demands that need further explanation, but are to some extent self-evident. For sensible life to be possible, certain factors in the environment are clearly necessary: the presence of life is itself a political claim.

Maintaining the usual non-dichotomous approach, Berleant will then continue the discourse, attempting to overcome the distinction between biological and cultural demands, as well as between the organic body and the social body. Firstly, he will argue how emotional, psychological and social dimensions and needs are also necessary to life and inseparable from organic functions, all of which are fused into the complex functioning of the human organism. Secondly, the author will argue that bodily sensibility can never be said to be strictly enclosed and private, but rather embedded within changing associations, relationships, processes and structures. Just like the environment, the body and its sensual demands are thus constantly articulated by social, cultural, historical and, above all, political factors: according to the author, in fact, sensibility is increasingly co-opted by the market and political institutions, so that desires and taste are no longer oriented towards individual and collective wellbeing, but rather towards the enhancement of profit and power.

At this point, however, a doubt emerges: are the perceptual commons impermeable to social and political articulations, constituting a kind of

³⁷² Berleant, A. (2012). *The Aesthetic Politics of Environment*, pp. 181-194.

unalterable metaphysical core to which we can anchor our ethical orientation, or do they always shift according to different historical, geographical and cultural coordinates? Following Berleant's reasoning, we should lean towards the second option. And so: if perceptual demands, initially universal and self-evident, turn out instead to be always politically situated and articulated, how will it be possible to discriminate between those that are more genuine and shareable and those that are instead co-opted by greater interests?

If organic need are understood in a strictly physical and biological sense, then individual and collective survival could be a criterion of authenticity and goodness, promoting the preservation of basic perceptual conditions; by integrating psychological, emotional and social needs and desires, as well as by recognising all needs and demands as always socially and historically articulated, Berleant cannot, however, but fall into paradox, leaving us without a true criterion of certain and precise evaluation (as there remains the risk that even our "basic" requests have already been unconsciously co-opted).

Enmeshed Sensibility

In the opening note to Berleant's article, we find a resonance that leads us towards a new author, also part of the recent upheavals in critical philosophy, capable of helping us to answer the proposed question or, even better, to enter into the outlined ambiguity. While recognising the independence of the two works, Berleant cannot but note the similarity of title and themes with Jacques Rancière's best known text, *The politics of aesthetics: The distribution of the sensible*. The French philosopher, like many of the voices animating this chapter, questions the relationship between perception and reality, fact and fiction, epistemology and ontology, knowledge and power, sensibility and politics.

Originating in response to requests made by two young philosophers, Rancière's text primarily questions the status of art and its political possibilities, as well as a particular conception of aesthetics that he

examines several times throughout its pages. Already among the first ones we find a possible definition capable of linking aesthetics and politics, not so much, it is said, continuing the discourse begun by Walter Benjamin regarding the “aesthetisation of politics”, but rather through an inverse movement that sees the conditions of perceiving as already embedded in power relations:

“If the reader is fond of analogy, aesthetics can be understood in a Kantian sense - re-examined perhaps by Foucault - as the system of a priori forms determining what presents itself to sense experience. It is a delimitation of spaces and times, of the visible and the invisible, of speech and noise, that simultaneously determines the place and the stakes of politics as a form of experience. Politics revolves around what is seen and what can be said about it, around who has the ability to see and the talent to speak, around the properties of spaces and the possibilities of time.”³⁷³

As Deleuze has repeatedly emphasised, Foucault's implicit intention is to develop a particular form of “neo-Kantism”³⁷⁴ capable of considering the conditions of experience never as general and universal, but always as particular, contextual and historical; it is thus that two terms that in Kant are at opposite ends of the spectrum, “a priori” and “historical”, are reconciled in Foucault's thought first³⁷⁵, and then in Rancière's³⁷⁶. The

³⁷³ Rancière, J. (2004). *The politics of aesthetics: The distribution of the sensible*. Continuum, cit., p. 13.

³⁷⁴ https://deleuze.cla.purdue.edu/wp-content/uploads/2022/04/05a-Foucault-111985-Eng-Rev-2022_0.pdf, p. 25.

³⁷⁵ <https://deleuze.cla.purdue.edu/wp-content/uploads/2022/04/02a-Foucault-102985-Eng-Rev-2022.pdf>, p. 3.

³⁷⁶ Let us also recall again the work of Crary, who, unlike Rancière's purely abstract analysis, seeks to develop Foucauldian intentions through an analysis of the material dispositifs of vision, thus also incorporating Benjamin's legacy (pp. 19-20). The two theses support each other; in fact, the author states how: “If I have mentioned the idea of a history of vision, it is only as a hypothetical possibility. Whether perception or vision actually change is irrelevant, for they have no autonomous history. What changes are the plural forces and rules composing the field in which perception occurs. And what determines vision at any given historical moment is not some deep structure, economic base, or world view, but rather the functioning of a collective assemblage of disparate

author thus advances in the Foucauldian ontological, aesthetic and political project, not only by upholding the two theses discussed above, according to which object and perception are necessarily socially and historically constituted, but also and above all by showing how they are always caught up in webs of power³⁷⁷.

Let us therefore retrace the three points, starting first of all with the ontological proposal put forward by the philosopher, aimed at eradicating the rigid distinction between reality and fiction:

“There is no reality in itself, but configurations of what is given as our reality, as the object of our perceptions, our thoughts and our interventions. Reality is always the object of a fiction, a construction of space in which the visible, the dicible and the feasible are interwoven. It is the dominant fiction, the consensual fiction, which denies its fictional character by presenting itself as the actual reality and drawing a simple dividing line between the realm of reality and that of representations and appearances, opinions and utopias.”³⁷⁸

The concept of “fiction” is reconfigured within Rancière's work, losing the negative valence often associated with it - which interprets it as an alternative to truth and reality - in order to be rethought as an inevitable way of presenting the real, an elaboration of structures of intelligibility, a strategy that allows one to “assigning meaning to the ‘empirical’ world of

parts on a single social surface. It may even be necessary to consider the observer as a distribution of events located in many different places. There never was or will be a self-present beholder to whom a world is transparently evident. Instead there are more or less powerful arrangements of forces out of which the capacities of an observer are possible” (Crary, J. (1992). *Techniques of the observer*, cit., p. 6).

³⁷⁷ “This dialectic of knowledge and power is today a thoroughly academic term in the established systematic reference, one-sidedly, no doubt, to Foucault [...] Certainly, if someone had been able to succeed in taking this conceptual deployment further than Foucault, it has been none other than Rancière” (Badiou, A. (2009). *The lessons of Jacques Rancière: Knowledge and power after the storm*. In Rockhill, G., & Watts, P. *Jacques Rancière: history, politics, aesthetics*. Duke University Press, cit., p. 31).

³⁷⁸ Rancière, J. (2008). *Le spectateur émancipé*. La Fabrique, cit., pp. 83-84. Translation mine.

lowly actions and commonplace objects"³⁷⁹. Fiction is not opposed to reality, but necessarily coexists with it; reality does not exist in itself, but exists only as *sensible reality*, a common fabric traversed by an incessant activity of folding and refolding of its surfaces. Rancière's proposal thus attempts to avoid the constructionist drifts according to which everything is narrative, that is, everything is, in a certain sense, unreal, inconsistent and ungrounded. The point of the discourse lies not so much in debating the distinction between reality and unreality, but rather in demonstrating how there is no world without strategies of intelligibility, no material traces without gestures of configuration, no facts without presentations of the same: strategies, gestures and presentations that can occur in an infinite number of ways and variations, making the real a *prismatic* question. Let us then move on to the second issue, namely the perceptual dimension. The same becomes central in the text *The emancipated spectator*, where Rancière breaks another dichotomy, namely that between action and perception:

"Emancipation begins when we challenge the opposition between viewing and acting: when we understand that the self-evident fact that structure the relations between saying, seeing and doing themselves belong to the structure of domination and subjection. It begins when we understand that viewing is also an action that confirms or transforms this distribution of positions. The spectator also acts, like the pupil or scholar. She observes, selects, compares, interprets. She links what she sees to a host of other things that she has seen on other

³⁷⁹ Rancière, J. (2004). *The politics of aesthetics*, cit., p. 36. According to Härle's interpretation, artistic objects (but, indeed, we could say, the objects that populate the whole of reality) can be said to be - to use our past lexicon - material-semiotic, that is, characterised by the indistrictibility between the "trace", the "real heterogeneity", the "material pre-inscription", and the infinite "gestures and procedures through which traces can be accepted, suspended, deactivated, cancelled, neutralised, assembled, re-inscribed [...], without losing their fundamental ambiguity" (Härle, C. C. (2011). Che cosa fa della traccia un'opera? In De Gaetano, R. (Ed.). *Politica delle immagini: su Jacques Rancière*. Luigi Pellegrini Editore, cit., pp. 112-113. Translation mine).

stages in other kind of place. She composes her own poem with the elements of the poem before her.”³⁸⁰

The redefinition of reality as an object of perceptions, thoughts and interventions cannot but lead to a redefinition of sensibility as an activity of intelligible rendering, a way of constructing sensible frames and strategies of articulating the real. Once again, Rancière seems to approach the previously discussed interventions, rethinking the senses no longer as organs of passive reception, but rather as “sensory practices” aimed at highlighting and surpassing, enlarging and shrinking, connecting and disconnecting, identifying similarities and differences, placing emphases, rhythms and frequencies. Sensibility is therefore on the one hand always situated and caught up in social, historical and political relationships³⁸¹, and on the other hand always enacted, dynamic and rearticulating, capable of making and unmaking those very meshes within which it finds itself entangled.

This brings us to the last point, that of power relations and the relationship between aesthetics and politics, a crucial node in Rancière's thought. We thus also return to the question that opened this section, namely the ambiguous relationship between subjugation and subjectivation, manipulation and resistance, co-optation of sensibility and sensibility requests. The paradox is explored by Rancière starting from certain aesthetic strategies and works of art, in particular the works of Josephine Meckseper and Martha Rosler³⁸². According to the philosopher, in fact, what the critical art of the last decades highlights is a certain conception of the mass spectator: ignorant, if not eager to ignore. On the one hand, the spectator is in fact incapable of understanding reality, i.e. of correctly interpreting the images, symbols and traces presented to him in such a way

³⁸⁰ Rancière, J. (2009). *The emancipated spectator*. Verso Books, cit., p. 13.

³⁸¹ On the situated character of perception, see also Tedesco, S. (2011). Politiche dei saperi e sistema dell'estetica. In De Gaetano, R. (Ed.). *Politica delle immagini*, where the author draws a parallel between Rancière's proposal and Helmuth Plessner's esthesiological project aimed at reconsidering the “body as a historical category” (p. 57).

³⁸² Rancière, J. (2009). *The emancipated spectator*, p. 27 and following pages.

as to grasp the truth behind them, because its sensibility has been co-opted; on the other hand, the spectator itself, although aware of certain truths, often decides to live “as if” these did not exist, proceeding in its own comfortable life and neglecting the problems of others. This conception thus opens up space for innumerable works of an ironic or melancholic nature, residual possibilities of that honest and lucid gaze on the world, a free and direct gaze that the artist alone is capable of embodying. Three characters, then, on stage: power, the people who are moulded by it and the artist who escapes the same.



Figure 6. *Josephine Meckseper, Untitled, 2005; Martha Rosler, House Beautiful: Bringing the War Home, Balloons, 1967-1972.*

Rancière rails against the arrogance of such criticism, which can only reproduce itself if “power” is conceived as a unitary bloc capable of widespread and pervasive control of the (almost) entirety of society:

“In effect, the procedures of social critique have as their goal treating the incapable: those who do not know how to see, who do not

understand the meaning of what they see, who do not know how to transform acquired knowledge into activist energy. And doctors need these patients to look after. To treat incapacities, they need to reproduce them indefinitely. [...] To escape the circle is to start from different presuppositions, assumptions that are certainly unreasonable from the perspective of our oligarchic societies anti the so-called critical logic that is its double. Thus, it would be assumed that the incapables are capable· that there is no hidden secret of the machine that keeps them trapped in their place. It would be assumed that there is no fatal mechanism transforming reality into image; no monstrous beast absorbing all desires and energies into its belly; no lost community to be restored. What there is are simply scene of dissensus capable of surfacing in any place and at any time.”³⁸³

We can clearly see how Rancière embraces Foucault's lesson on power: power is not in the hands of the dominant, who exercise it over the dominated, in this case by constructing appearances that conceal reality from the masses - a reality that will later be unveiled by a group of artists, critics and militant intellectuals; rather, power is continuously enacted and counter-acted in a diffuse, dispersed manner and at different intensities. On the one hand, therefore, reality does not need any “removal of the veil” placed by power, but rather to be continually contested and reconfigured, through an incessant work of folding and refolding of the common sensibility fabric. On the other hand, sensibility does not need to find its pure and internal point, i.e. impermeable to social and political relations, but rather to work critically within this condition of “conditioned indeterminacy”³⁸⁴, working on the ongoing negotiation and rearticulation of the tensions and relations that constitute, shape, nurture and support it. Returning to the question posed by Berleant, the key issue will therefore not be the identification of authentic *perceptual commons*, nor even the restoration of a co-opted sensibility; on the contrary, it will be necessary to

³⁸³ *Ivi*, cit., p. 48.

³⁸⁴ Fimiani, F. (2011). Lo spettatore indecidibile. L'emancipazione estetica tra poetica e retorica. In De Gaetano, R. (Ed.). *Politica delle immagini*, p. 118.

focus on the *orientation* and trajectory of the incessant and inevitable activity of revising such perceptual commons.

Such possibilities of (re)direction are in particular embodied in certain subversive gestures, which Rancière identifies as “scenes of dissensus”. Although sceptical towards the strategies of critical art, the philosopher nevertheless reserves a privileged position for art and politics within this field of contestation: political utterances and artistic practices are in fact realised whenever the evidence of the given - imposed by a “policing” regime of the sensible - is called into question, whenever deviations from the norm, unexplored speeds and rhythms, unforeseen modes of action and reaction, trajectories and strategies capable of reconfiguring the map of the real and the shared sensibility are generated³⁸⁵. Artistic and political gestures thus produce “dissensus”, that is, taking up and concluding the previous quotation:

“What ‘dissensus’ means is an organization of the sensible where there is neither a reality concealed behind appearances nor a single regime of presentation and interpretation of the given imposing its obviousness on all. It means that every situation can be cracked open from the inside, reconfigured in a different regime of perception and signification. To reconfigure the landscape of what can be seen and what can be thought is to alter the field of the possible and the distribution of capacities and incapacities. Dissensus brings back into play both the obviousness of what can be perceived, thought and done, and the distribution of those who are capable of perceiving, thinking and altering the coordinates of the shared world. This is what a process of political subjectivation consists in: in the action of uncounted capacities that crack open the unity of the given and the obviousness

³⁸⁵ I would venture to argue how artistic and political gestures do not perform this function; on the contrary, it is the function performed - resistant and re-articulating - that defines a gesture as artistic or political. At the same time, it is inevitable to note how, even though Rancière repeatedly advocates the importance of the redistribution of capacities, roles and competences, he often seems to discuss art in relation to the intertwining of artists, museums, institutions, books, theatres and so on. In this way, the envisaged extension of artistic (and rearticulating) capacities seems to be cautiously contained.

of the visible in order to sketch a new topography of the possible. Collective understanding of emancipation is not the comprehension of a total process of subjection. It is the collectivization of capacities invested in scenes of dissensus. It is the employment of the capacity of anyone whatsoever, of the quality of human being without qualities. As I have said, these are unreasonable hypotheses. Yet I believe that today there is more to be sought and found in the investigation of this power than in the endless task of unmasking fetishes or the endless demonstration of the omnipotence of the beast."

Writing Environments

Having outlined some general lines of the discourse developed by Rancière, let us now try to delve into the conception of the environment and nature traceable within two of his main works. Let us start with a text from the 1990s, *The Names of History*, within which the author begins to outline the strategy that, as already stated, will conclude with the disruption of the distinction between reality and fiction, making the latter an indispensable articulation strategy of the former. In this case the distinction concerns the two poles of "story" and "history", separated in English and never fully disjointed in languages such as Italian and French, where "storia" and "histoire" denote both the regime of narratives and that of official, objective or, better said, scientific reconstructions. In fact, Rancière seeks to identify the moment when the historical discipline decided to take that step that would later grant it the certification of science, that is, the moment when events were replaced by long durations, the qualities of situations were replaced by quantities and repetitions, proper names were replaced by multitudes and anonymous individuals, the novel of human life was replaced by the universal language of numbers. From this moment on, history does not abandon itself in order to become science, but rather assumes the "conjunction of contradictories"³⁸⁶ as its stylistic feature,

³⁸⁶ Rancière, J. (1994). *The names of history: On the poetics of knowledge*. U of Minnesota Press, cit., p. 7. As he will say years later: "Writing history and writing stories come under the same regime of truth" (Rancière, J. (2004). *The politics of aesthetics*, p. 38).

accepting its own ambivalence and thus developing *poetic* techniques capable of conferring the *scientific* appearance and status to historical narratives³⁸⁷.

What interests us here is to note how, within this discourse, the author also touches upon the status of a specific natural referent, namely the Mediterranean Sea. In particular, Rancière refers to the latter as described by historian Fernand Braudel in his work *La Méditerranée et le monde méditerranéen à l'époque de Philippe II* (1949). The philosopher recognises how maritime space is characterised by a fundamental constitutive plurality, be it geographical, i.e. a multiplicity of seas united under one name, or temporal, i.e. a multiplicity that includes the motionless, everyday sea, the sea occasionally traversed by battles and the sea often traversed by trade and merchant ships. At the same time, however, reading and rereading some passages of the text, he notes how the possibility of discussing the Mediterranean Sea as an historical object (if not sometimes subject) also and above all necessitates a certain unity of the same, an internal consistency that certainly has a physical and natural character, without however being reduced to this dimension: unlike the Atlantic Ocean, according to Braudel, there is in fact a "monochrome heart", an "even light which shines at the heart of the Mediterranean".

And so, Rancière cannot help but ask: "A homogeneous center, a world of even light... How does one not feel the excess of these expressions on every empirical description and every scientific determination?"³⁸⁸. According to the philosopher, in fact, the more one analyses the historian's treatment, the more the maritime unity appears to be not so much a simple matter of

³⁸⁷ The author goes on to explore other techniques developed by the historical discipline, in reference for instance to the use of sources, documents or testimonies, rereading them all, however, as stylistic procedures aimed at giving the impression of scientificity, rather than as true guarantees of rigour and objectivity, or rather "ontological modality to which a discourse is devoted" aimed at guaranteeing "a status of truth" (Rancière, J. (1994). *The names of history*, pp. 49-50). The story thus gives itself authority "in the very texture of narrative: in the modes of interpretation, but also in the style of the sentences, the tense and person of the verb, the plays of the literal and figurative" (cit., p. 89).

³⁸⁸ *Ivi*, cit., p. 83.

geography, but rather a matter of “historicity” and symbolic unity, i.e. of writing, narration, mythological and historical discussion, in particular the transcription of all those human activities of travel, exchange and trade that took place against that background: “The Mediterranean is as one neither by climate, exchanges, nor battles; nor by their addition or intertwining. It is as one because it is *such as it was written*”³⁸⁹. It thus reveals itself as “a body of perceptible evidence” and “a body of hidden knowledge”, “geography offered up to view” and “scholarly geology of the social times”, a “material space” and a “space of writing”³⁹⁰, or, as we would say, as a material-semiotic object.

Painting Social Inequalities

If in this first book Rancière deals with a specific natural element, namely the Mediterranean Sea, it will be in one of his more recent texts that he will focus attention on a generic referent so dear to environmental aesthetics – even though it has already been accused and criticised by the authors of the field on several occasions. Thus opens *The time of the landscape*:

“The time of the landscape discussed here is not the time when flowery gardens, majestic mountains, peaceful lakes, or rough and choppy seas started being described in poems or depicted on walls. It is the time when the landscape imposed itself as a specific object of thought. This object of thought was constituted through *quarrels* about how gardens should be designed, *descriptions* of parks adorned by classical temples or humble country lanes, *narratives* of journeys to solitary lakes and mountains, and *evocations* of mythological or rustic paintings. This book, then, will follow the specific twists and turns of these narratives and quarrels. What they gave rise to is not so much the taste for a spectacle that delights the eyes or elevates the soul, but the experience of *a form of unity in sensible diversity* capable of changing the

³⁸⁹ *Ivi*, cit., p. 85.

³⁹⁰ *Ivi*, cit., pp. 84-85.

configuration of modes of perception and objects of thought that had existed until then.”³⁹¹

Almost a century earlier, Simmel had already described the landscape as a fusion of disparate elements “into a sense-perceptual unity”³⁹², refusing to conceive it as a “mere external entity”, but rather describing it as “the intertwining of something given with our creative capacities”³⁹³. The further step taken by Rancière in this new text will be that of analysing the natural object no longer only from the constitutive material-semiotic entanglement, but adding a third element to the equation, namely the ethical and political one.

Starting from Kant's introduction of the art of gardening and the analysis of treatises on good gardening practices, Rancière attempts to illuminate the relationship that developed between the same, landscape painting and the concept of nature towards the end of the 18th century. Before Kant's intervention, in fact, art did not use nature, but merely *imitated it*, reproducing its elements within “non-natural” objects, i.e. paintings. By introducing gardening within the field of the arts, a new problem will emerge, namely: how can this practice be granted the status of art if its constitutive process does not concern the artificial imitation of natural elements, but rather the direct use of them? In what does the artistic character of such a practice consist of? According to Rancière, this passage involves a constant and a variation. The constant will be the criterion of artfulness, i.e. the imitation of nature; the variation, on the other hand, will concern the concept of nature itself: first considered as a set of laws that regulate and relate the various elements, nature will gradually take shape as a creative and composing force, itself an artist that presents scenes according to a new criterion, namely artistic freedom³⁹⁴.

³⁹¹ Rancière, J. (2022). *The time of the landscape: on the origins of the aesthetic revolution*. John Wiley & Sons, cit., p. x. Emphasis added.

³⁹² Simmel, G. (2007). The philosophy of landscape. *Theory, Culture & Society*, 24(7-8), 20-29, cit., p. 23. First edition 1913.

³⁹³ *Ivi*, cit., p. 28.

³⁹⁴ Rancière, J. (2022). *The time of the landscape*, p. 17.

What, then, does the transformation of the concept of nature entail for the possibilities of art? According to the philosopher, before this transition, nature only offered elements, leaving the painter free to imitate it, selecting, reproducing and perfecting these materials in order to compose an “ideal nature”, a scene full of beauty, which would, however, at the same time respect the invisible and underlying cause-effect relationships proper to it. Gardening, by directly intervening on such elements and modifying them, would only compromise and erode such relationships and necessities. By changing into an artist, however, nature would not only offer materials, but also a model of free composition reflecting a certain quality: the quality of the “picturesque” - literally, that which provides a good subject for a painting³⁹⁵. In this way, the art of painting retains its position, but also leaves room for the art of gardening, which is equally charged with the task of “imitating” nature: no longer reproducing its necessary laws (perhaps an impossible task for gardeners), but rather the free artistic movement that gives scenes the character we call the picturesque.

At this point, therefore, Rancière begins to outline his thesis.

First point: if the art of gardening requires careful observation of the unconscious work of nature so as to derive the methods and models of composition, at the same time, in order to be able to grasp the models, it is necessary to “learn to see them”, i.e. to acquire the habit of stopping to contemplate such spectacles; to acquire the idea that what one is contemplating is nature at work; and, finally, to learn that what is to be imitated is precisely such work. All this requires education, that is, the development of certain skills and the will to develop them³⁹⁶. And who better than landscape painters to educate this gaze? This is Rancière's first intuition: (1) the art of gardening³⁹⁷ can enter the space of the arts, but only on condition that it learns from its fellow painting a certain way of looking at and grasping the world – remaining, therefore, dependent and subordinate to it.

³⁹⁵ *Ivi*, p. 24.

³⁹⁶ *Ivi*, pp. 33-38.

³⁹⁷ Or, we might say, the art and artists of the landscape (*Ivi*, p. 37).

Second point: the category of the picturesque arose to fill the space created by Burke (and inherited from Kant³⁹⁸) between the beautiful and the sublime, the former connected to littleness, softness and delicacy, the latter to terror, power and darkness, as aroused in the spectator. This median category is informally articulated through the transitions made by lovers of painting, theorists of the picturesque garden and travellers fascinated by grandiose landscapes. In particular, in analysing the theoretical treatises of the time, Rancière emphasises a crucial point, namely a certain idea of composition, according to which the featured elements were not selected by nature, but rather came together magnificently through chance and accident. Second intuition: (2) the art of gardening and landscape imitates (painting which imitates) nature, understood as an artist *devoid of intentionality*, capable of composing scenes where the variety of elements and the multiplicity of accidents that follow one another in time merge into a unity of extraordinary beauty.

“Nature is an artist of a very peculiar sort, one superior to every other artist because it is not trying to make art. [...] Nature is an artist giving lessons to the arts, but not because it offers exemplary lines or surfaces, but because it refuses the principle that served as the norm to every art worthy of its name: selection. Nature’s defining trait is that it does not select or distinguish. Instead, it allows the coexistence of all manner of objects, all varieties of forms, colors, light, and shadow. The absence of selection accomplishes the principle of unity in variety by combining natural elements through the randomness of their development, be that the random work of time and the seasons, or of the activities that have impacted them. That is how it produces the unifying effect that the art of gardening must imitate: not through the collection of selected parts, but through the fusion of an infinity of constant elements and accidental circumstances. What must be imitated in nature is its *blind way of working* [...]”³⁹⁹.

³⁹⁸ *Ivi*, pp. 60-63.

³⁹⁹ *Ivi*, cit., p. 24 / pp. 28-29. Emphasis added.

Third point: the aesthetic revolution and the introduction of gardening within the field of the arts intersect with two coeval political processes, namely the French Revolution and the gradual elimination of the English commons. The same year that Kant published his aesthetic work, 1790, would be the year that Burke published *Reflections on the Revolution in France*. The author of the treatise on the beautiful and the sublime will this time analyse and comment on the French Revolution and its aftermath, accusing the rebels and the new legislators of being “like their ornamental gardeners, forming everything into an exact level”⁴⁰⁰. According to the philosopher, in fact, the flattening of differences that took place in the “social landscape”⁴⁰¹, as well as in the gardens and countryside of the French Republic, represents the interruption of the slow and accidental unfolding of nature, the terrible dissolution of the “natural” order. The natural order remains, on the other hand, in the landscape of the English countryside, a landscape forged by tradition, open to accommodate all those novelties and accidents capable of fitting harmoniously into its unity, thus avoiding the abrupt and radical subversion of the ancient elements and established virtues⁴⁰².

At this point Rancière asks: what story lies behind this supposed “naturalness” of the English landscape, so celebrated by Burke? In the 17th century, the revolutionary movement of the “levelers” developed in England, which, similar to the French claim for a “levelling out” of social

⁴⁰⁰ Burke, E. (2003). *Reflections on the Revolution in France*. Yale University Press, cit., p. 146.

⁴⁰¹ As stated in the conclusion to the text: “A landscape is the reflection of a social and political order. A social and political order can be described as a landscape” (Rancière, J. (2022). *The time of the landscape*, p. 67).

⁴⁰² “For Burke, the tall trees of parks, with their protective shade, symbolise an *aristocratic and traditional order* that is good for everyone because it is founded on nature, and nature ensures the slow growth of plants and gives each its *respective size and place* in the whole”. In contrast, Wordsworth celebrates the “naturalness” of equality realised in the French landscape: “For Wordsworth, the garland of flowers on rustic crossroads, maypoles, and *republican* triumphal arches symbolises a fraternal order based on a nature that generously distributes its goods in *equal measure* to people who have no desire to rise above others” (*Ivi*, p. 68).

differences, joined forces to challenge the rampant spread of enclosures. The joint action of landowners and state authorities guaranteed - in contrast to the "crazy" landscape project characterised by the maintenance of massive commons - a "harmonious gradation" of different socio-economic conditions. Under the guise of maintaining this "natural" landscape, what the state and landowners undertook was instead, according to Rancière, an arrogant (but still gradual and *almost* imperceptible⁴⁰³) action of appropriation of the commons at the expense of its shared use by the poorer sections of the population. On the one hand, therefore - according to Burke - the unnaturalness of the revolutionary and *abrupt* process of levelling, on the other, the naturalness of the *gradual* process of expropriation.

And so we come to the heart of the matter, namely the intertwining of art, aesthetics and politics. As mentioned, the process of the dissolution of the commons and the gradual spread of enclosures were slowly modifying the English landscape. What was necessary at this point was to inscribe this new view within the realm of "naturalness" and "neutrality". And so, while Burke criticised the French handling of his "social landscape", the English landscape theorists Knight and Price (both wealthy landowners) formulated in writing the proper character of the picturesque, granting the new pictorial images (portraying the violent expropriations and modifications of the land) the two functions described above: on the one hand, (1) serving as *models* for the art of garden management and landscape modelling; on the other hand, (2) that of embodying the *unintentional* movement of nature, showing scenes capable of conveying the feeling of "naturalness", of the harmonious unity of accidents and variations. The activity of gardeners and landscape

⁴⁰³ "The levelling practice of the rich did meet with opposition, sometimes in the form of petitions, and sometimes in more direct actions, as was the case in West Haddon (Northamptonshire) one August day in 1765. Two artisans invited workers to a football match that, once the crowd had gathered, turned into a bonfire that consumed the fence poles and rails that had been delivered for the construction of an enclosure. The practice was also stigmatised in a poem destined for fame, 'The Deserted Village', in which Oliver Goldsmith evokes the obliteration of the landscape of a life at once laborious and joyous [...]" (*Ivi*, p. 72).

creators (i.e. the expropriation of land by landowners and dominant state subjects) would thus operate within this framework of “neutrality”, as inspired by the picturesque and the art of landscape painting, which would merely portray the spontaneous movement of nature in a transparent and innocent manner.

This operation thus makes it possible to conceal the social and political components at play in the articulation of the image of nature and, in parallel, of all the artistic and spatial practices that manage and modify the material aspects of it. On the contrary, Rancière cannot but remind us how reality is always an object of fiction, that is: any (re)presentation of nature is only given within the selection of specific frames and articulations of the same.

Unfortunately, this lesson is often forgotten. As a result, (3) the slow and gradual process of privatisation will not only be *portrayed* and *incited* by landscape paintings, but above all will be *inscribed* by them within the frame of “naturalness”⁴⁰⁴, masking the forces and interests that promoted it and

⁴⁰⁴ The attempt to determine moral norms and guidelines by rooting them in nature, i.e. to derive answers to practical questions from assertions about “facts” (*from is to ought*), has been criticised on several occasions through the argument of the naturalistic fallacy (Iovino, S. (2004). *Filosofie dell'ambiente*, p. 37). Daston also highlights the incessant human attempt to anchor morality within the immutability and universality of nature: “Why do human beings, in many different cultures and epochs, pervasively and persistently, look to nature as a source of norms for human conduct? [...] Nature's authority has been enlisted by reactionaries and by revolutionaries, by the devout and secular alike. In various and dispersed traditions, nature has been upheld as the pattern of all values: the Good, the True, and the Beautiful” (p. 3). In the conclusion to the text, the author emphasises how nature is actually multiple in itself, always changing in relation to the selection and interpretation to be made of it: “It is, so to speak, in the very nature of the word ‘nature’ to mean many things. Therefore, whichever norms are drawn from one sense of nature are more than likely to be in competition with, if not contradiction to, other norms drawn from nature. It was just this proliferation of norms in nature that led critics like Mill to throw up their hands in exasperation: nature will never speak with one voice, so why listen?” (Daston, L. (2019). *Against nature*. MIT Press, cit., p. 61). According to the author, nature will continue to serve as a referent for morality, no longer considered as a univocal order, but simply as a repository of different (alternative and conflicting) orders.

concealing them within the unconscious unifying and harmonising movement of nature. This, then, is Rancière's third and final insight:

“The art of gardening thus distributes its effects on two levels: on one, it proposes to concretely arrange a landscape of the visible whose lines are not cut by property; on the other, it contributes to the forms of perception of a common world shared by owners and non-owners. It will be said that this is all about appearances. But, in the age of revolutions, which is also the age of aesthetics, everyone knew that appearance is not the opposite, or the mask, of the real. It is what opens or closes the access to the reality of a common world. Nor is it the product of human artifice and lies, which stand opposite and against the simplicity of nature. It is nature itself that teaches its use and initiates the movement that deploys appearances and their effects. The whole question turns on figuring out *where we can fix the destination* of this movement, and the ends to which it orients rational beings in an era of storms and tempests sparked by revolutionaries in love with natural reason and rustic simplicity. The ideal of reasonable property fused into the accidents of the landscape that these lovers of painting propose is *one way* to fix its limits.”⁴⁰⁵

The author thus shows us how nature is never naturally given; rather, it will necessarily be configured in different ways, at different times and places, through different media, narratives, discursive, visual, gestural and relational trajectories and, above all, according to particular political interests⁴⁰⁶. What remains to be done therefore is not to deconstruct its social articulation, but rather to define its direction and orientation.

⁴⁰⁵ Rancière, J. (2022). *The time of the landscape*, cit., p. 80. Emphasis added.

⁴⁰⁶ “The time of landscape is the time when the harmony of landscape gardens, or the disharmony of wild nature, have led to an upheaval of the criterion of beauty, and even of the meaning of the word ‘art’. This upheaval has led to another, which has affected a fundamental notion in both common usage and philosophical reflection: nature. What affects nature also affects the society that is supposed to obey its laws. And so the time of landscape is also the time in which the happy organisation of society has borrowed its metaphors from the harmony of fields, forests and watercourses” (*Ivi*, p. xi).

Rancière's reflection on landscape thus allows us to rethink environmental aesthetics along trajectories completely forgotten by most of the philosophers in the field⁴⁰⁷. Taking Carlson's and Brady's aforementioned contributions as an example, we see how they are almost completely devoid of ethical-political insights. Carlson argues how landscape is characterised by formal, factual and cultural information⁴⁰⁸. We have already seen how his position opposes both indeterminacy - assuming that the landscape is fundamentally a material entity, accidentally traversed by cultural meanings - and radical multiplicity - given that, precisely, the multiple meanings are placed on a definite and unambiguous landscape. Returning to the explanation given regarding the different information, we can also note that not only are the formal and factual ones pacified and free of conflict, but also the cultural ones lack any trace of political disagreement. Indeed, the factual ones would refer to ordinary, scientific, historical and functional descriptions, while the cultural ones would refer to nominal, imaginative, mythological and literary descriptions. We are well aware that none of these descriptions can be said to be totally free of political tensions, but the fact that Carlson does not explicitly refer to this specific dimension suggests that the author, although recognising a plurality of possible historical or literary descriptions, perhaps does not perceive the power dynamics that make some descriptions more truthful and valid than others.

Conversely, Brady recognises how aesthetic judgement is fundamental in shaping conservation priorities and land management plans, often resulting in conflict and disagreement⁴⁰⁹. At the same time, however, as mentioned above, the disagreement concerns, in Brady's view, not so much the

⁴⁰⁷ Indeed, Rancière, dealing with landscape aesthetics, embodies that posture defined as "Critical-Substantive-Culturalist", according to which "an aesthetic relation to landscapes ideologically removes their historical rooting in the bourgeois and individualistic mindset, as ways to control and exercise power over space and time, to serve the needs of politics, trading, military, navigation, and so on" (Siani, A. L. (2022). *Landscape Aesthetics*. In *International Lexicon of Aesthetics* (Vol. 5, pp. 1-6). Mimesis, cit., p. 3).

⁴⁰⁸ Carlson, A. (2000). *Landscape and Literature*. In *Aesthetics and the Environment*.

⁴⁰⁹ Brady, E. (2003). *Aesthetics of the Natural Environment*, p. 215.

primary character of the object and its primary qualities, i.e. the “non-aesthetic” description of it, but rather the subsequent stages concerning the aesthetic description and overall verdicts⁴¹⁰. On the contrary, Rancière attempts to show us how the very description of nature, of its deepest character, its innermost workings and features, is from the outset imbued with political conflicts.

It is from his invitation to question any unquestionable assumption that we proceed, attempting to challenge one of the founding premises of his own discourse, which has so far remained partially hidden.

2.3.2 Interested Naturalization

In the opening of *The politics of aesthetics: The distribution of the sensible* Rancière claims:

“Aristotle states that a citizen is someone who has a part in the act of governing and being governed. However, another form of distribution precedes this act of partaking in government: the distribution that determines those who have a part in the community of citizens. A speaking being [*L’animal parlant*], according to Aristotle, is a political being [*animal politique*]. If a slave understands the language of its rulers, however, he does not ‘possess’ it.”⁴¹¹

The distribution of the sensible is not only about the differential articulation of reality according to different forces and energies, but also about the differential division of the capacities of articulation, i.e. the definition of who will be included in the domain of those who can configure the real and who will be excluded from that domain, relegated to the margins and deprived of aesthetic and political potential. One of the first separations highlighted by Rancière is thus that between the participants in the political game in the strict sense and the excluded from that same game, namely the slaves. At

⁴¹⁰ *Ivi*, p. 201.

⁴¹¹ Rancière, J. (2004). *The politics of aesthetics*, cit., p. 12.

the same time, however, by telling us about the revolt of the plebs in the Roman Republic⁴¹², which rose up against Appius Claudius' desire to deny space to the same - who, according to him, would limit themselves to making sounds (*phone*) rather than exercising speech (*logos*) -, the philosopher shows us the very essence of his conception of politics: not only the ontological-aesthetic disagreement over the characters, properties and boundaries of reality, but the questioning of places and parts, the revealing of a misrecognition and the taking of the floor by those to whom speech had not yet been granted.

At this point, however, a possible complication arises. Even before the dividing line between freemen and slaves can be drawn, there is a line that is even more pronounced and, perhaps for this very reason, gone unnoticed. Cecchi emphasises how, in order for the freeman-slave distinction to be established, the dominated person must be considered not so much as a "savage", characterised by the residual *animality* of the human being, but rather as a slave, characterised instead by a residual and not fully completed *humanity*:

"[...] the free man [...] knows that the slave's understanding, its *aisthesis* of the *logos*, is not the result of simple adaptation or training - concepts that invest the animal being rather than humanity - and that that *aisthesis* will always be something more than the mere accumulation of successive sensible impressions, which is the model with which we represent the animal's learning, made up of repetition, habit and expectation, as in Pavlov's dog experiment. Paradoxically, the master relies precisely on the residual, aesthetic (in the sense of merely sensible) humanity of the slave to maintain its dominion: in the relationship between rulers and ruled, it must be assumed that the

⁴¹² Rancière, J. (1999). *Disagreement: Politics and philosophy*. University of Minnesota Press, p. 24.

ruled, although not free, have at least what Kant calls *sensus communis vulgaris*, without which any communication would be impossible.”⁴¹³

Given the differences, there is therefore a certain spectrum of similarity between freemen and slaves, even if the same is perpetually obscured for the sake of domination. This spectrum consists in the common condition of humanity, in the possibility of minimal communication and mutual understanding. Let us then try to take up Moscati's provocation: “in the idea that every inequality presupposes, even if only in the form of a principle, an equality between speakers, is there not a kind of humanism”⁴¹⁴?

Dolger promptly replies, arguing that Rancière, through the fetishisation of a certain type of communication and linguistic act (the *logos*, as distinct from the *phone*⁴¹⁵), decides to exclude a priori from the political field the non-human animals, to whom this capacity for interaction is precluded⁴¹⁶. In the philosopher's own political formulation – aimed at always leaving space for the widening of the margins promoted by those who inhabit those margins and scrutinise them from the outside – a further metaphysical fence is therefore hidden, an insurmountable borders for the animal kingdom – incapable, precisely, of the exquisitely human linguistic act.

⁴¹³ Cecchi, D. (2011). L'arte dei disaccordi: la questione della democrazia tra politica ed estetica. In De Gaetano, R. (Ed.). *Politica delle immagini*, cit., pp. 84-85. Translation mine.

⁴¹⁴ Moscati, A. (2011). Di alcuni motivi nella politica di Rancière. In De Gaetano, R. (Ed.). *Politica delle immagini*, cit., p. 233. Translation mine. He then continues: “I do not want to criticise a priori every form of humanism, but I think that the problems that politics poses today also concern human beings insofar as they live on that common and finite substratum called earth and, therefore, cannot but involve non-human elements and actors”.

⁴¹⁵ “‘Animals’ lack of rationality also leads Aristotle to insist that they are not genuinely political. Animals are equipped only with ‘voice’ (phōnē, akin to mere sound or code), which is capable of expressing pleasure and pain but is insufficient for political life. Human beings, by contrast, are capable of rational discourse (again, the Greek term is *logos*), a capacity that allows them to express ‘what is beneficial or harmful, and hence also what is just or unjust’ (Calarco, M. (2015). *Thinking through animals: Identity, difference, indistinction*. Stanford University Press, cit., p. 8).

⁴¹⁶ Dolger, S. P. (2014). *Animal republics: Plato, representation, and the politics of nature*. In APSA 2014 Annual Meeting Paper, pp. 3-4.

Dolger thus highlights Rancière's wilful neglect of all those situations of communication between different species, now proliferating not only on a domestic and everyday level, but also within the scientific observation and interpretation of the same. In addition to the case reported by the author, relating to the production of new linguistic acts by chimpanzees⁴¹⁷, it is possible to highlight this movement within the broader field of ethology, which today sees an increasing number of publications aimed at highlighting the similarities, rather than the differences, that characterise human and non-human animals, as well as the ways of establishing and recreating language within the animal kingdom⁴¹⁸. We therefore start from the question of language to explore three main issues: (1) the ethical-aesthetic problem that arises in relation to the distinction between human beings and nature (in this case the non-human animal); (2) some possible strategies for solving the problem; (3) the political implications of the problem and of its resolutions.

Although there are interesting perspectives emerging from both the feminist⁴¹⁹ and anti-racist and post-colonial⁴²⁰ debates - as well as from the

⁴¹⁷ Hopkins, W. D., Taglialatela, J., & Leavens, D. A. (2007). Chimpanzees Differentially Produce Novel Vocalizations to Capture the Attention of a Human. *Animal behaviour*, 73(2), 281-286. See also the website from which such communicative acts can be heard: <https://chimpsnw.org/2022/11/terrys-bronx-cheers/>.

⁴¹⁸ We cite here one of the most recent and curious findings: Pardo, M. A., Fristrup, K., Lolchuragi, D. S., Poole, J. H., Granli, P., Moss, C., ... & Wittemyer, G. (2024). African elephants address one another with individually specific name-like calls. *Nature Ecology & Evolution*, 1-12.

⁴¹⁹ According to Calarco, three main approaches emerge within the feminist discourse. The first concerns *care ethics*, which we will return to later. The second concerns the poststructuralist approach, aimed at identifying how the same processes of binary distinction and "othering" reserved for the feminine, homosexuality and so on, are reproduced at the level of the human-animal distinction (for a revisiting and revival of Butler's thought see the contributions collected in Filippi, M., Reggio, M. (2015) (Eds.). *Corpi che non contano. Judith Butler e gli animali*. Mimesis). Finally, there is a third current identifiable with the emergence of new materialisms and posthuman approaches, for example within the positions of Barad and Haraway (Calarco, M. R. (2020). *Animal studies: the key concepts*. Routledge, pp. 76-79).

⁴²⁰ In this case we see how Calarco emphasises, on the one hand, the processes of de-humanisation and animalisation reserved for colonised peoples, aimed at guaranteeing

intersection between the two⁴²¹ - we will now focus on approaches from the macro-field of *Animal Studies*, referring in particular to the reconstructions and proposals of Matthew Calarco, one of the main systematisers of the field of study.

The Human-Animal Divide

Let us therefore start from point (1), namely the ethical-aesthetic problem. According to Filippi, this problem can be described as the “animal issue”, i.e. as the set of critical aspects existing in the relationship between human and non-human life, in particular in the current treatment of the latter, produced from the perception of a clear and insurmountable difference. In fact, the material conditions of animal life cannot therefore but be indissolubly linked to the *production of the Human*, as well as to its *perception* as the antithesis of the Animal. This process of “naturalisation”, i.e. the relegation of non-human animals within the (non-human, pre-social, a-historical) realm of “nature”, is generated at varying intensities in different epochs and historical transitions, beginning with the Neolithic period, passing through the global spread of monotheistic religions, Humanism, the Renaissance, the industrial and techno-scientific revolution and, finally, the modern era. Looking at this stratified and complex history, we see how the ideology aimed at the elaboration of the Human (and the relative split with the Animal), does not precede animal exploitation and slaughter, but is in constant co-evolution with the same material practices of domination; not a cause, but a legitimising and sustaining device that allows its undisturbed continuation. Filippi defines this device as the “specist machine”, a machine capable of materialising the Human not so much as a “result of the empirical

impunity and justifying the violence exercised on them (*Ivi*, pp. 45-46) and, on the other hand, the processes of enslavement and exploitation to which animals are subjected today, a treatment not too dissimilar from that which has been prolonged for a long time against racialised people (*Ivi*, pp. 113-114).

⁴²¹ See in particular the chapter “Razzismo, animalizzazione, colonialismo. Il femminismo antispecista nero” in Timeto, F. (2024). *Animali si diventa. Femminismi e liberazione animale*. Tamu.

discovery of identified biological traits” but rather as a “bureaucratic certification of the supposedly natural origin of the social relations in place”⁴²².

The genealogy of the concept takes us back a few years, specifically to the text *L'aperto. L'uomo e l'animale*⁴²³, where Giorgio Agamben attempts to shed light on the process and functioning of the “anthropological machine”. After some references to philosophy and theology, aimed at showing the emergence of the idea of “life” and some of the fundamental divisions (organic life and animal life, for example) through which it becomes articulable and thinkable, the philosopher proceeds in his research by investigating the first scientific attempts to establish the famous human-animal distinction. Among the earliest texts are, for example, *Orang-Outang, sive Homo Sylvestris, or, the Anatomy of a Pygmie*, published in 1699 by Edward Tyson, where comparative anatomy becomes a useful tool to show the physical differences between ape and man.

Exactly two centuries later, in 1899, it would be Ernst Haeckel who would reunite the two domains, scientific and philosophical, within one of his best-known works: *Die Welträtsel*, or the *The Riddle of the Universe*. The text attempts to continue the path already traced in 1874 in *Anthropogenie*, where the author questioned the greatest of riddles: the origin and history of man. In this first text, Haeckel reconstructs this story, starting from the Silurian fish to the man-apes or anthropomorphic apes, and finally arriving at the human being. The interesting thing, however, is the hypothesis that the author puts forward, namely the existence of a “ape-man” capable of acting as a bridge between the anthropoid apes and man. Such a “ape-man”, *Affenmensch*, or *Pithecanthropus alalus* (as it lacks language) “would” constitute the last stage before the talking man.

It would, in fact, remain mere conjecture, until, a few years later, in 1891, Eugen Dubois, a Dutch military doctor, discovered a femur and a piece of skull on the island of Java that were very similar to those of the coeval human being: relying on the fantasy of the “ape-man”, the doctor decided

⁴²² Filippi, M. (2017). *Questioni di specie*. Elèuthera, cit., p. 56.

⁴²³ Agamben, G. (2004). *The open: man and animal*. Stanford University Press.

to name this being *Pithecanthropus erectus*. Thus, after only hypothesising it, Haeckel was able to affirm the existence of this missing link, the missing piece that proves the gap between humans and animals. It is in this way that the “ape-man” turns out to be not so much a concept derived from the empirical deduction of evidence and data, but rather, on the contrary, a foundational fiction only subsequently justified through a random possibility of existing materiality, adapted to the speculative (and, perhaps, political) needs that precede it.

The distortion and prejudice are already evident, but Agamben decides to go ahead and tell us a second story that took place in the same years, where another researcher will admit the short-circuit emerging from his own argument. In this case, the protagonist is Heymann Steinthal, a linguist who, several years before Haeckel, had similarly hypothesised the existence of a pre-linguistic stage of the human. At this stage, language, precisely, has not yet emerged. However, rather than identifying an indistinct mass of non-speaking animal beings, the author decides to circumscribe within it a “pre-linguistic human” group (as Haeckel's “ape-man” might have been) that, we repeat, although not yet effectively human - since it lacks language - is nonetheless potentially human: such a being possesses a certain “excess of forces”, a superior perceptive and sensitive capacity that can potentially mutate into something new. A few more years go by and, after reading Darwin's and Haeckel's theories, it is Steinthal himself who returns to his own proposal, recognising in fact the necessary *fiction* that supports it:

“We have compared this purely hypothetical stage of the human soul with that of the animal, and have in the first discerned, in general and in all respects, an excess of forces. We then had the human soul apply this excess to the formation of language. We have thereby been able to show why language originated from the human soul and its perceptions, and not from that of the animal... But in our description of animal and human souls we have had to leave aside language, the possibility of which we were precisely supposed to prove. It first should have been shown whence stems the force by means of which the soul forms language; this force which has the ability to create language

obviously cannot stem from language. For this reason we have invented a stage of man that precedes language. But of course, this is only a fiction [...]"⁴²⁴

In order for it to be possible to draw a clear and decisive dividing line between human and animal on the basis of language, it is necessary to generate what Agamben defines as a "zone of indeterminacy", that is, an indistinct being, not fully human (insofar as it lacks language) but, at the same time, no longer animal (insofar as it possesses an excess of forces). Recognising the indistinct being as pure *fiction*, the zone of indeterminacy - i.e. the dividing line between human and animal being - reveals itself not so much as a set of evident and irrevocable distinctions of physical and material traits, but rather as a terribly empty space, animated purely by the constant games of inclusion and exclusion of characters and capacities, by the animalisations of the human and the anthroporphanisations of the animal, by an incessant process of shifting and displacement, selection and removal.

One of the most persistent strategies of inclusion/exclusion over time, one of the multiple (supposed) differences on which the anthropological machine feeds is for sure the presence/absence of linguistic capacity. Despite the criticisms of Agamben, Filippi, and several other emerging voices⁴²⁵, language continues to function (as seen also in Rancière's discourse) as a marker of otherness, a marker most commonly defined, within and beyond the field of *Animal Studies*, as "anthropological difference".

Let us therefore also analyse the origin of this second term and return to Hans-Johann Glock's famous article entitled *The Anthropological Difference: What Can Philosophers Do to Identify the Differences Between Human and Non-human Animals?*. After outlining some trajectories of philosophical anthropology, the author argues how the discipline developed along two

⁴²⁴ Steinthal, H. (1881). *Abriss der Sprachwissenschaft, Einleitung in die Psychologie und Sprachwissenschaft*. Dümmler. (1a ed. 1871), cit., pp. 355-356. Agamben's translation.

⁴²⁵ Calarco, M. R. (2020). Language. In *Animal studies: the key concepts*, pp. 89-92.

parallel lines of research: on the one hand, the “anthropological universals”, i.e. those constants capable of defining the human group internally, and on the other hand, the “anthropological difference”, i.e. that marker capable of defining the group by external negation with respect to the animal⁴²⁶ (and, in earlier times, also with respect to the divine).

Although, as Glock argues, “there is nothing special about being special” - in other words, even if a specific characteristic of the human were to be found, this would not make it any more special than any other animal species which, precisely as a species in its own right, is defined by a specificity of its own (as may be the ultrasound navigation of bats) - in order for philosophical anthropology to proceed, this special character had to be preserved, albeit in a purely fictitious and strategic manner to the theoretical argumentation. Among the infinite differences, a certain “special” difference should therefore be highlighted:

“[...] philosophical anthropologists are looking for a difference with a difference. They are searching for features of homo sapiens that (a) set us apart ‘categorially’ or ‘essentially’ from all other animals; (b) are fundamental, in that (all) other relevant differences derive from them; (c) are important, notably to our self-image, for instance because they assure us of a higher spiritual or moral status than animals.”⁴²⁷

The point, then, does not lie in the denial of differences, but rather in the awareness of how, in the midst of a multiplicity of widespread and proliferating differences among a multiplicity of organisms, some begin to

⁴²⁶ Glock provides a list of the main traits that have been candidates for anthropological difference over time: “thought (rationality, reason); concepts and abstraction; language; knowledge of necessary truths; consciousness or sentience; selfconsciousness (knowledge of one's own mental states); knowledge of the mental states of others; an immortal soul; a moral sense; a sense of humour; a sense of history; anticipation of the future, including one's own death; a sense of beauty; tool use or tool manufacture; technology; free will; a capacity to act (for reasons); a capacity to follow rules (normativity); personhood or personality; a capacity for culture or cultural progression” (Glock, H. J. (2012). *The anthropological difference: What can philosophers do to identify the differences between human and non-human animals?*. *Royal Institute of Philosophy Supplements*, 70, cit., p. 111).

⁴²⁷ *Ivi*, cit., p. 109.

be more *salient* than others. Moreover, Glock argues, in order for certain characteristics and differences to certify the presence or distinctiveness of mind, thought, intelligence and so on, it will be necessary to establish *circularly* or *simultaneously* - thus, often previously or concurrently - what mind, thought, intelligence "are". We thus see how the question, more than biological, can easily be reread in a political perspective: if the founding interest of research is to prove our human specificity, then we will not hesitate, at the appearance of undesirable results, to modify the very definition of the objects of investigation, so as to redefine also which are the relevant characteristics to pay attention to⁴²⁸.

As already argued by feminist and queer theories, the work to be done consists not so much in the denial of the materiality of properties and

⁴²⁸ As Filippi recalls, in relation to the story narrated by Corbey: "The affair in question is, in a nutshell, the spasmodic succession of a series of progressive 'empirical adjustments' that have made it possible, despite evidence to the contrary, to continue to uphold the ideological axiom taken for granted even today. Here are the details. The aprioristic axiom: Man is the most intelligent animal. The uncritical assumption: intelligence is synonymous with argumentative and rational capacities and certainly not, for instance, with the ability to make oneself 'invisible' to predators, to find one's way home in the tangle of a jungle or to change one's flight path by moving the wings according to the updrafts; in other words, the intelligence spoken of is already and only that of Man. Empirical adjustments: Man is the most intelligent animal because it has the largest brain. Colonial expansion, however, leads Man to encounter more and more animals, e.g. whales and elephants, with brains larger than his own. The system breaks down and a solution must be found. So Man becomes the most intelligent animal because it has the highest ratio of brain mass to body mass. Unfortunately, an animal that had hitherto lived in the shadows reached the limelight: the animal with the 'best' brain/body ratio is... the rat! New crisis and, without losing heart, new correction: Man is the most intelligent animal because it is characterised by 'better' allometry (i.e. a more efficient ratio between relative organ size and physiological or behavioural performance). But in this case, it is the dolphins that are breathing down Man's neck. Dolphins immediately forced to surrender by the introduction of a new correction based on metabolic rates. Moral of the story: onwards and upwards, without shame, as long as we continue to emphasise the exceptional nature of Man. [...] Zooming in on the narratives around the uniqueness of Man, it will not be difficult, as already mentioned, to see a gigantic flaw emerging in their plot: those who classify are so interested in the 'result' of their classification that they already have it in mind before they 'discover' it" (Filippi, M. (2017). *Questioni di specie*, cit., p. 47. Translation mine).

differences, but rather in the awareness of the salience given to some over others, in the search for the origins and power dynamics that generate and support the dominant definitions, frames and conventions, and in the eventual subversion of these when necessary for a better living. And so, just as Butler deconstructs the “metaphysics of substance” underlying the distinction between male and female, Glock goes on to attempt to dismantle the essentialism underlying the difference between human and animal⁴²⁹. We can summarise his points as follows:

- Temporality: the advent of Darwinian theory, aimed at supporting constant evolutionary changes, shows the human being as emerging from the evolutionary process, rather than being based on an eternal or temporally invariable essence. All that remains for the essentialist at this point is to focus on the present, i.e. to detect the presence of an “anthropological difference” through today's comparison between present-day human beings and the animals around them;
- Genetics: the search for anthropological difference then moves into the human (and non-human) genome. It is unfortunate, however, that there are often substantial variations in the genome of “humans”, as well as high similarities between these genomes and those of various animals. From the genotype we then move on to the phenotype: here, too, however, we note

⁴²⁹ Filippi himself emphasises the parallel: “[...] what allows us to distinguish *Homo sapiens* is not so much the simple observation of a ‘mute’ series of more or less exclusive characteristics, but rather that these *get to speak* thanks to the unquestionability of the sacrificial norm (the sum of ideology and devices) which, in the shadows, has already decided who is worthy of living and who can instead be slaughtered in peace. Since we live in times of ‘sentinelle in piedi’, it is perhaps easier to show how similar mechanisms work at the production of gender, echoing what was mentioned in passing earlier. The penis or the vagina, per se, do not speak. This undeniable biological difference between living animals (who has a penis and who has a vagina) only takes on its socio-political significance thanks to the *heterosexual norm* which, among myriad other biological differences, recognises the penis as an eloquent aspect for the constitution of the ‘male body’ and the vagina as an eloquent aspect for the constitution of the ‘female body’. In other words, there are not ‘males’ and ‘females’ who, attracted by nature to each other - and vice versa - make heterosexuality hegemonic, but it is the heterosexual norm that produces male and female subjectivities that then pass off as natural entities” (Ivi, pp. 64-65).

how several marginal cases, lacking certain reproductive, morphological or mental capacities that we consider to be proper to the species, are nevertheless considered to be part of the human species despite the phenotypic differences;

- Potentiality: the essentialist therefore invokes potentiality, arguing that "had the individual had a different genetic make-up and been exposed to appropriate environmental conditions, it would have acquired the feature"⁴³⁰. Again, re-reading the sentence we note how the same argument can then be applied to other organisms of other species that, with a different genetic make-up and a different environmental exposure, could have developed those features and also been included in the category of human;

- Normality: one then proceeds to assert that properly human characteristics are those possessed by a "normal" human being, that is, a human who has followed a normal developmental path. The problem with this strategy is the confusion that leads those conducting the research or supporting the claim to confuse the similarities of the developing paths around them for anthropological constants, wrongly universalising their own more familiar context;

- Typicality: the last remaining road is that of typicality, based on the statistical recurrence of certain characteristics⁴³¹. This road, however, radically subverts the essentialist position, recognising difference as emerging from specific occurrences rather than founding them, thus revealing its ever-changing and relative character (to the group considered, to the historical moment, to the premises, to the instruments and to the decisions taken by those conducting the research):

"There is nothing problematic about the idea that in contemporary circumstances humans typically develop in certain ways and hence

⁴³⁰ Glock, H. J. (2012). *The anthropological difference*, cit., p. 126.

⁴³¹ One also often speaks of "clusters of homeostatic properties", i.e. a set of properties that do not always and everywhere occur in their entirety, but at least in conspicuous and repeated numbers. Not all components always possess all properties, but all always have at least some of them.

have typical features and capacities. It is worth noting, however, that this amounts to a serious scaling down of the idea of an anthropological difference. By contrast to normality, typicality is a purely statistical rather than evaluative or normative notion. As a result invoking typicality will not deliver an anthropological difference of a traditional kind, namely one which sets all humans apart from all animals [...]"⁴³²

At this point, Glock proposes a final path, or rather a final turn: a "social turn". He invites us to note how, not so much in individual organisms, but rather in today's human societies, there are clear, distinctive traits, namely:

"a special and highly complex system of communication, namely language; a special and highly complex kind of social relationships, one which involves social institutions, and hence cooperation, norms and values, and (possibly) division of labour; a special kind of plasticity: the capacity to adapt to highly diverse circumstances and environments through tools (technology) and rational deliberation (planning), a capacity which in turn depend on our special cognitive powers."⁴³³

The conclusion reached by the author thus leads him to affirm the existence, yes, of an anthropological difference (which, attempting a reduction of the three previous ones to a single common denominator, he considers to be situated once again within linguistic capacity⁴³⁴), but a difference that is possible, rather than necessary, socially situated, rather than universal and eternally present, and, I would add - in Filippi's words - interested, rather than neutral and impartial. In Glock's words, an "Anthropological Difference light".

⁴³² Glock, H. J. (2012). The anthropological difference, cit., p. 128.

⁴³³ *Ivi*, cit., p. 130.

⁴³⁴ "Accordingly, if I were forced to name a single anthropological difference, my money would be on language" (*Ivi*, cit., p. 130).

Identity, Difference, Indistinction

Through various concepts, from the animal issue to the specist/anthropological machine to the anthropological difference, we have highlighted the production and reproduction of the separation between humans and non-human animals. Having analysed the problem, let us now move on to point (2), namely possible solution strategies. If Calarco's name has so far only remained at the bottom of the page, let's now have a look at one of his most recent publications, entitled *Beyond the Anthropological Difference*, an evident response to Glock's article and a possible way out of human/animal distinctions. Indeed, although Glock rejects the existence of a "strong" anthropological difference, he nevertheless - concerned that, in the absence of a human specificity, the humanistic disciplines and philosophical anthropology would risk complete collapse⁴³⁵ - proceeds in the search for a difference, arguing that in present-day human societies there are "special and highly complex" elements capable of separating them from the animal kingdom.

According to Calarco, this argument runs the risk of repeating the errors already pointed out above, particularly with regard to the use of terms such as "special and highly complex" in relation to language, social forms and cognitive abilities. Clearly Glock is aware that such claims regarding the exclusive presence of such traits in humans are highly contestable, given that we find as much variety of language, social forms and cognitive abilities within niches of the animal kingdom. Vague terms such as "special" or "highly complex" are used to overcome the problem, terms that leave considerable leeway in the choice of speciality/complexity criteria and their

⁴³⁵ In the wake of other voices in the analytical field, Glock tries to show how the conception of the human, rather than discarded, should be maintained as pluralistic, i.e. changing according to different "epistemic needs". Although the pragmatically motivated concern is certainly understandable, Calarco wonders whether, perhaps, a crisis in the humanities is not what we actually need today: a shake-up that leads us from the "humanities" to what Braidotti calls "posthumanities", i.e. fields of knowledge emerging from "humble experimentation", from the practical and theoretical implications of non-anthropocentrism (Braidotti, R. (2013). *The Posthuman*. Polity Press, pp. 145-150).

possible revision. Thus, we return to the critical point, namely: if we have decided in advance that an anthropological difference exists, then human traits will be special and more complex from the outset; the result of the research will be nothing more than an inevitable confirmation of the premise. And if the results do not satisfy us, all that will be needed is to change the constraints, rewrite certain definitions, retrace lines and then return to our enterprise.

After responding to Glock's lukewarmness regarding the animal issue, Calarco proceeds to criticise the anti-speciesist position: indeed, as he sees it, the critical target should be replaced from speciesism to anthropocentrism. The latter, conceived "as a logic, as a set of rhythms and habits that structure everyday life, and as a set of institutions and practices aimed at securing the privileged status of those deemed to be fully human"⁴³⁶, presents two main advantages: (1) a systemic and structural approach to the problem, instead of an individual or psychological one; (2) a broader concern, both for animals and for those how are not consider "fully human", so that the struggles of the "sub-humans" can intertwine with the those of the animal kingdom in an intersectional perspective⁴³⁷. Given all these premises, we thus come to Calarco's strategy: *indistinction*. Before analysing this proposal, however, it is useful to recall the philosopher's previous works where, alongside indistinction, he identifies and analyses two other possible strategies: identity and difference.

As we can imagine, the first strategy consists in undoing the human/animal

⁴³⁶ Calarco, M. (2020). *Beyond the Anthropological Difference*. Cambridge University Press, cit., p. 21.

⁴³⁷ "[...] in Western cultural and intellectual traditions in particular, the human has only rarely and recently been taken to denote human biological species membership; more commonly, the concept of the human comprises only a select group of privileged individuals. Among those select individuals, humanness is maintained by seeking to exclude or denigrate certain 'animal' and 'nonhuman' traits and behaviours considered to be both internal and external to humanness" (*Ivi*, cit, p. 18); "[...] struggles for animal justice must if anything become *more* visible on the political scene, insofar as work that is done to break down hierarchical and violent human/animal divisions is exceedingly important for disclosing some of the more subtle and stubborn machinations of *intrahuman* anthropocentrism" (*Ivi*, cit., p. 24).

distinction through the recognition of a common identity. In contrast to the Western philosophical tradition⁴³⁸, which through central figures such as those of Aristotle, Descartes and Kant, has argued, respectively, for the inferiority of animals and their use at man's pleasure, their machinic character and absence of mind, and their lack of autonomy and moral agency, the advent of Darwinian theory calls into question any certainty about the thick line of demarcation⁴³⁹. By placing the human being among the other animals and highlighting the evolutionary continuities between them, Darwin shows how existing differences are merely a matter of degree rather than type: any trait is given as temporary and contingent and, therefore, any difference is liable to increase in intensity or to diminish - even to disappear - with the passage of time and changing environmental conditions.

Starting from these intuitions, contemporary science has developed various research aimed at bringing to light the presence (as mentioned, according to different degrees and variations), within the animal kingdom, of traits that we believed to be exclusively pertaining to humans - starting from the much contested linguistic capacity, passing through agency, ludic activity and empathy, up to the mind or intelligence⁴⁴⁰. Studying the latter, Franz De Wall, famous ethologist and primatologist, states:

“The comparison is not between humans and animals but between one animal species—ours—and a vast array of others. Even though most of the time I will adopt the ‘animal’ shorthand for the latter, it is undeniable that humans *are* animals. We’re not comparing two

⁴³⁸ Calarco acknowledges, however, the presence of several countercultural interventions by Diogenes, Plutarch, Montaigne, Hume, Nietzsche and others (Calarco, M. (2020). *Beyond the Anthropological Difference*, p. 6).

⁴³⁹ Calarco, M. (2015). *Thinking through animals*, pp. 6-11.

⁴⁴⁰ For scientific references see the links offered in the various sections of Calarco, M. R. (2020). *Animal studies*. Just to mention a few with reference to the listed faculties: Bradbury, J. W. and Vehrencamp, S. L. (2011). *Principles of Animal Communication*. Sinauer; McFarland, S., & Hediger, R. (2009). *Animals and agency: an interdisciplinary exploration*. Brill; Respectively chapters 1 (‘Why Do We Play?’) and 3 (‘Moral Animals’) in Lents, N. H. (2016). *Not so different: Finding human nature in animals*. Columbia University Press; Griffin, D. R. (1992). *Animal Minds*. University of Chicago Press.

separate categories of intelligence, therefore, but rather are considering variation within a single one. I look at human cognition as a variety of animal cognition."⁴⁴¹

Similarly, a number of philosophers (particularly related to the field of ethics) have striven to highlight the continuity, the possible common identity, between human beings and animals. Looking at the classics we certainly find Peter Singer, who argues that both beings are sentient, as well as Tom Regan, who attempts to go further by considering the two as equal "subjectivities" or "subject-of-a-life", i.e. capable of having conscious preferences, experiencing pleasure and pain, believing and feeling, remembering and having expectations. More recent positions are those of Gary Francione, according to whom animals and humans deserve equal ethical consideration as they both possess interests, and of Stefania Cavaliere, who, attempting to extend the doctrine of human rights to animals, finds the point of contact within intentionality and agency⁴⁴².

The second strategy, as we said, takes the name of difference. In this case, we see how the philosophical approach in a certain sense abandons the analytical field, aimed at rigorously verifying the presence/absence of common traits, to turn instead towards the continental debate. In particular, the voices belonging to the strategy of difference are characterised by an anti or post-humanism (in the wake of Nietzsche, Heidegger or Foucault) and an ethics of difference (in this case linked to Emmanuel Levinas). Among the many voices, the philosopher who stands out the most is certainly Derrida⁴⁴³. According to the latter, the differences between humans and animals exist and must be maintained. Rather than considering differences as operating along a single demarcation line,

⁴⁴¹ De Waal, F. (2016). *Are we smart enough to know how smart animals are?*. Norton & Company, cit., p. 12.

⁴⁴² Singer, P. (1975). *Animal Liberation: A New Ethics for Our Treatment of Animals*. HarperCollins; Regan, T. (1983). *The Case for Animal Rights*. University of California Press; Francione, G. (2000). *Introduction to animal rights: Your child or the dog?*. Temple University Press; Knights, P. (2001). *The Animal Question: Why Nonhuman Animals Deserve Human Rights*. Oxford University Press.

⁴⁴³ Derrida, J. (2006). *L'animal que donc je suis*. Galilée.

capable of dividing humans and animals into two homogeneous groups that flatten and annihilate their internal differences, what Derrida proposes is openness towards the infinite variety and richness of multiplicity⁴⁴⁴. On the one hand, then, the human richness that proliferates by overcoming the concept of the Human as an ontological monolith, and on the other, the animal richness that unfolds by recognising how:

“[...] there is (a) no simple, shared essence that binds together the incomprehensibly vast number of animal species that populate the world, (b) considerable variation among individual animals that belong even to the same species, and (c) significant mutual influence and innumerable thoroughgoing relationships between and among individual animals as well as between and among different animal species.”⁴⁴⁵

Here, too, we see how certain exponents of the scientific field have tried to recount the richness and difference of animals, rather than simply bringing them into a similarity with human beings. In doing so, they avoid the risk of anthropomorphism, i.e. the risk of attributing human forms, structures, functions to animals and other non-human beings, as well as interpreting and reading them through strictly human concepts. Among the most recent texts, we find, for example, *Other Minds*⁴⁴⁶, in which Peter Godfrey-Smith tells us about the mind of octopuses, animals that are extremely distant from our evolutionary line and, precisely for this reason, *surprisingly* intelligent - capable, perhaps, of prompting us to rethink the very idea of intelligence starting from the astonishment and wonder of the unexpected encounter with otherness, with difference, with the alien.

⁴⁴⁴ He also advances the concept of “Animot”, which, on the one hand, sounds like “animaux” in French, reminding us of the plurality of animals, and on the other hand, of the term “mot”, highlighting the linguistic nature of the term itself, i.e. a human attempt to catalogue and name a multiplicity that necessarily exceeds cataloguing (Calarco, M. R. (2020). *Animal studies: the key concepts*, pp. 13-15).

⁴⁴⁵ Calarco, M. (2011). Identity, difference, indistinction. *CR: The New Centennial Review*, 11(2), 41-60.

⁴⁴⁶ Godfrey-Smith, P. (2016). *Other minds: The octopus, the sea, and the deep origins of consciousness*. William Collins.

We thus finally arrive at the third and last strategy, the one articulated and favoured by Calarco, namely indistinction. Although the author acknowledges the in-becoming state of the strategy in question, he nevertheless attempts to sketch a possible framework for it. Among the most relevant figures in the philosophical sphere, we find, for example, the aforementioned Agamben, who invites us to stop the “anthropological machine” and its binary divisions, in order to find ourselves inhabiting that “zone of indeterminacy” concealed by the machine and, at the same time, so vital to its functioning. Another figure that we have already encountered on several occasions is Haraway, who with the idea of “companion species” - which emerged as early as the beginning of the century⁴⁴⁷ and was then taken up again in *Staying with the Trouble* - attempts both to redefine the concept of “species”, as described in the hard sciences, and the concept of “human subjectivity” proper to certain philosophical traditions⁴⁴⁸.

Essential then are the figures of Deleuze and Guattari, who with their “becoming-animal” mark another milestone for animal theory and practice⁴⁴⁹. In Filippi's words, the Deleuzian turn is a *carnal* turn: unlike

⁴⁴⁷ Haraway, D. (2003). *The companion species manifesto: Dogs, people, and significant otherness*. Prickly Paradigm Press; Haraway, D. (2008). *When Species Meet*. Minneapolis: University of Minnesota Press.

⁴⁴⁸ “While common sense notions of species tend to suggest species are fixed, static, or natural kinds of some sort, Haraway insists that they should be understood as dynamic and deeply relational in nature. In her account, species are characterized as groupings that emerge under specific historical and evolutionary pressures and, as such, are contingent (that is, the groupings could have been otherwise had they evolved under different conditions and will of necessity become something else over time as relations and selective pressures change). So, a species is itself a ‘multispecies crowd’, internally differentiated and externally related to numerous species at micro- and macrolevels. This vision of radical difference and relationality is essential to Haraway’s notion of companion species and is intended to undercut not just the idea of species as fixed natural kinds but also the notion of human exceptionalism. The human species, too, is a multispecies crowd, co-constituted by numerous species and relations, from gut microbes to other organisms to large-scale ecosystems” (Calarco, M. R. (2020). *Animal studies*, cit., pp. 49-50). See also Timeto, F. (2017). La specie è un ossimoro. L'estetica con l'animale nella filosofia di Donna Haraway. *Studi culturali*, 14(2), 241-262.

⁴⁴⁹ Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia*. U of Minnesota P.

Singer and Regan, as well as Derrida, the animal is not made of words, concepts, ideas, but of palpitating, bloody flesh⁴⁵⁰. Animals are not only thought of, but also and above all encountered and felt, capable of generating possibilities “between” bodies, zones of “closeness” and “indiscernibility” or, as he would say of Bacon's painting, a “common zone between man and beast”⁴⁵¹. According to the philosopher, Bacon's paintings in fact draw us into a space where the common embodied nature and shared vulnerability become pressing, a space where boundaries dissolve, making us aware of a hidden and terrifying possibility: even our bodies are essentially flesh - even human bodies are potentially edible flesh.

Rather than falling into the risk of a “night when all cows are black”, the strategy of indistinction invites us to produce new ways of thinking, renaming, and redefining animals and our relationships with them, to challenge ways of thinking about ourselves as enclosed humans, as well as to advance new ways of meaningful interaction with unfolding otherness. Calarco thus urges us to shift our attention away from common *traits*, aimed at the (often analytically informed) creation of a shared identity, towards common *conditions* of existence and survival, aimed instead at creating spaces and practices of cohabitation and mutual care:

“Such perspectives on and experiences of indistinction refer not so much to common powers over which we have control but to shared conditions into which we fall, into which we are thrown, side by side with animals and the more-than-human world. And if we bear these profoundly shared, indistinct conditions firmly in mind, it reinforces a kind of ontological and normative humility. We gradually lose interest in thinking about what constitutes anthropological distinctiveness and turn instead to recognizing and affirming that we participate in a world

⁴⁵⁰ Filippi proposes a kind of Deleuzian bestiary, recovering the various animal encounters recounted by the philosopher (in the wake of Timeto's similar attempt in relation to Haraway). Filippi, M. (2024). Molteplicità in agguato ed ecologie bizzarre: gli animali secondo Deleuze. *aut aut*, 401, 7-22; Timeto, F. (2020). *Bestiario Haraway: per un femminismo multispecie*. Mimesis.

⁴⁵¹ Deleuze, G. (2017). *Francis Bacon*. Bloomsbury.

that precedes and exceeds us in every temporal and spatial direction."⁴⁵²

The question of practices also leads us back to the scientific side, which in turn ceases to focus on the demonstration of shared characteristics or the narration of astonishing animal diversity, and instead turns towards practices of experimentation, metamorphosis and profound transformation. The case reported by Calarco refers to the ethological experience of Joe Hutto⁴⁵³, who decides not to study the animal in a detached and objectifying manner, but rather to immerse himself in its way of being in the world. He plunges and merges into the life of a herd of mule deer, which, after approaching him, allow him to slowly become part of their everyday life: this is how, throughout seven years, Hutto finds himself in an unforeseen animal-becoming, sharing meals with the deer, exchanging and receiving information with them through body signals, cuddling with their bodies and sharing the joys and sorrows of everyday life. This long-term experiment allows not only for the deer to change their relationship with Joe, but also for the latter to rearticulate his own ways of living and conceiving sociality, of inhabiting and experiencing an environment, of constituting and performing his own subjectivity⁴⁵⁴.

New ways of experiencing and narrating the becoming-animal thus emerge, which are capable of creating spaces of indistinction, of highlighting and cultivating shared bodily, social and mental styles, avoiding both the classic risk of anthropomorphism and the specular risk of "anthropodenial"⁴⁵⁵ - that is, an a priori denial of the presence (and, I would say, the possible development) of shared characteristics. Instead, by recognising common

⁴⁵² Calarco, M. (2020). *Beyond the Anthropological Difference*, cit., p. 32.

⁴⁵³ Hutto, Joe (2014). *Touching the Wild: Living with the Mule Deer of Deadman Gulch*. Skyhorse Publishing.

⁴⁵⁴ Calarco, M. (2020). *Beyond the Anthropological Difference*, pp. 36-37. A more detailed discussion of the case can be found in the first chapter of the more recent Calarco, M. (2024). *The three ethologies. A Positive Vision for Rebuilding Human-Animal Relationships*. The University of Chicago Press.

⁴⁵⁵ De Waal, F. B. (1999). Anthropomorphism and anthropodenial: consistency in our thinking about humans and other animals. *Philosophical topics*, 27(1), 255-280.

descent and, above all, existing and future reciprocal crossings, it becomes increasingly possible to glimpse and promote shared ways of imagining, acting, thinking, travelling, playing, empathising, feeding, socialising and dwelling.

Ethical and Political Implications

To conclude, Calarco asks us: “[...] if we adopt a specific ontological framework, what are the implications of that framework for ethics and other value-laden interactions between human beings and animals?”⁴⁵⁶

After the problem and solution strategies, let us now try to reflect on point (3), namely the ethical and political implications of (the overcoming of) the distinction. We use the term implications here, rather than repercussions or consequences, to emphasise the thesis that runs through the entire paragraph, namely the intertwining of ethics and aesthetics. In fact, there is no unidirectional relationship that, starting from a certain way of perceiving the human-animal (in)distinction, generates specific ethical postures and political structuring; equally, it is not a particular political articulation or ethical awareness that configures or reworks the vision. Rather, we can say that ethics and aesthetics, moral and perceptive dispositions, political and sensitive dispositifs, work in parallel and in mutual co-constitution.

Concerning the problem, it seems that the connection between ethics, aesthetics and politics is now more than evident. In fact, we have seen how anthropocentrism⁴⁵⁷ is realised both through an ontological-sensible separation between human and animal, and through *material* and

⁴⁵⁶ Calarco, M. R. (2020). *Animal studies*, cit., p. 102.

⁴⁵⁷ “Anthropocentrism is the view that human beings (in opposition to animals and other nonhuman beings) are of supreme importance in ethical, political, legal, and existential matters. [...] Among the primary characteristics of anthropocentrism are: (1) a narcissistic focus on human exceptionalism; (2) a binary account of human-animal differences; (3) a strong moral hierarchy that ranks human beings over animals and other nonhuman beings; (4) a tendency to de-humanise and subhumanise certain populations; and (5) institutions that aim to protect and give privilege to beings deemed fully human” (Calarco, M. R. (2020). *Animal studies*, cit., p. 18).

performative devices that allow the continuation of animal aggression⁴⁵⁸. The perception of difference is thus accompanied by the indiscriminate implementation of violence. If this is the problem, then resolution strategies must equally operate simultaneously on the aesthetic and political levels. As stated in the introduction to the last *aut aut*, entitled “La filosofia davanti al massacro degli animali”, it will always be necessary to work in parallel on both fronts:

“a) the dismantling of the material-semiotic devices of dismemberment and putting to death and b) the deconstruction of the sacrificial frame and the justificationist ideology that sharpen the blades that every moment - even today, even now - continue relentlessly their work of destruction/mercification of those living beings from whom we have taken away the possibility of responding and whom we have called, with a violent collective singular, the Animal.

It is here, in the deconstructive work of the concept of species, on which the spectres of the sacrificial frame and justificationist ideology take shape, that a political philosophy worthy of the name should act.”⁴⁵⁹

If the field of *Animal Studies* is precisely working on a conceptual and perceptive level to deconstruct the separation between human and animal, Calarco reminds us that more and more activists and thinkers, aware of the fact that animal suffering does not simply derive from a framework of

⁴⁵⁸ Among the former Filippi includes, for example, “the breeding farm, the slaughterhouse, the laboratory and all other non-places of confinement and reification”, while he defines the latter as “words that kill”, i.e. “1) the national and supranational laws that regulate both the practices of slaughter – ‘humane slaughter’, ‘good experimentation’ and ‘animal welfare’ - and the public subsidies that support them; 2) the resolutions of industry associations or trade unions; 3) the regulatory provisions on how and where to hunt, how and where to hold circuses, how to conduct restaurants, how to manage kennels, etc. 4) administrative measures aimed, for example, at defining the spaces in which ‘pet’ animals may enter or from which they are strictly banned, or the conditions under which biting dogs may be ‘put down’.” (Filippi, M. (2017). *Questioni di specie*, cit., pp. 28-29. Translation mine).

⁴⁵⁹ Foreword to “La filosofia davanti al massacro degli animali” (2024). *aut aut*, 401, cit., p. 6.

thought, but also and above all from social structures, economic interests and production methods, are moving towards a different approach, that of *Critical Animal Studies*. These people, unlike their predecessors, therefore operate on both a symbolic and material level, promoting animal rights, practising vegetarianism and veganism, as well as implementing strategies of subversion and sabotage of the various industries based on animal domination and exploitation⁴⁶⁰. In the light of the two-dimensionality of the struggle, let us now retrieve the three strategies of aesthetic resolution proposed earlier, attempting to trace the concomitant ethical postures and political actions that accompany them.

Starting from the identity approach, we see how the sensitive identification of common traits leads the previously mentioned identity philosophers to argue for the extension of human ethical frames to the animal kingdom⁴⁶¹. Peter Singer, for example, advocates a utilitarian line, according to which ethics should be guided by the principle of the greatest good for the greatest number of individuals; considering animals as individuals, we see how animal-based food and experimentation can only be abolished, given the little interest it brings to human consumers in the face of the high degree of suffering endured by animals being killed and tortured. If in this case the practices are outlawed not so much because they are intrinsically wrong (should they in fact, under different conditions, provide greater comfort than the pain endured, then they might once again be considered possible), we see how Regan's approach, by changing the perceived common trait, also changes the ethical treatment of humans and animals. From being both sentient, we move here to being both subjectivities, *subject-of-a-life*, thus making each individual intrinsically valuable, rather than instrumentally valuable to a political project based on mathematical logic. Continuing the discourse, and moving on a more pragmatic and

⁴⁶⁰ Calarco, M. R. (2020). *Animal studies*, pp. ix-x.

⁴⁶¹ For a synthesis of the ethical positions of “utilitarianism” and “rights theory”, often linked to the aesthetic-ontological approach to identity, see Calarco's discussion of ethics (*Ivi*, pp. 64-67), as well as the broader framework offered in Iovino, S. (2004). *Le etiche ambientali*. In *Filosofie dell'ambiente*, pp. 35-90.

legislative level, Stefania Cavalieri argues for the extension of universal human rights to the animal kingdom, populated by subjectivities that equally possess *agency* and intentionality, and thus fully participate in the moral community to which we already belong.

However, Calarco is keen to emphasise how the ethical implications of the identity approach can sometimes become inconsistent or controversial. In the first place, since many identity philosophers are analytical in nature, they tend to focus on the internal coherence and conceptual rigour of their theories (within an academic game of repartee in articles and texts), while forgetting the political and social struggles for the actual realisation of advanced ideals⁴⁶². The emphasis on the conceptual dimension then also translates into a certain idea of the ethical stimulus, identified with pure rationality: in fact, according to the identitarians, once the contradiction that animals are excluded from the ethical frame despite having the fundamental characteristics that guarantee access to it is rationally recognised, the discomfort generated at the intellectual level will be so strong that it will inevitably lead us to modify our sensibility and behaviour. Recalling the feminist critique of logocentrism, Calarco reminds us how, given the continuity between reason and the emotions, it is not possible - particularly in the ethical sphere - either to guarantee superiority to the former over the latter, or its independence with respect to the affective and relational level⁴⁶³. Lastly, the aforementioned problem of anthropocentrism emerges: on the one hand, there is the risk of promoting the welfare of only those animals that most conform to our idea of "identity", i.e. those that most resemble us, leaving those most alien to us to their sad fate; on the other hand, it should be remembered how the identity approach starts from a particular idea of "human being", the bearer of traits that often belong to the dominant class (therefore, already excluding certain human types from the outset):

⁴⁶² Calarco, M. (2011). *Identity, difference, indistinction*, p. 44.

⁴⁶³ Calarco, M. (2015). *Thinking through animals*, pp. 22-24.

"Consistent with anthropocentric logic, this framework seeks to develop a notion of ethics and moral community that rotates around what is considered to be quintessentially and relevantly human; it just so happens that certain animals happen to be 'human' enough to grant them standing. The fate of other animals, humans, and nonhumans who are not sufficiently like 'us' would remain, within the identity framework, as precarious as ever."⁴⁶⁴

Let us now turn to the second strategy, namely difference. As mentioned, this approach revolves around Derrida's work, in particular his essay *L'Animal que donc je suis*. Here the author recounts his relationship/encounter with his cat which, despite the fact that he defines as belonging to the categories of cat, female, "his" and so on, he cannot but recognise it as preceding and exceeding these categorical and conceptual descriptions: *this* cat is a specific irreducible being, whose ineffable existence can only be reduced to a sum of linguistic categories from a pragmatic perspective (or, possibly, a utilitarian, consumerist and exploitative perspective⁴⁶⁵). Indeed, on the one hand, it should be recognised that concepts and abstractions help us to tame strangeness; insofar as they are repeatable and recognisable, they are always useful in the encounter with diversity. At the same time, however, Derrida emphasises how such generalisations inevitably fail in their attempt to grasp the Other as singular and unique.

On the contrary, it can sometimes happen that one experiences an encounter with a radically different otherness thanks to which conceptual grids give way and are rearticulated. The encounter with the cat prompts Derrida to recognise both her feline point of view as alternative and not completely inhabitable by the philosopher, and her cat gaze as preceding the scene of the encounter, in other words: if normally it is our gaze that

⁴⁶⁴ *Ivi*, cit., pp. 26-27.

⁴⁶⁵ See in this regard Campagna's reflections, mainly related to the categorical reduction of the human within the system of Technique and capital, later extended by the author himself to the animal and vegetable worlds. Campagna, F. (2018). *Technic and magic: The reconstruction of reality*. Bloomsbury Publishing.

rests on the animal, the realisation of the possibility of the cat seeing him before he sees the cat itself, the sensation of *being* looked at before he looks, produces an alienating and unexpected sensation. This sensation pushes him (and us) to recognise the Other's excess with respect to the categories within which we wanted to summarily relegate it, questioning his (and our) conceptual apparatuses, ways of living together and relating. In contrast to the identity approach, where ethics is grounded in autonomy and rational choice made by the (human) subject, here we see how ethics is rooted in *heteronomy*, always realising itself as a *response* to a situation within which I find myself thrown, to a radically Other that questions and puts me in question.

Here again, Calarco emphasises two possible dangers of the difference approach. The first concerns the lack of limits due to the very character of the proposal, that is, its being based on the lack of familiarity with the entity that presents itself to me in the encounter, on the strangeness that undermines my certainties and conceptual assumptions. This premise removes any guarantee that ethics can only extend to human, animal, living subjects - categories that, indeed, could always falter or crumble completely -, thus risking expanding its regard to any (and, therefore, possibly no) entity. The second problem is then identified in the great capacity to challenge approaches to identity, to highlight the shortcomings and irresolvable contradictions of different philosophical and social strategies, without at the same time providing effective legal and political viable alternatives: the only possible way forward for difference theorists thus remains a critical and partial support for identity initiatives aimed at promoting animal rights, recognising their pragmatic and strategic effectiveness, without forgetting their flaws⁴⁶⁶.

Finally, we come to indistinction, an approach in the making and tentatively summarised by Calarco. If the anthropocentric perspective of identity incorporates the animal within a common figure portrayed from the properly human, while difference leaves room for the animal as an

⁴⁶⁶ Calarco, M. (2015). *Thinking through animals*, p. 44.

activation and ethical questioning for the human being, indistinction allows for the unfolding of a zone of commonality where uni(and bi)directionality come into confusion, where the animal is no longer recognisable (and separable), where animality disperses in traits and relationships. The unexpected encounter here acquires a greater potential, shaking not only conceptual structures and linguistic categories, but rather touching the more carnal and corporeal, proximal and instinctual dimensions of one's own experience and contact with otherness. This dimension appears, as already mentioned, in authors such as Deleuze and Guattari, in posthuman positions such as Haraway's - aimed at laying bare the interpenetration between beings, the involuntary cohabitation that leads certain organisms to live on the tissues and bodies of others, the symbiosis that is generated between host and guest and which makes the same roles precarious and interchangeable -, or in other more militant ones such as Hribal's - which, by documenting various acts of animal resistance, shows us the possibility of feeling caught up in the common struggle against the oppression and exploitation of bodies⁴⁶⁷. Without dwelling too much on critical issues, Calarco simply emphasises how the opening up of unexplored possibilities does not necessarily lead to positive outcomes, but rather to unforeseen ones: their endurance and effects must therefore be assessed contextually in each case.

In conclusion, I would like to emphasise how a point of contact between the indistinction approach and the identity approach seems to emerge within the commitment to a politically connoted diet. Whether proceeding from more analytical and normative reflections à la Singer or Regan, rather than from the carnal and suffering vision of Bacon's paintings or from Plumwood's tragic experience⁴⁶⁸, the support for vegetarianism and

⁴⁶⁷ Hribal, J. (2011). *Fear of the animal planet: The hidden history of animal resistance*. ak Press.

⁴⁶⁸ Finding herself in the jaws of a crocodile, the philosopher embodies the position of the sacrificial victim, usually reserved for non-human animals, thus instantly realising the unexplored possibility of becoming prey and food herself. Her commitment to vegetarianism thus becomes, against all expectations, even more profound (Plumwood, V. (1996). *Being Prey*. *Terra Nova*, 1, 32-44).

veganism indeed becomes a central issue for multiple philosophers. It is not only a point of contact between the two approaches, but also a possibility of interweaving between strategies purely related to environmentalism and those related to anti-specism. If in fact, as Calarco recalls, in the 1970s-80s the tension - sometimes hostility - between the two movements was palpable, in the last three decades the struggles have increasingly merged⁴⁶⁹. And, clearly, one of the battles that unites both fronts is that against the cattle industry: on the one hand, it contributes to a range of between 10% and 50% of total greenhouse gas emissions (the most widely used and moderate estimate is 14.5%, provided in 2017 by the "Food and Agriculture Organization of the United Nations"⁴⁷⁰), thus making it one of the main causes of global warming; on the other hand, the meat industry keeps animals in miserable conditions, close to "non-life"⁴⁷¹, then proceeding with the killing of unimaginable numbers of the same:

"The scale of the slaughter is so exorbitant as to be almost inconceivable. The number of animals slaughtered each year in the world to produce food varies, depending on estimates - always dated and probably highly inaccurate by default - between 15 and 70 billion, not counting small animals, whose corpses are sold by the ton. Of these, fish killed for food reach an astronomical figure of between 37 and 120 billion a year - a figure that is bound to grow given the steadily increasing consumption of marine meat."⁴⁷²

It is from these last considerations that we open to the next and final section on the intertwining of ethics and aesthetics produced within the field of the environmental crisis.

⁴⁶⁹ Calarco, M. (2020). Environmentalism. In *Animal studies*, pp. 60-62. See also "Earth and Animal Liberation Convergences" in Pellow, D. N. (2014). *Total liberation: The power and promise of animal rights and the radical earth movement*. U of Minnesota Press.

⁴⁷⁰ <https://www.fao.org/family-farming/detail/en/c/1634679/#:~:text=Livestock%20supply%20chains%20account%20for,global%20anthropogenic%20greenhouse%20gas%20emissions>.

⁴⁷¹ Filippi, M. (2017). *Questioni di specie*, p. 13-14.

⁴⁷² *Ivi*, cit., p. 12. Translation mine.

2.3.3 Partisanship of the Environmental Sensible

The difficult questioning of human exceptionalism has made it possible in recent years to reconfigure the idea of emancipation, extending ecological reflection and the vectors of intersectionality towards that last community that for so long remained excluded from the political game, namely the animal community⁴⁷³. In the awareness of this forgetfulness, Steven Best, among the main promoters of the so-called *Total Liberation*, therefore decides to develop a reading of oppression and its origins through the adoption of the never considered “animal standpoint”, thus promoting a different refraction of history capable of giving voice to those who have suffered violence on this planet for the longest time and with the greatest intensity⁴⁷⁴.

Just as Silvia Federici reproaches Marxist analysis for completely forgetting the unpaid female labour force, that is, the reproductive labour that allows the capitalist system to maintain itself and progress⁴⁷⁵, Best decides to take a further step backwards (and sideways), to glimpse a more enduring and extensive form of oppression on which the system itself has long been based. According to Best, around ten thousand years ago, relations between species - more or less harmonious, more or less chaotic - began to be organised according to a new power structure. With the transition from gatherer-hunter cultures to agricultural societies, we see how the latter begin a domestication of wild species. “Domestication”, however, perhaps

⁴⁷³ “Critical legal theorist Kimberlé Crenshaw's concept of intersectionality reminds us that various forms of inequality-such as race, class, ability, gender, and sexuality-interrelate and work together to produce advantages and disadvantages for individuals and groups. [...] While scholars have done an admirable job of pursuing this line of theorizing among and across the above categories, there remains little work on how we might expand this concept. For example, categories such as nonhuman animal, land, and nonhuman nature or ecosystems are virtually absent from this literature and might be useful for deepening our analysis of intersectionality” (Pellow, D. N. (2014). *Total liberation*, cit., p. 37).

⁴⁷⁴ Best, S. (2014). *The politics of total liberation: Revolution for the 21st century*. Springer, pp. 1-20.

⁴⁷⁵ Federici, S. (2004). *Caliban and the Witch*. Autonomedia.

does not give the idea of the enterprise, which is rather carried out through various techniques of exploitation, confinement, castration, breeding and forced labour, branding, ear-cutting and killing, as well as through control devices such as fences, cages, collars, chains, whips, goads and so on. What is normally narrated to us as a moment of progress, as a technique of social and historical advancement, taken from the animal point of view turns out to be nothing more than the first and most deep-rooted form of violence and domination⁴⁷⁶.

Once the roots of oppression and the foundation stone of the current production system have been identified, Best can only turn to the ecological problem with fresh eyes, showing how animal liberation is fundamental to radically change our ways of relating to each other and to the world as a whole:

“Since the fates of all species on this planet are intricately interrelated, the exploitation of animals cannot but have a major impact on the human world—psychologically, socially, physically, and ecologically. When humans hunt animals, they disrupt natural selection and degrade ecosystems necessary for their own lives. When they butcher animals by the tens of billions every year in factory farm systems, they poison the air and water, degrade aquatic ecosystems, squander scarce resources, ravage rainforests, turn grasslands into deserts, and spew greenhouse gases into the atmosphere.”⁴⁷⁷

Notwithstanding the possibilities opened up by Best's approach, dwelling for a moment on this quotation, it is possible to make an initial criticism of

⁴⁷⁶ According to Best, in fact, the subsequent forms of coercion and domination developed against women (controlled so as to maximise and manage their reproductive capacity) and slaves (castrated and organised like livestock), take their cue from the trajectories previously experimented on animals. Not only the material dispositifs, but also the aesthetic ones, are re-proposed starting from that original oppression: just as the line of demarcation between human and animal is drawn starting from the supposed “rationality” of the former, absent in the kingdom of the beasts, the same criterion then reappears to operate the marginalisation of various ostracised groups, from black people to women, the mentally ill to the disabled.

⁴⁷⁷ Best, S. (2014). *The politics of total liberation*, cit., p. 99.

the discourse at hand. As various critics of the Anthropocene concept have already stated on several occasions, it is not so much the human being as a compact species, as an indistinct monolith, that has caused the ecological disaster, but rather a specific portion of that community, bearer of certain values and promoter of specific logics of exploitation and domination. Equally, we cannot say that it is the generic human being who hunts and slaughters animals, but rather - especially today - that part of the population that, despite the constant reminders of the problem, decides to pursue its own lifestyle and diet.

Moving on, we then see another possible problematic point. In the conclusion to the text Best states:

“This time it is we who are the meteor crashing into the earth, and we keep crashing and crashing and crashing, never allowing the planet to recover. We are a meteor *storm* that continuously, repetitively keeps slamming into the planet, precluding adaptation and blocking recovery. If we cannot learn how to live on this planet and harmonize our existence with other species and the biocommunity as a whole, then, frankly, we have no right to live at all. If we can only exploit, plunder, and destroy, then surely our demise is for the greater good. [...] Which road will humanity choose—the path leading to peace and stability, or the one verging toward greater war and chaos? Will we advance in a direction that establishes social justice, or which exacerbates inequality and poverty? Will we recognize that we have come to the crossroads of uncontrolled global capitalist growth and neoliberalism, or will we find an alternative route that radicalizes the modern traditions of Enlightenment and democracy and is guided by new signposts toward a future that is just, egalitarian, participatory, healthy, happy, and sane?”⁴⁷⁸

The author's second failing appears by recovering the previous reflections provided by decolonial studies, which were able to emphasise the need to consider the oppressed group as an active part of the process of its liberation. On the contrary, Best, after accusing a generic human “we” of

⁴⁷⁸ *Ivi*, cit., pp. 165-166.

causing the animal/ecological problem, calls this same indistinct “we” to take responsibility for solving the problem.

If his colleague Pellow already reconfigures the politics of *Total Liberation* through this awareness, considering “not just [human] actions to defend nonhuman natures but a form of collaboration and participation by nonhuman actors as well”⁴⁷⁹, it is in Stefania Barca's work that we find a clear fulfilment of the trajectories traced so far. Indeed, the philosopher succeeds in elaborating a theory where the lines seem to stretch diagonally, imperfectly and provisionally, so as to reproduce neither a generalisation of humanity nor a passivity of the animal kingdom.

Barca, too, starts from a strong critique of an equally strong invocation of a generic “we”, an invocation coming in this case from the apparent neutrality of the scientific field. It was in 2012 when at the opening of the *Rio+20 Earth Summit*, at the *Planet Under Pressure* conference in London⁴⁸⁰, as well as (most probably) in various other contexts and situations⁴⁸¹, the now well-known video entitled *Welcome to the Anthropocene* was screened. Through a short narrative, lasting about three minutes, the video offers us “a science-based, consensual understanding by which to make sense of the current

⁴⁷⁹ He then continues: “The unstated assumption has been that social movement struggles are entirely human-led processes that occur because humans motivate other humans to adopt ideas and values and pursue goals and actions independent of other forces. But as scholarship from the fields of environmental sociology and political ecology reveals, there is nothing that humans do that is entirely isolated from influence and guidance from other species, ecosystems, and inanimate objects. The important role of nonhumans-ecosystems, animals, technologies, and so forth-in animating the activist imagination, in motivating action, and in producing interactions forces us to rethink what constitutes a social movement and how far its impacts can be felt” (Pellow, D. N. (2014). *Total liberation*, cit., pp. 24-25). See also, in the same text, “The Power of Nonhumans in Social Movements”.

⁴⁸⁰ If Barca cites the case of Rio, Demos - in a similar critique of the video under examination - refers instead to the case of London (Demos, T. J. (2017). *Against the Anthropocene: Visual Culture and Environment Today*. Sternberg Press).

⁴⁸¹ Adopted also by the UNEP (United Nations Environment Programme), the video seems to reflect (and produce) not only the dominant scientific and political discourse, but also common sense, the most commonly accepted narrative about the causes, actors and possible resolutions of the crisis.

earth-systems crisis and to frame the political choices to be made at the summit”⁴⁸².

The story begins about 250 years ago in England, where the advent of the industrial revolution will - we are told - enable unprecedented development thanks to fossil fuels: global transport networks, medical discoveries and chemical fertilisers, increased production and population. All of this goes on until the “great acceleration” of the 1950s, from which the successes of globalisation branched out, from marketing to tourism, from economic growth to the development of large urban cities. Here, however, we are interrupted:

“In a single lifetime we have grown into a phenomenal global force. We move more sediment and rock annually than all natural processes such as erosion and rivers. We manage three quarters of all land outside the ice sheets. Greenhouse gas levels this high have not been seen for over one million years. Temperatures are increasing. We have made a hole in the ozone layer. We are losing biodiversity. Many of the world’s deltas are sinking due to damming, mining and other causes. Sea level is rising. Ocean acidification is a real threat. We are altering Earth’s natural cycles. We have entered the Anthropocene, a new geological epoch dominated by humanity.”⁴⁸³

At this point, Barca advances the first of the two criticisms mentioned earlier: to whom does this generic “we” refer? According to the philosopher, this indistinct group actually groups together only the “forces of production” - i.e. western science and industrial technology -, reflecting an idea of history and development closely linked to modern-style economic growth. It is therefore not about humanity as a species (we hear in the opening of the video: “this is the story of how one species changed the planet”), but rather about a segment of the population that has seen *its* material progress as a teleological trajectory, concealing the violence perpetrated elsewhere throughout history. The toxicity of pesticides on the bodies of workers and

⁴⁸² Barca, S. (2020). *Forces of reproduction*, cit., p. 7.

⁴⁸³ The reference information site is https://www.anthropocene.info/index_php.html
The video can be found at: <https://vimeo.com/39048998>

rural dwellers, the social costs and unequal distribution of wealth, the exploitation of women's bodies as unpaid labour, the malnutrition suffered by a billion people (to which the video itself refers, quickly glossing over and moving on), all became inevitable "collateral damage". The process of industrialisation - despite the proven overcoming of the earth's biophysical limits for maintaining such levels of production - is presented as necessary and intrinsically good, and, circularly, every good achievement of humanity over the last 250 years seems to be ultimately traced back to industrialisation: this is what Barca calls "Eco-capitalist realism".

By identifying the *cause* and *resolution* of the problem within the entire human species, the forces of production thus act on two fronts. On the one hand they dilute their responsibility for the ongoing disaster, spreading it over the whole of humanity and erasing all differences. As Demos recalls, analysing the same video:

"My argument, in brief, is that Anthropocene rhetoric—joining images and texts—frequently acts as a mechanism of universalization, albeit complexly mediated and distributed among various agents, which enables the military-state-corporate apparatus to disavow responsibility for the differentiated impacts of climate change, effectively obscuring the accountability behind the mounting eco-catastrophe and inadvertently making us all complicit in its destructive project."⁴⁸⁴

On the other hand, by naturalising the march of the human being within productive, scientific and industrial development, the forces of production proclaim themselves guides for the new political-ecological course that the world population will have to diligently pursue. Barca therefore asks:

"If we accept that all humanity is one with the master, from where, then, should we expect change to come? The Anthropocene ideal wants us to believe that the master itself holds the capacity to address the ecological crisis. [...] My counter-master narrative of the Anthropocene is based on the hypothesis that history consists in a

⁴⁸⁴ Demos, T. J. (2017). *Against the Anthropocene*, cit., p 17.

struggle of other-than-master subjects for producing life, in its autonomy from capital and freedom of expression, a struggle that opposes the unlimited expansion of the master's rule. These other-than-master subjects are the forces of reproduction."⁴⁸⁵

We thus also return to the second level of criticism: not only demystifying the responsible "we", but also recognising and conferring *agency* on secularly oppressed forces, so that a new ecological class can be articulated and composed.

The compulsory and unremunerated extraction of surplus does not only take place on the bodies of labourers and women, but also on those of racialised subjects forced into the system of slavery and plantations, as well as on those of non-human animals that, in addition to non-violent involvement in entertainment or companionship activities and unpaid forms of "ecosystem service" (such as pollination), suffer abhorrent forms of exploitation in the areas of scientific experimentation⁴⁸⁶ and the production of edible meat⁴⁸⁷, without receiving any form of compensation and experiencing forms of alienation comparable to those of the above-mentioned oppressed categories⁴⁸⁸.

Barca thus illuminates the work and power of the forces of reproduction that, over the centuries and today more than ever before, have been concerned with the sustenance and promotion of life on earth - particularly

⁴⁸⁵ Barca, S. (2020). *Forces of reproduction*, cit., p. 5.

⁴⁸⁶ Calarco, M. (2020). Experimentation. In *Animal studies*, pp. 71-74.

⁴⁸⁷ See in the above-mentioned text both the sections on meat (pp. 94-97) and CAFO (pp. 33-36), contemporary intensive livestock farming practices in the United States.

⁴⁸⁸ Recalling Hribal's work, Calarco states: "Critical animal studies theorists such as Jason Hribal go further and call not simply for the abolition of animal work but for deeper reflection on the capitalist economic system that exploits the labour power of both animals and human beings. For Hribal, animal work should be seen as one kind of exploited labour among others. As with dispossessed workers, under a capitalist economic system animals are alienated from both their labour power and the commodities they produce. With these similarities in mind, Hribal argues that animals should be seen as members of the proletariat (the exploited working class within the capitalist economic system) and that animal liberation is fundamentally linked to the overthrow of capitalism and the liberation of all workers" (*Ivi*, cit., p. 135).

that of the dominant subjects -, taking care of the bio-physical, social and psychological environment that allows it to flourish: subjects who have long been engaged in subsistence farming, housework, gardening, teaching, health care, waste collection and recycling, communal land management and care, pollination, regeneration of the earth and its fruits; subjects who are now developing new counter-plantation projects, indigenous conservation, women's reproductive autonomy, factory occupations, trade union struggles for the environment, resistance to slaughter and exploitation of bodies, community reforestation projects, agroecology and permaculture.

Rather than adopting - as done by her colleague Chakrabarty⁴⁸⁹ - a "species view" that lumps all humans under one roof, flattening their differences and responsibilities and denying any transformative potential to non-human entities, Barca decides to take a "reproductive stand-point", so as to reread the history of the Anthropocene no longer as a straight line of inevitable and inherently prosperous development, but as a history of oppression and resistance, as a class struggle that opposes the modern forces of production and their project of exploitation and devastation of bodies and lands to the ever-existing - devalued and concealed - forces of reproduction.

In doing so, the solutions are also reconfigured: no longer, as the dominant narrative would have it, a "sustainable development" - i.e. a continuation of the same production and consumption dynamics associated with an attempt to minimise their impact, through investments in industrial technologies and, possibly, in eco-modernist projects to reduce or collect emissions; on the contrary - taking up the example offered by Barca - a "care income"⁴⁹⁰ to be paid to the forces of reproduction, capable of sustaining

⁴⁸⁹ Chakrabarty, D. (2009). The climate of history: Four theses. *Critical inquiry*, 35(2), 197-222.

⁴⁹⁰ "Representing a convergence of 'wages for housework' with degrowth and climate justice perspectives, the care income demand recognises the crucial value of care work as a means for radical change in global political economy. It urges governments to 'invest in caring, not killing', by dropping financial support for fossil fuels, the arms trade and industrial farming and diverting money towards supporting caregivers in homes and communities, as well as in urban and rural environments. [...] This is not an all-

the work carried out by them and promoting a social reorientation towards a different way of sustaining oneself and inhabiting the planet, respecting its rhythms and limits and taking care of the degradation and suffering that its inhabitants - human and non-human - are facing today.

Aware of the inevitable partiality and partisanship of any perspective on the ecological crisis, including the scientific one, which is one of the most astute at concealing its own positioning - or, as Rancière would say, dominant fiction passing itself off as ultimate and indisputable reality -, Barca therefore takes responsibility for a particular point of view. Not only does she take responsibility for it, but she makes it explicit, describes it and, even before that, constitutes it by calling upon a multitude of actors and actresses: by appealing not so much to an identity-based and predetermined belonging to an oppressed category, but rather to a way of being and acting in the world - that of care and reproduction -, the author thus generates a *common sensibility* capable of welcoming anyone who decides to align with it and make it their own⁴⁹¹. Barca thus reminds us how no narrative, perspective and articulation of the crisis is ever fully objective and neutral: the assumption of a particular perspective (to the detriment of others) is always necessary and, therefore, it will always be necessary to

encompassing plan for undoing the Anthropocene with one coup, but it would certainly help in dismantling the master's house" (Barca, S. (2020). *Forces of reproduction*, cit., p. 62). For more details: <https://globalwomenstrike.net/careincomenow/>

⁴⁹¹ After Butler's critique of the possibility of the formation of a political class based on a stable identity and given categories (see the first pages of Butler, J. (2002). *Gender trouble*) there has been much discussion about the usefulness of such reflection and alternative possibilities to identity politics (for a recent response see Federici, S. (2020). *Beyond the periphery of the skin: Rethinking, remaking, and reclaiming the body in contemporary capitalism*. pm Press). Barca seems to provide a possible solution by focusing on a posture, a feeling, a way of acting in the world. In this, she also seems to align herself with one of Latour's latest reflections, who hopes for the emergence of an ecological class that can be based on shared sensibilities and "habits" capable of "tuning the general public to the right range of *affects* necessary to move away from the obsession with production" (Latour, B., & Schultz, N. (2022). *On the emergence of an ecological class: A memo*. John Wiley & Sons).

take responsibility for the inclusions and, unfortunately, the exclusions, produced by our own environmental and climate sensibility.

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CHAPTER 3



How Can Critique Get Back on Track

3 HOW CAN CRITIQUE GET BACK ON TRACK

In a now not-so-recent article, dating back some 20 years, Latour began to show the first concerns with respect to certain positions taken or constructed during his own career. Although he refuses the postmodern label (defining himself rather as non-modern), the philosopher can certainly be counted among those who in recent decades have most embodied the theoretical atmosphere reviewed in the last chapter, an atmosphere capable of troubling the alleged universality, transcendence and unquestionability of science through different instruments and trajectories⁴⁹²: from sociological studies of science to disciplines such as SSK (Sociology of scientific knowledge) and STS (Science and Technology Studies), from approaches such as the cultural turn, the strong programme or the HPS (history and philosophy of science) to the critique of the privileged point of view, often linked to the human, male, heterosexual, western and white position as the standard for objectivity.

However, after participating in the aforementioned movement of deconstruction, contextualisation and politicisation of scientific objects, Latour comes face to face with a new majestic and terrifying phenomenon. So, he decides to stop for a moment. And, stopping, he cannot but ask himself: "Why has critique run out of steam?"⁴⁹³. That is, how is it possible that those same critical strategies that for years have served progressive aims now seem to be losing their potential, if not actually supporting regressive and conservative positions? The Science Wars have seen a

⁴⁹² See Omodeo, P. D., Ienna, G., & Badino, M. (2022). *Epistemologia storica*.

⁴⁹³ Latour, B. (2004). Why has critique run out of steam?

community of thinkers take a common stand against the arrogance and unquestionability of science and the scientist: is this conflict still the case? Or should critical theory attempt a re-tuning with the surrounding social environment and thus reconfigure its goals, its challenges, its enemies? After spending all this energy to highlight the impossibility of neutral and unconditional access to truth, the lack of certainty inherent in the construction of so-called “scientific facts”, as well as the social and subjective participation in all that is considered as “natural”, how should we react when these same arguments are reiterated by those who attempt to discredit the existence, urgency or responsibility for the climate crisis?

Indeed, doubt and suspicion no longer pertain to the progressive fringes⁴⁹⁴, fuelling instead conservative and denialist populism, a certain “right-wing postmodernism”⁴⁹⁵ capable of undermining unwelcome scientific evidence, especially linked to the environmental discourse. The excerpt from the article that Latour reports best summarises the turning point we are experiencing:

“Most scientists believe that [global] warming is caused largely by manmade pollutants that require strict regulation. Mr. Luntz [a Republican strategist] seems to acknowledge as much when he says that ‘the scientific debate is closing against us’. His advice, however, is to emphasize that the evidence is not complete.

‘Should the public come to believe that the scientific issues are settled’, he writes, ‘their views about global warming will change accordingly.

⁴⁹⁴ As Pellizzoni recalls: “Taking initially the character of an external attack (the ‘science wars’ of the 1990s) and subsequently of a selfcritique (Latour 2004), criticisms built to a significant extent on the claim that, more than supporting weaker social groups by exposing the hidden links between scientific authority, economic interests and political powers, science deconstruction may undermine the very possibility of contesting such interests and powers in the name of indisputable factual evidence” (Pellizzoni, L. (2019). Innocent, guilty or reluctant midwife? On the reciprocal relevance of STS and post-truth. *Tecnoscienza: Italian Journal of Science & Technology Studies*, 10(1), cit., p. 116).

⁴⁹⁵ McIntyre, L. (2018). *Post-Truth*. MIT Press, pp. 133-148.

Therefore, you need to continue to make the lack of scientific certainty a primary issue'.⁴⁹⁶

Retracing the paths that have led to the current situation, as well as analysing the postmodern strategies and tools that reverberate in critical studies of science, has therefore been a crucial task. At this point, however, rather than embracing or rejecting these critical strategies in their entirety, it will perhaps be more prolific to understand what can still be useful and how, and what needs to be overcome through new thoughts and movements: we will thus avoid falling into the easy simplification of an inevitable dichotomy between postmodern theory and dogmatic scientism⁴⁹⁷, as well as automatically correlating them with regressive or progressive political positions⁴⁹⁸, trying instead to propose a meaningful theory for the current era.

In light of these insights, the first fragment of each coming section will attempt to recover the conclusions of the previous chapter regarding the ecological crisis, showing at the same time the limits of such postmodern discourses. The subsection "3.1.1 - Beyond Ontological Flimsiness" will open with the reflections of Andreas Malm, a climate theorist and activist who

⁴⁹⁶ "Environmental Word Games". In New York Times, 15 Mar. 2003, p. A16.

⁴⁹⁷ "From this perspective, the current political-epistemological dilemma between propagandistic post-truth (with its antecedents in postmodernism), on the one hand, and dogmatic scientism (a revised form of neo-positivism), on the other can be deconstructed as an ideological dialectic (or rather the ideological construction of a false dichotomy) that serves, despite being constructed as an unresolvable *aut aut*, the reproduction of capitalist society, albeit with different nuances" (cit. , p. 42. Translation mine). For a reconstruction of the salient moments that structured this opposition, see the entire paper Omodeo, P. D., & Meisner, L. (2022). L'aut aut di fatticità scienista e relativismo postmoderno quale semplificazione ideologica del problema epistemologico di expertise e populismo post-veritativo. In Ienna, G., Badino, M., & D'Abramo, F. (Eds.). *Expertise ed epistemologia politica*. Meltemi.

⁴⁹⁸ See in the previous article the possibility of connecting both positions to regressive politics (pp. 53-58); as Latour already asked: "Should I reassure myself by simply saying that bad guys can use any weapon at hand, naturalised facts when it suits them and social construction when it suits them?" (Latour, B. (2004). Why has critique run out of steam?, cit., p. 227).

tries to examine the new ontological accounts that are trying to prove the inevitable entanglement of matter and meaning. In his opinion, the insistence on the indeterminacy of scientific objects risks today undermining any articulation of the crisis capable of defining its boundaries, its core and underlying dynamics, as well as the responsible active subjects and those fundamentally damaged by it. Therefore, we will try to reflect on the following question: does recognising the semiotic component of the crisis entail its complete and arbitrary malleability?

Subsection “3.2.1 - Beyond perspectival incommensurability” will expose Brigati’s counterpoint to the anthropology of the ontological turn, especially showing its ecological reverberations: each (perspective on the) crisis (or lack thereof) becomes equivalent, also rendering any kind of communication between different perspectives ineffective or unnecessary. A possible solution to this perceptual-ontological fragmentation is offered by Anna Tsing, which invites us to shift the focus from world perspectives to world-making trajectories, processes that shows how ontologies are always co-created and thus partially shared. However, one more issue remain unsolved: if the interweaving trajectories pertain to the two opposite poles of environmentalism and climate denialism, how will it be possible to create a shared world without, at the same time, abandoning our ecological demands?

Finally, the subsection “3.3.1 - Beyond sensible bewilderment” will reiterate the questioning of boundaries performed by Animal Studies, showing how the line that separates and defines animal and plant life is itself historically constituted and, if not open to criticism, at least questionable and generative of new possibilities for both realms. After the ideas of Stella Sandford, one of the main exponents of Plant Studies, we will continue by giving the floor to Elizabeth Povinelli, an anthropologist and philosopher capable of questioning a further (and perhaps definitive) separation, that between life and non-life. Rediscussing every perceived boundary, the two authors lay bare the danger of unrestrained deconstruction: if no demarcation, not even the most basic one between life and non-life, can be said to be politically neutral, how will it be possible to discern between what

deserves to be respected, protected and promoted and what can instead be arranged, used and organised without any particular worries?

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Rereading Latour's article more carefully, I come across a note that intrigues me. The author states: "Although Fleck is the founder of science studies, the impact of his work is still very much in the future because he has been so deeply misunderstood by Thomas Kuhn"⁴⁹⁹. While Kuhn's name proliferates in philosophical texts, extending his concept of "paradigm" far beyond the field of philosophy of science, Ludwik Fleck, as Latour rightly points out, seems to have been (unjustly) sidelined and ignored. After summarising several possible social, political and personal reasons why the epistemologist's work was so long forgotten, Coniglione – echoing several colleagues – states:

"It was only when both of these 'blocs' came to an end, with the end of the Cold War and the crisis of the RV, that Fleck's thought could also be rediscovered, thanks to the pull of Kuhn's evaluation, so that today it is used by many historians of science - especially for its concept of 'style of thinking' - to the point that it is considered 'one of the classics of the history of science and research on the theory of science' and 'one of the most important pioneers of the constructivist tendency in history, sociology and theory of science' and to think, admittedly somewhat optimistically, that it may not be long before Kuhnian paradigm theory 'may well become a mere footnote to Fleck's full-length revival'."⁵⁰⁰

Having explored contemporary critiques of the universality of scientific enterprise, I therefore decide to return to what appears to be their distant founder. I retrieve his most famous text, *Genesis and Development of a Scientific Fact*, in which he studies the genesis and development of syphilis, in particular through the Wassermann reaction and its verification and

⁴⁹⁹ Latour, B. (2004). Why has critique run out of steam?, cit., footnote p. 234.

⁵⁰⁰ Coniglione, F. (2019). Lontano da Vienna, lontano da Leopoli. Ludwik Fleck: l'uomo giusto nel posto e nel tempo sbagliati. Introduction to Fleck, L. *Stili di pensiero: La conoscenza scientifica come creazione sociale*. Mimesis, cit., p. 78.

diagnosis procedure. On the strength of his knowledge in the field of microbiology, Fleck takes me through this surprisingly intricate and complex history, presenting me with one of his most important concepts: the scientific style of thinking. This is how the author defines it:

“Neither the particular coloration of concepts nor this or that way of relating them constitutes a thought style. It is a definite constraint on thought, and even more; it is the entirety of intellectual preparedness or readiness for one particular way of seeing and acting and no other. The dependence of any scientific fact upon thought style is therefore evident.”⁵⁰¹

I will now skip over the explanation of Fleck's epistemological theory, which we will later explore in more detail. What I would like to emphasise instead is how the concept of “style” immediately opened an unexplored possibility. Having always thought of style as an object of investigation and a tool for action proper to the aesthetic and artistic discipline⁵⁰², its use within the scientific field cannot but invite me to a recovery, a revival, an unexpected reconfiguration of the same⁵⁰³. This is an invitation that I take up, especially by noticing how Fleck's use of the same operates not only from a *destruens* perspective, but also from a *construens* one: not only deconstructing the object, but also illuminating its dynamic articulation and its possibilities of

⁵⁰¹ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*. The University of Chicago Press. [first edition 1935], cit., pp. 64-65.

⁵⁰² For an exploration of the use of the term in the aesthetic field see Pinotti, A. (2001). *Il corpo dello stile. Storia dell'arte come storia dell'estetica a partire da Semper, Riegl, Wölfflin*. Mimesis. On the transition from the aesthetic to the epistemological field see Davidson, A. (2002). Styles of reasoning: From the history of art to the epistemology of science. In *The emergence of sexuality: Historical epistemology and the formation of concepts*. Harvard UP. For other uses before and after Fleck, regarding science as well as aesthetics, see the references mentioned by Francesco Coniglione (2009, p. 33).

⁵⁰³ It is interesting to note how the term already appeared in several authors treated in the previous chapter, both regarding the ontological dimension of bodies and objects (Butler, J. (2002). *Gender trouble*, p. 177), the perceptual and perspectival dimension (Descola, P. (2014). Modes of being and forms of predication, p. 274), as well as the intertwining of sensibility and ethics (Calarco, M. (2015). *Thinking through animals*, p. 63; Calarco, M. (2011). Identity, difference, indistinction, p. 48).

evolution; not only situating the gazes, but also detecting and promoting assonances, harmonies and perceptive interweavings; not only politicising and doubting sensibility, but also understanding its modes of orientation and direction.

After opening with a counterpoint to the postmodern drifts, namely with the risks they may now pose to the climate debate, the second fragment of each section will be devoted to a review of the beginnings of such critical trajectories, as well as to the identification of possible ways out. We will explore the work of Ludwik Fleck, whose texts foreshadow many of the attacks and themes developed in more recent decades with regard to the scientific enterprise, its operation and its status.

The subsection “3.1.2 - Stylising the Object” will introduce the theory of styles of thinking, then focus on the ontological issue and Fleck's treatment of scientific objects and facts. In particular, reference will be made to his proposal of active and passive elements of knowledge, capable of rethinking the dualism between matter and meaning through new terms, i.e. of recognising the arbitrary component of the configuration of reality without at the same time denying that particular “resistance” that constantly dialogues with it, thus making it possible.

Subsection “3.2.2 - Stylising the collective” will initially show a certain assonance between the multiplicity and incommensurability of worlds advanced by the ontological turn and the onto-epistemological fragmentation proposed by Fleck. At the same time, this fragmentation will be circumscribed within the rare case of extreme spatiotemporal distances, highlighting rather the overlaps and entanglements that run within and between the different collectives. Going back to our problem, we will see how Fleck was in the last century already analysing the distance between the scientific elite and the general public, exploring at the same time harmonisation possibilities of their different realities.

Finally, subsection “3.3.2 - Stylising the Subject” will attempt to investigate the relationship between the previous two dimensions - namely the ontological and the perceptual - and the ethical-political axis. Considering

Fleck's little attention on the topic, we will first try to highlight some of the rare passages in which the author's opinion seems to take shape, recalling our earlier intuitions regarding the inevitable intertwining of facts and values, science and politics, as well as ethics and aesthetics. Rather than looking for ways out of the problem within Fleck's texts, we will attempt to recount the tragic events he experienced during the Second World War, so as to bring a concrete example of scientific orientation: not so much a universally valid analytical criterion, but rather an invitation emerging from the actual engagement with the challenges of his time.

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Thanks to Fleck's insights, we will thus be able to address some of the main problems that have emerged as a result of postmodern criticism and historical and social approaches to science. Indeed, the indeterminacy of the object, the fragmentation of perspectives, and the sensible bewilderment already find both their roots and their possible resolutions within the microbiologist's writings. One last question thus remains: how can we apply these solving strategies within the ecological debate?

Starting with "3.1.3 - Generating Proto-ideas", we see how Malm's (well-founded) concerns can be answered through Fleck's proposal of active and passive elements. According to the author, in fact, the elaboration of guiding proto-ideas for research, however inevitable and necessary it may be, does not entail a complete arbitrariness of the results obtained (and thus their delegitimization). On the contrary, proto-ideas help to formulate hypotheses, questions, lines of research capable of sustaining and feeding the process of articulation of scientific objects and phenomena. Thanks to this theoretical framework, the very concept of the Capitalocene advanced by Malm can be reread not so much as a critique or demolition of the scientific climatic discourse, but rather as an alternative to the Anthropocene capable of nourishing new possibilities of investigation, emphasising different dynamics and responsibilities.

We then move on to the conclusion of the second section, "3.2.3 -

Conversing at the Intersection”, aimed at untangling the knot of climate scepticism and climate denialism. The theory of thinking styles and collectives teaches us how the relationship between the public and the scientific community is not unidirectional, made up of the transmission of knowledge alone, but rather circular, i.e. sustained by the trust placed by the public in the scientific community, as well as by the participation of the former in the creation of knowledge. Going back to Tsing insights, we will highlight the importance of these two practices to counteract denialist drifts: on the one hand, listening to ecological demands emerging from marginal spaces and specific situations; on the other, letting these situated communities participate in the articulation of the concept of the Ecological Crisis and, thus, in the definition of its practical uses.

Finally, the last subsection, “3.3.3 - Participating in Struggles”, will attempt to solve the problem of the politicisation of the sensible. We have seen how every gaze, whether ordinary or scientific, is always caught up in webs of power, so that the same can never be said to be neutral. In order to find a possible compass to orient his scientific activity and politicise his gaze, what Fleck did was (unintentionally) participating in the oppressed collective (Fleck being Jewish) and (actively) joining a resistant collective (through the falsification of vaccines operated by his research group). Similarly, the rearticulation of the perceived distinction between human and animal or between living and non-living – and, thus, of our ecological concerns in both political decisions and scientific research – can unfold mainly thanks to the participation in the struggles of those who suffer most from the consequences of the crisis, as well as in the collective resistance against its tragic effects.

As said, instead of a conclusion, the thesis will close with these invitations, hoping that the three proposed – inextricably onto-epistemological, aesthetic and political – strategies will be taken up, reconfigured and employed against the many challenges of these difficult times.

3.1 ARTICULATING INDETERMINACY

3.1.1 Beyond Ontological Flimsiness

Having reconstructed some of the theoretical junctures traversed by postmodern criticism with reference to the ontological dimension of the object of investigation – be it nature, the environment or the climate crisis –, let us now turn the same critical gaze back on such reflections. One author who has recently decided to engage in the enterprise is Andreas Malm. In *The progress of this storm: Nature and society in a warming world*, the philosopher has rightly questioned the validity of many recent theoretical positions within the climate debate and politics, critiquing the various theories presented so far, from postmodern epistemology to the performativity of nature by Barad, to the climate indeterminacy of thinkers such as Morton⁵⁰⁴ and Haraway⁵⁰⁵.

Malm reconfigures such recent theoretical reflections in terms of hybridism, the idea that “reality is made up of hybrids of the social and the natural and that the two terms therefore have no referents any longer, if they ever did”⁵⁰⁶. Overlaps between nature and society capable of producing both a questioning of the clear-cut distinction between human and non-human

⁵⁰⁴ Malm, A. (2018). *The progress of this storm*, p. 88.

⁵⁰⁵ *Ivi*, p. 25 / pp. 138-140. As De Giuli and Porcelluzzi also point out: “Haraway, faced with what she calls the ‘rubbish of the Anthropocene’, proposes adopting a new, sprawling way of thinking that leads to an anti-hierarchical connection of thought and collective, complex, alternative action. It is clear from the outset that the ‘psychedelia’ with which this Harawayan revolution is presented does not speak the same language as political and much less imaginative thinkers like Malm. Haraway’s prose is seductive and deliberately elusive. In one of her best-known mottos, she calls for the creation of kinship and not children: that is, for the creation of alliances both between humans and between human and non-human, through a ‘multi-species environmental justice’ that leads to the generation of new creative and conceptual connections and a collective assumption of responsibility for the world. Malm, in a, shall we say, more immediate way, proposes instead to blow up the pipelines” (De Giuli, M., Porcelluzzi, N. Introduction to Chakrabarty, D. (2021). *Clima, Storia e Capitale*. Nottetempo. Translation mine).

⁵⁰⁶ Malm, A. (2018). *The progress of this storm*, cit., p. 40.

and a reformulation of objects as material-semiotic interweavings. Thus, hybridism is realised in the following two forms: the third chapter, "On What Matter Does: Against New Materialism", will be devoted to Barad and the various approaches that fall under the name of new materialisms⁵⁰⁷, while the following chapter, "On Unicorns and Baboons: For Climate Realism", will focus the critique on one of the most renowned living (de)constructionists, namely Bruno Latour.

Without going into the details of the criticism, nor into Malm's counter-proposal - fundamentally based on a revival of the late Marx's idea of nature and John Bellamy Foster's neo-Marxist theory of the "Metabolic Rift" - let us try here to summarise some of the key points of the first chapters. First of all, the author makes a criticism of an ethical order, referring to the indistinction advanced between human and non-human, i.e. the excessive emphasis placed on the *agency* of matter. According to several thinkers, in fact, it is time to rethink matter not as an inert and passive entity, which is subjected to human activity without having any capacity for action and response, i.e. as a product, medium or obstacle, but rather as an "active shaper of the world"⁵⁰⁸. Not only human beings and elites possess *agency*, but also chemical and geophysical entities and forces. What matters is the ability to "make a difference": if one entity X produces effects on a second entity Y, then X is endowed with *agency*.

Nothing could be more wrong in Malm's opinion. If according to Barad "agency is not aligned with human intentionality or subjectivity"⁵⁰⁹, the author will refer to the most recent and accredited philosophies of action⁵¹⁰, to demonstrate instead how the fundamental criterion through which we can decree the presence of the capacity to act is intentionality, i.e. the

⁵⁰⁷ According to D'Angelo and Pozzoni, it is possible to bring Morton's position and that of Haraway/Barad under a single theoretical umbrella, namely that of the new materialisms, the former considered as a "negative" variant, the latter instead as a "performative" variant (together with a third position which is that of the new "vitalist" materialisms). D'Angelo, L., & Pozzoni, G. (2021). *NEW MATERIALISM*. Quaderni materialisti, (20).

⁵⁰⁸ Malm, A. (2018). *The progress of this storm*, cit., p. 64.

⁵⁰⁹ Barad, K. (2003). *Posthumanist performativity*, cit., p. 826.

⁵¹⁰ O'Connor, T., & Sandis, C. (Eds.). (2011). *A Companion to the Philosophy of Action*. John Wiley & Sons.

capacity to plan, imagine desired results and act in accordance with these aims. What disturbs Malm is not so much the attempts to extend *agency* to the animal world, a move that is largely supportable, but rather those referring to matter. To use the capacity to “make a difference” as a criterion is in a way to make no difference between the entities that populate the world, all of which are equally capable of acting in the same way.

This strategy of thinking, together with the idea of unintended or unforeseen consequences⁵¹¹, would lead us towards a dilution of responsibility, such that coal can be said to be equally responsible for its overuse, given its properties as well as its ability to attract our interest and make itself productive within certain economic dynamics. Even following a more moderate line, according to which coal is considered a mere participant in the course of action, the argument for Malm cannot hold:

⁵¹¹ By this expression we mean to think of events, in our case the climate crisis, as generated by a multiplicity and complexity of causes and agents such that the action of the (individual or collective) human being cannot be said to be directly oriented towards the production of the crisis, but rather interacting in an unforeseen and unexpected way with this multiplicity. Put another way, no human being has ever intentionally set itself the goal of generating an environmental crisis, pursuing such a project and imagining precisely the expected results; simply, by acting in the world in concert with other agents and matter, it has unintentionally shaped the crisis: “We have fallen into the Anthropocene, says Chakrabarty, following the development of industrial civilisation and because of an idea of progress intimately linked to that of profit, it is true. But the study of deep time also tells us something else, namely that this long and disastrous path (full of crises, failures, illusions and successes) was also, and perhaps above all, the result of chance, of an infinite series of coincidences and historical accidents that led us to the transition from wood to coal, to the discovery of oil, to the automobile industry (and before that: to intensive agriculture, livestock farming, and more generally to technology) - and hence to the impact of this expansion, initially perhaps difficult to imagine, on the planet's atmosphere. One cannot therefore speak, according to Chakrabarty, of the climate crisis as a destiny inscribed in capitalist society: rather, the Anthropocene is the *unintended* outcome of a series of processes triggered by capitalist and global modernity. [...] Malm's take on Chakrabarty's proposals can be summed up quite easily: Chakrabarty's intent, namely to sever the links between climate emergency and social justice, is for the Swede an unacceptable strategy. One might go so far as to say: reactionary” (De Giuli, M., Porcelluzzi, N. Introduction to Chakrabarty, D. (2021). *Clima, Storia e Capitale*. Translation mine).

"So it seems: the earthquake occurs; the invasion is ordered and implemented; the latter is the result of a decision, and the decision-makers could have chosen otherwise (if the demonstrations threatened the stability of their regime, for instance), while the former is the outcome of mute plate tectonics. Should we uphold this distinction, between physically determined events on the one hand and reflexively intentional collective acts on the other? *In climate change, it makes all the difference.*"⁵¹²

Nature, according to the author, is therefore to be considered as autonomous and independent of the human being (even if it comes into close contact with it) insofar as it is capable of self-regulating its own behaviour; this does not mean, however, that the patterns through which it develops and unfolds are the result of an intentional choice among several possibilities and plans. For this reason, we can say that nature possesses "autonomy without agency"⁵¹³.

Let us now pause the question of the distinction between animate and inanimate, which we will return to in the third section of the chapter, to move instead towards what interests us most here, namely the proposal of material-semiotic entanglement and overlap between discovery and scientific production that shakes up the ontology of scientific objects, first and foremost the ecological crisis. After examining the new materialisms and the issue of *agency*, Malm moves on to the analysis of Latour's constructivist epistemology, opening the chapter with the aforementioned article on Ramses and tuberculosis and then proceeding with various other interventions by the philosopher.

According to this approach, the existence of objects, both scientific and non-

⁵¹² Malm, A. (2018). *The progress of this storm*, cit., p. 84.

⁵¹³ *Ivi*, cit., p. 147. He also affirms: "What would an alternative view of nature look like? In *What Is Nature?: Culture, Politics and the Non-Human*, surely the most incisive inquiry into that question ever written, Soper defends the following answer: nature is 'those material structures and processes that are independent of human activity (in the sense that they are not a humanly created product), and whose forces and causal powers are the necessary conditions of every human practice, and determine the possible forms it can take'. That definition deserves to be read again and memorised. Many others have been proposed - we shall inspect some of them below - but we shall treat this realist definition as capturing the essence of the realm we know as nature" (p. 27).

scientific, depends on the quality and quantity of “allies” (animate and inanimate) capable of certifying their existence, i.e. the degree of “embeddedness” within a network of actors, apparatuses and institutions capable of supporting the object's reality. Neutrons are more real than unicorns not as such, but as embedded within a network of greater and better alliances; not more real, but *stronger*, therefore. Likewise, the conclusions of climate scientists are not more correct than others; they have simply been more successful than others in attracting human and non-human alliances. It is on this basis that Latour, Harman and other like-minded thinkers cannot but call themselves climate-sceptics.

Again in complete disagreement, Malm will instead argue for an “epistemological climate realism”⁵¹⁴ according to which the climate crisis exists regardless of its scientific discovery:

“Only on the condition that the factuality of a warming world is independent of the science can its claims be intelligible at all; the results of that science register what it does not produce. Humans are doomed to expressing their knowledge of climate, as of anything else, in thought, but the object is a different matter, neither allied nor symmetrical nor parallel nor bundled with the thought. In the terminology of critical realism, ‘the intransitive dimension’ – climate change – is independent of ‘the transitive dimension’ – the science about it – or, in short, the storm is coming whether the barometer is there or not.”⁵¹⁵

Whether the barometer is there or not, climate change does in fact exist. The acclaimed impossibility of untangling and separating phenomenon and measuring apparatus promoted by Barad is thus rejected here without too many concessions. Similarly, if according to Barad matter and meaning interpenetrate and none of the two precedes the other, Malm takes up Bhaskar again to argue how “knowledge follows existence, in logic and in time”. Distinguishing the object of knowledge from the modalities through

⁵¹⁴ In particular, relying on the texts of Roy Bhaskar. Bhaskar, R. (2010). *Reclaiming reality: A critical introduction to contemporary philosophy*. Routledge; Bhaskar, R. (2013). *A realist theory of science*. Routledge; Bhaskar, R. (2014). *The possibility of naturalism: A philosophical critique of the contemporary human sciences*. Routledge.

⁵¹⁵ Malm, A. (2018). *The progress of this storm*, cit., p. 99.

which it is known and grasped is therefore of fundamental importance if climatic realism is to be established, and although discursive practices, cultural and artistic representations are extremely useful, it would still be wrong to claim that they constitute the phenomenon they claim to represent⁵¹⁶.

From ethics and epistemology we thus come to the core of Malm's discourse, namely the affirmation of a dualistic ontology, which sees on the one hand nature and materiality, devoid of intentionality, independent and prior to society and the production of meanings, and on the other hand society and the human being, dependent on its own soil and capable of producing meanings, as well as endowed with intentionality and thus *agency*. It is on the basis of this ontological premise that it is possible for us not only to identify the human being as the one responsible for the crisis, but also and above all to guarantee the scientific enterprise the validation and solidity it needs.

So, is the crisis produced or discovered? Is the crisis a strictly material phenomenon or always also semiotically articulated? According to Malm's climatic realism, we can say that it is certainly produced, by the material actions carried out over time by human beings, as it is then discovered, thanks to the scientific apparatuses of recording. The crisis is given in its materiality and any interpretation, reading, recording appears only secondarily to mere existence. However, we could ask ourselves at this point: if matter, nature and the climate crisis have a strictly material character and are independent of the discursive, philosophical and artistic practices that interpret and configure it, waiting rather to be simply detected by the scientific enterprise, why does Malm spend so much time talking about it? Whose responsibility is it to solve the indeterminacy of the crisis? To the scientist alone, or to a larger group of divergent actors, including philosophers and critics? It is from these questions that we proceed, recovering the first texts of socio-historical critique of science and

⁵¹⁶ *Ivi*, p. 101. The risk we would run by following this line of thinking is that of no longer considering climate as “good” or “bad”; good or bad would only be the ways of imagining, narrating and experiencing climate. See for example Hulme, M. (2010). Four meanings of climate change. In Skrimshire, S. (Ed.). *Future ethics: climate change and apocalyptic imagination*, Chapter 2 (pp. 37-58). Continuum Press.

its objects, so as to finally return, with greater awareness, to the theme of the crisis.

3.1.2 Stylising the Object

One of Malm's main critical targets, as just said, is Bruno Latour. If, on the one hand, Foucault's reflections led to the deconstruction of the objects of the human sciences and the deconstruction of categories such as sex, gender, race, species and so on, Latour seems to be the perfect figure to synthesise the parallel movement that took place within the natural sciences. At the same time, however, as seen in the introduction to the chapter, even the philosopher seems to have realised the dangers we risk running into by taking a strongly constructivist perspective in science, particularly with regard to the environmental crisis. Taking up the advice that the author left us in one of the notes of his most self-critical article – "Although Fleck is the founder of science studies, the impact of his work is still very much in the future because he has been so deeply misunderstood by Thomas Kuhn"⁵¹⁷ – we now attempt to return to the beginnings of the sociology of science, in particular to the life and thought of Ludwik Fleck, hoping that his insights will help us overcome the drifts of postmodern ontologies.

Born in Lwów (today Lviv) on 11 July 1896, Ludwik Fleck grew up in a culturally lively atmosphere, attending high school and later graduating in medicine at the Jan Kazimierz University. Always interested in the problems of microbiology, in 1920 Fleck decided to become assistant to Rudolf Weigl, a typhus specialist who at that time headed the laboratory for infectious diseases in Przemyśl, later following him (1921-1923) when he was hired as professor of biology at the Faculty of Medicine of the University of Lwów. Not only a lover of microbiology, but also of philosophy, sociology and the history of science: already during his university years, in addition to trainings in concrete laboratory practices, Fleck spent part of his days reading various texts from lateral disciplines, thus continuing to question

⁵¹⁷ Latour, B. (2004). Why has critique run out of steam?, cit., footnote p. 234.

himself on meta-scientific issues. His first publication in philosophy of science dates from 1927 and is entitled *Some Specific Features of the Medical Way of Thinking*, followed by a second article in 1929 entitled *On the Crisis of "Reality"*. In 1935, the author presented his first and last monograph, *Genesis and Development of a Scientific Fact*, in which one can find a detailed account of the development of syphilis as an epistemic-ontological unit, all intertwined with numerous insights and concepts that are today central to the philosophy of science⁵¹⁸.

So what insights are we talking about? Influenced by the contemporary Polish school of the philosophy of medicine⁵¹⁹, Fleck attempts to oppose the universality, immutability and autonomy of human thought, as well as that of empirical fact, thus establishing himself as one of the main precursors of the historical and sociological approach to science⁵²⁰. Forgotten for years, most likely due to the language of his writings - Polish - and, therefore, the late translations, the author was then rediscovered by authors such as Kuhn⁵²¹ or, more recently, as we have seen, by Latour. In spite of the various attempts to take his thought to extremes, aimed at configuring it as the forerunner of a radical constructivism, Fleck's position is much more reasonable and moderate with respect to the most recent constructivist

⁵¹⁸ Schnelle, T. (1986). Microbiology and philosophy of science, Lwów and the German Holocaust: Stations of a life. Ludwik Fleck 1896-1961. In Cohen, R. S., & Schnelle, T. (Eds.). *Cognition and Fact: Materials on Ludwik Fleck*. Boston Studies in the Philosophy of Science, vol 87. Springer Netherlands, pp. 3-6. The theoretical production then continued after 1935 (until 1960, a year before his death) with a dozen more articles.

⁵¹⁹ Rosa, F. (2018). Ludwik Fleck. *APhEx*, pp. 4-6. For other sources of Fleck's thought see Schnelle, T. (1986). Microbiology and philosophy of science, pp. 6-19.

⁵²⁰ "To these epistemologists trained in the natural sciences, for instance, the so-called Vienna Circle including Schlick, Carnap, and others, human thinking - construed as an ideal, or thinking as it should be - is something fixed and absolute. An empirical fact, on the other hand, is relative. Conversely, the philosophers previously mentioned with a background in the humanities construe facts as something fixed and human thought as relative. It is characteristic that both parties relegate that which is fixed to the region with which they are unfamiliar. Would it not be possible to manage entirely without something fixed?" (Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 50).

⁵²¹ Kuhn acknowledged his debt to the author in the first pages of his most famous text (Kuhn, T. S. (1962). *The Structure of Scientific Revolutions*. University of Chicago Press), as well as in the preface to the English translation above.

theories⁵²², managing to account for the “resistance” of the real, without ever postulating or referring to a presumed “world in itself”. This, perhaps, is also due to the fact that - unlike Latour, who started out as an anthropologist and then decided to analyse science, while at the same time arguing that his scientific ignorance (renamed by Bunge as *willful or postmodern ignorance*⁵²³) is a strength rather than a weakness - Fleck is trained in the medical and biological fields and thus possesses an in-depth knowledge of the disciplines he reflects upon, so that his sociological insights never result in the total deconstruction or delegitimisation of scientific practice⁵²⁴.

Where later socio-historical accounts of science and its objects, offered by authors such as Kuhn or Foucault, would present a discrete and discontinuist approach, i.e. based on the idea of well-circumscribed and determined historical a priori⁵²⁵, Fleck would attempt to offer a much more variegated, stratified, elusive and complex vision. Indeed, paradigms and epistemes extend like monoliths within certain temporal boundaries and permeate the entire society or scientific community, replacing one another only through radical breaks in thinking and thinkable objects between one epoch or system and those to come. On the contrary, Fleck invites us to think through styles of thinking, capable of overlapping, intersecting, coexisting in multiplicity and influencing each other, whether through

⁵²² See for example Zielinska, A. C. (2023). Sciences, objectivity and realism between Ludwik Fleck and contemporary debates. *Sciences, circulations, révolutions: Festschrift pour Philippe Nabonnand*, 729-740.

⁵²³ Bunge, M. (1995). In Praise of Intolerance to Charlatanism in Academia. *Annals of the New York Academy of Sciences*, 775(1), 96-115, p. 108.

⁵²⁴ Campa, R. (2001). Fleck's place in the philosophical debate. *Ruch Filozoficzny*, 58(2).

⁵²⁵ Sciortino, for example, comparing Fleck, Kuhn, Foucault and Hacking shows how only Fleck adopted a continuist approach to science (Sciortino, L. (2021). The emergence of objectivity: Fleck, Foucault, Kuhn and Hacking. *Studies in History and Philosophy of Science*, 88, 128-137). Indeed, Fleck's thought is often associated with Kuhnian paradigms or Foucauldian a priori. Regarding Hacking, we can say that when the author speaks of “styles”, the reference is not only to Fleck, but also and above all to Crombie (Lecture I, section 7, in Hacking, I. (2008). *The Scientific Reason*. National Taiwan University Press). The philosopher will also decide to redefine thinking styles in terms of styles of reasoning, to highlight their social nature, as well as styles of thinking and doing, to highlight both the conceptual and practical component (Vagelli, M. (2017). Introduction to Hacking, I. *La ragione scientifica*. Castelvechi, pp. 11-12).

harmonisations or contrasts, capable of lasting decades, centuries or, on the contrary, a single day, appearing gradually only to then gradually dissolve or dilute within other styles.

Thinking Styles and Scientific Objects

What, then, are scientific thinking styles? Starting from a critique of previous epistemic theories, which saw the process of knowledge as dual, i.e. consisting only of the knowing subject and the known object, Fleck decided to introduce a third element, the thinking collective, defined as “a community of persons mutually exchanging ideas or maintaining intellectual interaction”⁵²⁶. According to the author, in fact, every time two or more people begin to converse, a certain “mood” is generated between them: over time, through mutual understandings, misunderstandings and progressive adjustments, attitudes, dispositions, habits, a certain oriented way of perceiving and articulating reality, a particular trajectory of thought and action capable of guiding and configuring research are sedimented. This “mood”, what animates and characterises the collective of thought, is precisely defined by Fleck as a style of thinking⁵²⁷. The collective - and, with it, the relative style of thinking - participates in the process of knowledge,

⁵²⁶ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 39.

⁵²⁷ “We can therefore define thought style as [the readiness for] *directed perception*, with corresponding mental and objective assimilation of what has been so perceived” (Ivi, cit., p. 99). Fleck’s “style” seem to evoke concepts such as Bourdieu’s *habitus* (Omodeo, et al. (2022), cit, p. 85) or, even better, that of habits advanced by John Dewey, which Dreon describes - in an intervention aimed precisely at comparing them to the general concept of “style” - as: “[...] functions of the environment, that is [...] *socially acquired* predispositions to respond with patterns of habitual behaviour of a perceptive, cognitive, practical or productive kind and therefore to prefer certain environmental, natural and social stimuli, according to a sensitivity oriented mostly in a certain way” (Dreon, R. (2012). *Abiti, tecniche corporee e stili di vita*. In *Stili di vita. Qualche istruzione per l'uso*. Mimesis, cit., p. 45). See also Dewey, J. (1922). *Human Nature and Conduct. An introduction to social psychology*. Henry Holt & Company. For similar reflections on perception, science, ontology see Dewey, J. (1925). The naturalistic theory of perception by the senses. *The Journal of Philosophy*, 22(22), p. 602; Dewey, J. (1917). The need for a recovery of philosophy. *Creative intelligence: Essays in the pragmatic attitude*, 1, 3-69.

articulating (and being articulated in return by) the knowing subject and the object under investigation:

“The process of cognition is not a two-term one, as individualist opinion proclaims: it does not occur solely between an abstract 'subject' and an equally absolute 'object'. The collective is incorporated into this process as the third member, and there exists no way to exclude any of these three members from the process of cognition: every cognition is a process between an individual, his thought-style which results from affiliation to a social group, and the object. There is no use in discussing the subject of cognition, without regard to the thought-style, or the object independent of both, just as one cannot discuss a collective body which exists without individuals.”⁵²⁸

This new triangulation thus generates a (socio-historical) reconfiguration of both subject and object. On the one hand, Fleck rejects the idea of a disembodied and abstract knowing subject, firmly opposing both the idea of “normal” human beings and minds⁵²⁹ and the possibility of an “original” faculty of cognition or perception⁵³⁰. No thought and knowledge are

⁵²⁸ Fleck, L. (1947). *To Look, To See, To Know*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact*, cit., pp. 147-148.

⁵²⁹ “The fundamental error in many discussions from the field of epistemology is the (more or less open) manipulation of the symbolic epistemological subject, known as 'human spirit', 'human mind', 'research worker' or simply 'man' ('John', 'Socrates'), [...] which represents every 'normal' man regardless of the surroundings and the epoch. Thus it is to be absolute, unchanging and general. [...] That symbolic 'human spirit' is an asocial and ahistorical being: being the only one, unique, hence solitary, it has no communication with anybody, it does not enter into discussions, does not cultivate the art of imitation, has no companions, friends or enemies. Hence the neglect of the sociology of cognition. The 'human mind', this fictitious representative of the minds of men, is moreover said to be, in its 'logical structure', everywhere and always the same, even in general the only possible one. Hence the neglect both of studies of the historical development of thinking and of the comparative science of thinking” (Fleck, L. (1936). *The Problem of Epistemology*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact*, cit., pp. 79-80).

⁵³⁰ “At no time do we resemble a blank page, nor are we in a state of a *tabula rasa* as is the screen before a film is projected on it. Cognition has no discernible beginning, certainly not at the moment of birth or even in the womb, because the capacities for feeling, and feeling as such, originate in a parallel and synchronous way through interaction. It is equally impossible to establish the phylogenetic beginnings of cognition”

possible apart from a certain style, since from birth we involuntarily and inevitably participate in various collectives (scientific and non-scientific, as we shall see later) that, by orienting and arranging thought, simultaneously make this thought possible:

“A truly isolated investigator is impossible, and so also is an ahistoric discovery, or a styleless observation. An isolated investigator without bias and tradition, without forces of mental society acting upon him, and without the effect of the evolution of that society, would be blind and senseless. Thinking is a collective activity, just as choral singing or conversation.”⁵³¹

Despite this, the author does not argue for a unilateral determination of the knowing subject, subjugated and passively directed by style. On the contrary, precisely because style is not a metaphysical entity, but a pragmatic concept – like a song, a conversation, a “mood” generated and preserved by the constant enactment of the thinking collective –, the subject's active participation in maintaining and, at the same time, revising his or her own styles, will be an integral part of the process.

On the other hand, the presence and operation of styles also undermines the idea of an autonomous and pre-existing object in relation to the knowledge process. In spite of this, as we will see shortly, Fleck does not fall into a trivial constructivism or relativism, showing rather how the object, stylised by the knowing subject and the collective, manages to “resist” the arbitrariness of the two, reconfiguring in return the style of thinking and the activity of scientific research. Following the structure of the previous chapter, we will now start by exploring this process of ontological articulation and its “resistant” counterparts, leaving for the second section the collective stylisation of scientific gazes, and for the third and final section the social and, thus, political dynamics that configure both scientific facts and scientific perception.

(Fleck, L. (1929). *On the Crisis of “Reality”*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact*, cit., p. 48).

⁵³¹ Fleck, L. (1935). *Scientific Observation and Perception in General*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact*, cit., pp. 77.

In a 1947 article, *To Look, To See, To Know*, the author opens the discussion with the following image and the question: "What do we see?"



Figure 7. From Fleck, L. (1947). *To Look, To See, To Know*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact: Materials on Ludwik Fleck*. Boston Studies in the Philosophy of Science, vol 87. Springer Netherlands, p. 129.

After several wrong assumptions, Fleck tells us: "No, this is a perfect photograph of a cloud of the type known to meteorologists as cirro-cumulus". He then continues:

"In order to see one has to know what is essential and what is inessential; one must be able to distinguish the background from the image; one must know to what category does the object belong. Otherwise we look but do not see, we look intently at too many details without grasping the observed form as a definite entirety.

This happens not only under the artificial conditions of the experiment we have just carried out, but also in any, even the simplest and the most complex, perception. A passer-by who watches an event in the street; a man who looks at a work of art in a museum; a scientist who examines a natural phenomenon; a sociologist who studies, who follows the aspects of social life; a physician who observes a patient; a

farmer in the field, a craftsman at the bench – we have, all of us, to learn how to see the more or less complex forms of our world.”⁵³²

The meteorological example quoted can only fit in well with our climatic discourse⁵³³, reminding us how the environmental crisis is never given as a unit with definite contours and properties, but requires a certain readiness, education and skill in vision, i.e. the learning, embodiment and implementation of socially shared styles of perception and thought. Only in this way will it be possible to identify salient features and fundamental connections, discard unnecessary relations and instances, and guarantee a certain coherence, solidity and temporal stability to the phenomenon.

Someone, at this point, might object by arguing that scientific and objective observation is always possible, in particular by adopting an approach that can be based solely on the analysis of the physical and basic properties of the object in question. Here again, however, following Fleck's thinking, we could say that no observation of fundamental properties of the crisis would be possible without first defining what its essential elements are, how to measure them and beyond what thresholds they can be considered of concern. On the one hand, it will therefore be necessary to determine a *boundary* capable of isolating the object from its surroundings, defining which of the disparate possible elements make it up and which do not, i.e. already possessing a given concept capable of indicating the object's proper and basic characteristics; on the other hand, one must then define *criteria*,

⁵³² Fleck, L. (1947). *To Look, To See, To Know*, cit., pp. 129-130.

⁵³³ The author refers not only to so-called natural laws and objects, but also to other salient objects of critical theory, such as those of race or class: “If, due to a historic coincidence, two collective bodies come together after having been isolated from each other for a long time, their members seem to the other set to be madmen or liars: ‘how is it possible to ignore races?’ - ‘how can one not see classes?’ - ‘How is it possible not to see the bad and the good spirits who show themselves at every step?’ - ‘How can one disregard the laws of nature which manifest themselves in every phenomenon?’” (*Ivi*, cit., pp. 137-139). On other occasions he problematises the assumption of correspondence between male and female genitals or their “normal” or “natural” representation, foreshadowing the possibilities explored by queer theories with the sentence: “In science, just as in art and in life, only that which is true to culture is true to nature” (Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 35).

standards and measurement *apparatuses*⁵³⁴ which, inevitably, already lead one towards a certain way of seeing proper to the field or discipline in which the apparatus is normally used and in which one has been trained to use it over time, as well as defining the number of measurements sufficient to guarantee good statistical reliability (given that an infinite number of measurements would be impossible due to the observer's time limitations and the material deterioration of the observation instruments). The author will therefore claim:

“The perception of scientifically accepted properties must first be learned. It does not occur *ipso facto* and, indeed, the ability to perceive scientifically is only slowly acquired and learned.”⁵³⁵

If not even basic, physical or primary properties can be given apart from a certain historically and socially situated stylisation, the ontological autonomy of the object terribly wavers, clearly showing “the dependence of any scientific fact upon thought style”⁵³⁶.

Up to this point, the discourse seems to trace our previous reflections, aimed at demonstrating the impossibility of a material dimension completely disentangled from a semiotic counterpart, as well as the impossibility of a scientific discovery without any production of concepts, tools and practices of intelligibility. We have seen, however, how such reflections, transferred from the sphere of sexuality to that of nature and, finally, within the field of climate, risk leading us towards a dangerous inconsistency (or, in the worst case scenario, towards the denial) of the crisis. Precisely for this reason, Malm asks himself (and us): if scientific facts and objects depend on collectives and styles of thinking, thus proving to be socially and historically marked entities, can we then conclude that reality has no ontological solidity? Are the environment and the objects that

⁵³⁴ The co-dependence between the observed/measured phenomenon and the observation/measurement apparatus sees its roots (as we have already seen with the case of Barad) in the insights of quantum physics of Bohr and Heisenberg. Some references to the authors can be found in Fleck, L. (1935). *La questione dei fondamenti della conoscenza medica*. It. trans. in Coniglione, F. (2019), p. 156; Fleck, L. (1939). *Risposta alle osservazioni di Tadeusz Bilikiewicz*. It. trans. in Coniglione, F. (2019), p. 227.

⁵³⁵ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 48.

⁵³⁶ *Ivi*, cit., p. 64.

populate it merely the result of culturally situated observations and projections? Is the climate crisis to be considered a merely discursive phenomenon, a human construction, a mental representation? Or, to put it more directly: should the styles that articulate the crisis today and enable its perception disappear, would the crisis dissolve, and could we therefore say that we have solved all our ecological problems?

We have already alluded to the fact that Fleck, although sometimes portrayed as the promoter of a dangerous constructivism, can in fact be situated within an original median position, aware of the workings of scientific practice and, at the same time, not so naive as to define objects as the product of mere whim or the simple will of the researchers. Going back to our dichotomies, we can see how the author rejects the rigid distinction between discovery and production⁵³⁷, showing how objects are neither pre-existing to scientific observation, nor generated *ex nihilo* by it, but rather slowly articulated in the course of the knowledge process. Fleck writes:

“[...] cognition passes through three basic stages: the discovery appears at first in the form of a feeble advice, noting the resistance which inhibits the alternate mental oscillations in the creative chaos of thoughts. By way of social stylizing, by this circulation of the thought, there arises from this advice a demonstrable thought, i.e. a thought which can be placed in the style-system. Further development transforms it into an obvious thought - within the framework of the given style, into a specific, directly cognizable form, into an 'object' which the members of the collective must treat as a fact existing outside and independent of them. Such is the evolution of what we call 'real'.”⁵³⁸

According to Fleck, there is thus an investigation of reality that, starting from certain questions, problems and instances specific to a thinking collective, formulates various creative and alternative hypotheses. These act as trajectories of exploration that will inevitably encounter a certain “friction” or “resistance”, capable of circumscribing their oscillations and stabilising them within more or less restricted and defined directions. After this, there

⁵³⁷ Anticipating Daston's reflection, Fleck wrote: “The discovery - or the invention - of the Wassermann reaction [...]” (Fleck, L. (1981). *Genesis and Development*, cit., p. 97).

⁵³⁸ Fleck, L. (1935). *Scientific Observation and Perception in General*, cit., pp. 72-73.

will then be a necessary process of verification and attestation by the thinking collective according to shared procedures and stylised modes. Lastly, the observation, at first uncertain and circulating only in scientific articles, slowly begins to stabilise itself through transitions to more and more codified and increasingly impersonal publications, until it arrives within the disciplinary handbooks, where no researcher's name is any longer present, so that the embodied observations can become autonomous "objects" defined by specific "technical terms"⁵³⁹ (the characteristic of which is, precisely, to dissolve the connection that bound known object and knowing subject) - awaiting the subsequent editions of the manual, within which they might undergo slight modifications or substantial mutations, subdivisions or amalgamations within new entities or even disappear.

Observation of the process that leads from the first steps of research to a given "object" thus reveals the meaninglessness of the rigid distinction between discovery and production:

"If a fact is taken to mean something fixed and proven, it exists only in vademecum science. The preliminary stage of disjointed signals of resistance within journal science really constitutes only the predisposition for a fact. Later, at the stage of everyday popular knowledge, the fact becomes incarnated as an immediately perceptible object of reality."⁵⁴⁰

Even the sharp distinction between matter and meaning seems to make way for two new terms less marked by a dualistic prejudice, namely what Fleck would define as the active and passive elements of knowledge. If, in fact, it is often possible for us to think of meanings as abstract entities devoid of material supports, as well as of matter as a mute and inert substance, the active and passive elements instead reveal themselves as different but necessarily conjoined - distinct moments of a process of articulation incapable, however, of surviving without their counterpart⁵⁴¹. In essence, the active elements would constitute the assumptions,

⁵³⁹ Fleck, L. (1936). *The Problem of Epistemology*, p. 108.

⁵⁴⁰ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., pp. 124-125.

⁵⁴¹ *Ivi*, p. 95.

questions, concepts, practices and devices through which research can be oriented; the passive elements would instead be the necessary results, the “resistances”, which proceed from such premises, questions and devices. Where the normal representation of the cognitive process starts from the object as autonomous and pre-existing and then secondarily introduces a knowing subject who investigates the given properties, Fleck decides to reverse the directionality, putting in first place the socially shared active elements through which the activity of research and investigation is conducted.

Active and Passive Elements of Knowledge

In order to grasp the idea of active and passive elements, I propose here two metaphors advanced by Nicholas Binney. The first concerns radio signals. Binney argues how, once the instruments have been selected and adjusted, the field defined and the investigation oriented according to specific trajectories, radio operators begin their research:

“At first, all they hear is white noise. Then, in the noise, some researchers can make out the faintest hint of a signal. This is initially not clear enough to discern what the signal is exactly, but it is enough to indicate there is something worth pursuing, that the game is afoot. They continued to work on the reaction, learning about how it should be carried out and controlled. They learned that certain negative controls could return positive results and modified their procedures to cope with this problem. They learned how to carry out their procedures at the correct speed, to reduce the variability of results. [...] They added these elements to their network, tightening it, reducing the degree of freedom they had to interpret their results in different ways, until no one would deny the [...] value of [the same results]”⁵⁴²

Thus, although the final results, the so-called facts often crystallised into objects, certainly derive from a particular resistance - defined by Fleck as “*widerstandsavis*o (the early signal of resistance)” -, according to the author

⁵⁴² Binney, N. (2023). Ludwik Fleck’s reasonable relativism about science. *Synthese*, 201(2), 40, cit., p. 21.

what should not be forgotten is how the same undeniable resistance, initially weak and indistinct, was detected through the adoption of specific active elements, so that no passive element could exist and be affirmed regardless of them.

A second metaphor succeeds, in my opinion, in placing even clearer emphasis on the acted and temporal component of the research, thus showing the active and passive elements not so much as components of the object, but rather as components of its incessant articulation activity.

“The relationship between the culturally conditioned active element and the steadfast passive element is not like that of the social decisions to build an object like a bridge and the bridge itself. Although a bridge would not exist without those decisions, once it has been made it enjoys an autonomous existence. If people decide it was a bad idea to build the bridge, the bridge still exists independently of those decisions. Passive resistance is more like the resistance of a trampoline. When someone jumps on a trampoline (the active element), it resists their weight (the passive element). How they jump on the trampoline changes how the trampoline resists them. But when they get off the trampoline, it does not resist them anymore. Without the continuous cultural acceptance of active elements, there would be no passive elements at all.”⁵⁴³

The trampoline metaphor succeeds in holding together two apparently conflicting instances: on the one hand, the need for epistemic-ontological plurality and the recognition of the dependence of results on the style adopted; on the other, the need to avoid radical constructivist or relativist drifts, according to which the climate crisis is a mere social construction or according to which every perspective - including sceptics and denialists - can be said to be equally valid. The resistance produced and perceived varies, in fact, depending on the manner, quality, trajectory and impact of the leap, so that one can never speak of resistance in the singular, nor of a resistance pre-existing the action that provokes it; at the same time, one cannot even affirm the total arbitrariness or inconsistency of resistance, or its existence as a mere subjective belief, mental projection or social construction. It is

⁵⁴³ *Ivi*, cit., p. 20.

worth emphasising how Fleck succeeds in this operation without, at the same time, postulating or clinging to the existence of a supposed “world in itself”, which, according to the author, there is no need to talk about⁵⁴⁴. Indeed, “resistances”, despite being plural and relational, offer us enough support to avoid any dangerous anti-realist drift⁵⁴⁵.

In the light of the metaphors, it is now the case to put forward a few concrete examples, which are capable of lending greater solidity to the active and passive elements. A first case reported by Fleck concerns apparatuses, criteria and standards of measurement that, as mentioned earlier, are indispensable for any detection of physical properties. According to Fleck, for example, once the thinking collective fixes the atomic weight of oxygen at 16, such a conventional and arbitrary active element will necessarily entail an emergent and inevitable passive element, namely the fact that hydrogen has an atomic weight of 1008⁵⁴⁶. Without denying the inevitability of the 16:1008 ratio, the author cannot but consider the latter value as necessarily dependent - but never reducible or entirely produced - by the active elements brought into play for its measurement: oxygen weight, measuring scale, measuring apparatus. As will be reiterated elsewhere:

“In any case an observation with the aid of a scientific apparatus is not tantamount to the co-ordination of some number which is independent of us, with a certain constant independent element. It is rather the construction of a sentence of the following type: ‘under the

⁵⁴⁴ As Binney recalls: “Fleck argued that the notion of the culture-independent world-in-itself is not intelligible and preferred not to speak about things he did not think could be understood” (*Ivi*, p. 6). Similarly, Hacking states: “The persistence of a style demands some brute conditions about people and their place in nature. These conditions are not topics of the sciences, to be investigated by one or more styles, but conditions for the possibility of styles. An account of them has to be brief and banal because there is not much to say” (Hacking, I. (1992). ‘Style’ for historians and philosophers. *Studies in History and Philosophy of Science*, 23(1), cit., p. 18).

⁵⁴⁵ “The principle formulated in this way safeguards Fleck’s discourse from possible idealistic and radically relativistic drifts, since the cultural constraint determined by the historical collectivity to which the scientist belongs (which Fleck considers a sort of ‘active element’ of knowledge) must necessarily be limited on the basis of the ‘passive’ element of the absolute non-arbitrariness of reality” (Omodeo, P. et al. (2022), cit., p. 60).

⁵⁴⁶ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, p. 83.

conditions of the measurement the probability that the weight of the body C does not exceed the limits 5.32587-5.32589 g amounts to about 95%'. What have we found? A complex construction, an entire theory expressing the relation between a series of numbers, a set of conditions partly depending on ourselves, a state of our knowledge at the given moment and a certain element isolated by us. *From this construction one cannot deduce anything about something which is independent of us.*"⁵⁴⁷

If this first intuition seems trivial and, after all, of little use for the critical debate on the crisis⁵⁴⁸, let us move on to a second example. According to Fleck, in fact, the active component of knowledge does not simply consist of numerical conventions and measurement scales, but is also realised through the use of "proto-ideas"⁵⁴⁹ through which reality is then tested: as we were saying, in order for the articulation of scientific facts and objects to take place, it is always necessary to have certain starting concepts that guide the research, allowing us to define possible boundaries of the object and determine which elements make it up, that is, what is relevant for analysis and what can be neglected. Undeniably, modern scientific concepts, regarded as mere factual findings, have in fact sprung from purely philosophical speculations: Democritus' "atoms" or the "elements" of Greek thought, for example, did not correspond to any empirical evidence when formulated; at the same time, they provided a certain disposition, a particular focus, a speculative frame of reference useful for the formulation of hypotheses and scientific questions that, over time, have come to produce certain results and stabilise within ontologically consistent entities⁵⁵⁰. In Fleck's view, therefore, the point is not to question whether

⁵⁴⁷ Fleck, L. (1947). *To Look, To See, To Know*, cit., pp. 145-147.

⁵⁴⁸ We could indeed argue the dependence and variability of global average temperature data (or any other relevant ecological values, for example those related to the *Planetary Boundaries*) on their measuring systems and apparatuses. At the same time, however, such a statement would hardly be able to be linked to demands for climate justice, thus being reduced to a mere exercise in criticism for its own sake.

⁵⁴⁹ For a comparison between proto-ideas and similar contemporary concepts, see Rotenstreich, N. (1986). The proto-ideas and their aftermath. In *Cognition and fact: Materials on Ludwik Fleck*, 161-178.

⁵⁵⁰ The same can be said – as we previously saw – about (binary) gender, a social proto-idea through which we study and frame material attributes and biological sex.

these ideas were true or false, whether atoms really exist or are just an illusion, but rather to understand that no discovery can originate independently of certain socially elaborated ideas.

The relevance of proto-ideas emerges clearly within the discussion of syphilis conducted in the 1935 monograph. The text opens by showing how, towards the end of the 15th century, scholars were confronted with a growing mass of pathological symptoms, often related to the skin and genital areas. Many of these went on to be subdivided and characterised over the centuries as specific pathologies, then defined (in Fleck's time) as "leprosy; scabies; tuberculosis of the skin, bone, and glands; small pox (variola); mycoses of the skin; gonorrhea, soft chancre, probably also lymphogranuloma inguinale, and many skin diseases still regarded as nonspecific today, as well as general constitutional illnesses such as gout"⁵⁵¹. From this indistinct mass, an attempt was therefore made to bring order, initially through concepts from apparently distinct fields of knowledge from science and medicine. An initial interpretation of the phenomenon was imported from astrology, considering the pathology to be caused by the conjunction of Jupiter and Saturn in the sign of Scorpio (which, indeed, rules the genitals) on 25 November 1484. The idea of syphilis as a venereal disease, generated from an astral event, thus constituted the "first specific difference"⁵⁵² of the modern clinical entity. This first proto-idea was later mixed with and reinforced by religious teachings, which instead defined syphilis as divine punishment due to lust and sexual sins, thus also giving it a moral connotation. The concept of syphilis therefore began to make its way, becoming a useful tool for medical research, albeit generated at the intersection of a chaotic phenomenon (the massive spread of epidemic diseases) and various non-empirical, i.e. astrological and religious, suppositions:

"This rudimentary idea in syphilology, involving a theory of the venereal nature of syphilis, or syphilis construed simply as the carnal scourge, seems far too broadly based. It comprises not only what we today call syphilis but also the other venereal diseases, which have so far been successively distinguished as gonorrhea, soft chancre, and

⁵⁵¹ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 1.

⁵⁵² *Ivi*, cit., p. 2.

lymphogranuloma inguinale. However, the sociopsychological and historical foundation was so strong that it took four centuries before scientific advances in other fields were important enough to establish a definitive distinction among these various diseases. Such entrenchment of thought proves that it was not so-called empirical observations that led to the construction and fixation of the idea. Instead, special factors of deep psychological and traditional significance greatly contributed to it.”⁵⁵³

This early “ethical-mystical” idea of syphilis - defined as a kind of “carnal scourge” - persists over time and slowly begins to overlap with other trajectories. One of these is, for instance, the “empirical-therapeutic” idea emerging from the mercury treatment. The use of mercury could in fact alleviate the symptoms of the generalised phase of syphilis, while producing no particular effects in relation to the primary phase, localised only in the genitals. This trajectory therefore only separated and defined one phase of the (current) disease as syphilis, leaving instead the primary phase within the “carnal scourge” basin along with the (current) gonorrhoea and chancroid. Again, we can emphasise how the passive element that begins to guide us towards the current definition of syphilis, although it can be considered as an empirical fact (alleviation of symptoms), depends however on an active element, i.e. the idea of “carnal scourge” that allowed us to select a field of patients to whom to administer mercury - a field that in any case did not contain the totality of those we would today define as suffering from syphilis, since, for example, symptomless carriers were not touched by the therapeutic practice.

As we proceed, we then see how the two concepts begin to coexist, generating a dispute between those who attempt to maintain an identity between syphilis, gonorrhoea and chancroid (within the concept of “carnal scourge”) and those who instead support a possible division. The latter option is gaining more and more credibility (without, however, completely supplanting the ethical-mystical idea, of which - as Fleck reminds us - we can still see the remnants in the way those who contract venereal diseases are viewed and treated, i.e. justly punished for their sins), especially thanks to other new scientific insights that are beginning to make their way in. Among

⁵⁵³ *Ivi*, cit., p. 3.

the most relevant to our discourse will be the idea of identity between specific pathogenic microorganisms and specific diseases, which emerged from the intertwining of the observation of people developing the same symptoms as people with whom they were in contact (whereby there are different diseases, each with its own effects) and the observation of organisms such as intestinal worms (whereby diseases are caused by creatures invading the body).

In particular, among the pathogens identified, we will find the two responsible for gonorrhoea and chancroid. From this point onwards, therefore, syphilis will continue to persist, however, defining itself as a "residual" category, i.e. as that group of symptoms that are similar to gonorrhoea and chancroid, but which cannot be associated with these diseases due to the absence of their specific pathogens in the patients' bodies. Here again we therefore see how it is only from an active element such as the assumption of unambiguous correlation between pathogens and diseases that the passive element (i.e. the absence of gonorrhoea and chancroid pathogens and, at the same time, similar symptoms) can assume relevance. In the absence of the active assumption, in fact, the passive element alone could have led to alternative conclusions: just to give an example, "residual" patients could have been categorised as suffering from gonorrhoea when the possibility of two different pathogens causing the same disease had been taken into account.

A similar argument is repeated when the pathogen of syphilis - *Spirochaeta pallida* - is detected. Found within some of the "residual" patients, then inoculated within the bodies of animals that later began to show similar symptoms, the bacterium was considered to be responsible for the disease. At the same time, bacteriologists realised that it could not be clearly distinguished from other similar micro-organisms (which, on the other hand, did not cause any symptoms) through microscopic analysis (the main criterion used at the time to define a micro-organism). We can therefore say that, to a certain extent, it is not the pathogen that will incontrovertibly define syphilis, but on the contrary syphilis that will define its pathogen, allowing it to be distinguished thanks to symptomatology, where the morphology observed in the laboratory would have led to grouping it with other bacteria. Syphilis, an entity not yet clearly defined by empirical

evidence, and thus still to be considered as a proto-idea, is used to separate micro-organisms that are otherwise identical. Perhaps, therefore, it would be better to affirm the co-dependence between the two: just as syphilis gains ontological consistency by being defined by a (rendered) specific pathogen, *Spirochaeta pallida* gains ontological consistency by being differentiated from similar microorganisms by the (still undefined) syphilis⁵⁵⁴.

It is from here that the so-called Wassermann reaction will develop, i.e. a diagnostic test for syphilis aimed at detecting the specific antigens or antibodies relating to the specific pathogen (as their detection is much more accurate, quicker and cheaper than that of the *Spirochaeta pallida*, which is not always easily identifiable within samples of symptomatic subjects). Here again, although the empirical evidence may seem free of any social stylisation, Fleck seeks to highlight the non-demonstrable premises, i.e. the active elements of the process. For the test to be considered effective, it first needed to be fine-tuned, i.e. to demonstrate some statistical evidence of its effectiveness. Wasserman and his group thus conducted the test, obtaining 64 positive results out of 69⁵⁵⁵ within patients with syphilis and 14 out of 14 negative within patients without syphilis. What we might ask at this point is:

⁵⁵⁴ Moving laterally to the story, Binney shows how active elements are always operating within scientific research: “[...] Aldo Castellani discovered another spirochaete, which he named *Spirochaeta pertenuis*, present in patients with the tropical skin disease yaws, at the same time that Schaudinn found *Spirochaeta pallida* in cases of syphilis. This new spirochaete, however, looked exactly the same as *Spirochaeta pallida* under the microscope. As different species of pathogen were typically distinguished on the basis of their morphological characteristics, why should Castellani not have claimed that *Spirochaeta pallida* sometimes caused syphilis and at other times cause yaws? The answer is because to accept this would be to contradict the view that each disease had its own causative organism. These distinct species of disease each needed their own distinct species of pathogen, if the logical integrity of the network of knowledge was to be maintained. Of course, another option would be to say that yaws and syphilis were in fact the same disease, which presented differently in different people and in different climates. Castellani entertained this option but dismissed it because he believed that yaws and syphilis were different diseases. Accepting the distinction between yaws and syphilis is yet another active element of knowledge, making the network more rigid, further constraining researchers” (Binney, N. (2023). Ludwik Fleck’s reasonable relativism about science, cit., pp. 17-18).

⁵⁵⁵ Or out of 76 if one considers the 7 whose brain tissue was taken and tested.

how is it possible that the 69 patients were diagnosed as having syphilis when empirical proof of syphilis was not yet available, since the test had not yet been carried out? What about the 5 who were considered to have syphilis but did not test positive? By what criterion were they classified as affected if the presence of antigens or antibodies had not yet been ascertained and, moreover, still regarded as affected once their absence had been ascertained? Clearly, we could conclude that this classification was made on the basis of the indistinct (and certainly not purely empirical) proto-idea that saw syphilis as a “residual” set of symptoms, i.e. by means of an observation - partially creative and dependent on the choices of the researcher and the collective - capable of grouping different patients within the same category, that of syphilitic subjects. As in the case of *Spirochaeta pallida*, syphilis again gains ontological consistency by being circumscribed by Wasserman's (still in the testing phase) test, which in turn will be defined by the (proto-idea of) syphilis:

“Furthermore, syphilis and the Wassermann reaction were used to construct each other. Without knowing that there were patients with syphilis and being able to identify at least some cases and negative controls, the Wassermann reaction could not exist. The culturally defined boundaries of the disease entity syphilis informed the definition of the Wassermann reaction, as a procedure that was expected to return positive results in cases and negative results in negative controls. Conversely, the Wassermann reaction was used to change the boundaries of syphilis. Syphilis presented in many different ways, initially with genital lesions in a primary stage, and then with skin and other lesions in a secondary stage. It could then enter a long, asymptomatic, latent stage, before in some cases developing into a tertiary stage affecting many organs including the nervous system. In the early twentieth century whether patients in this tertiary stage were genuinely cases of syphilis was disputed. The Wassermann reaction was used to settle that debate, bringing these patients with tertiary disease into the group of patients with syphilis. Positive Wassermann tests also brought many patients with latent disease into this group.”⁵⁵⁶

⁵⁵⁶ Ivi, cit., pp. 14-15.

Not only the selection and cataloguing of the sample of patients, but also the selection and definition of thresholds of statistical reliability, criteria capable of establishing at what level a reaction is valid (e.g. that of haemolysis, used in Wasserman's test), adequate quantities of material to be analysed, external components to be used in the test: all active elements conventionally defined by the scientific community or the thinking collective⁵⁵⁷. Accepting this observation, disease as a solid metaphysical entity can only give way to a more ontologically nuanced and inevitably relational entity.

To conclude, however, let us add one last consideration. We mentioned earlier how the style of thinking articulates both the knowing subject and the known object, while at the same time being rearticulated back by them. The knowing subject cannot in fact think or act apart from certain styles, which in turn can only exist by being continually enacted, nourished and reconfigured by the subject's own reflective, discursive and manipulative activity. Similarly, if the object can only be articulated through the enactment of certain active elements proper to the style and the thinking collective, sometimes a certain resistance can produce a rejection and a reconfiguration of the assumptions and concepts that guided the research. For instance, after it had been developed and disseminated, Wasserman's reaction came into crisis due to unexpected results. It was found that the reaction could occur - i.e. the test could be conducted - even without the use of syphilitic antigen extracts, thus calling into question the assumption that a certain antigen (that of *Spirochaeta pallida*) reacts with only one type of antibody. Although a valid explanation for this inconsistency had not yet emerged, the test nevertheless continued to be used, however, by removing the antigen-antibody specificity from the active elements present in the collective's thinking style:

"This finding resisted the will of the researchers. No matter how unexpected it was, no matter how much they would have preferred to believe something else, it was a fact that the Wassermann reaction was not immunologically specific. Even though this fact was generated by

⁵⁵⁷ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, pp. 72-73.

the serologists' thought style, and could not exist without it, it still undermined the very tenets that had brought it into existence."⁵⁵⁸

How, then, do such reflections allow us to proceed within our climate discourse? Do Fleck's relativism and conventionalism necessarily lead towards a constructivist drift, or can a certain "resistance" actually counter dangerous postmodern scepticism and post-truth denialism? Concerned about such trajectories, Malm stated:

"In the terminology of critical realism, 'the intransitive dimension' – climate change – is independent of 'the transitive dimension' – the science about it – or, in short, the storm is coming whether the barometer is there or not."⁵⁵⁹

The scholar's concerns are certainly valid. At the same time, we could reassure Malm by rephrasing the thought: "In the terminology of Ludwik Fleck, 'the passive element' - the empirical information about the crisis - is dependent on 'the active element' - the proto-ideas, assumptions, practices and dispositifs through which it is investigated -, without, at the same time, being completely reduced or generated ex nihilo by the same". The storm is certainly coming, but this simple observation is not enough to solve the problem. Rather, our task will be to produce and select appropriate active elements, circumscribing the field of investigation, emphasising critical factors and overcoming those assumptions that, operating in the background, prevent the realisation of full climate justice: only in this way will the storm be able to "resist" us in the best possible way.

3.1.3 Generating Proto-ideas

Taking a step back, we see how an earlier paper by Malm, thanks to which the author will assume a certain popularity, allows an unexpected alignment with Fleck's insights. In 2014, Malm published together with Alf

⁵⁵⁸ Binney, N. (2023). Ludwik Fleck's reasonable relativism about science, cit., p. 22.

⁵⁵⁹ Malm, A. (2018). *The progress of this storm*, cit., p. 99.

Hornborg an article aimed at making a fundamental critique of the concept of the Anthropocene⁵⁶⁰, popularized in the 1980s by the biologist Eugene Stoermer, then relaunched in 2000 by chemistry Nobel prize winner Paul Crutzen and consecrated with an article in the journal *Nature* in 2002⁵⁶¹. Fundamentally, what Crutzen proposes is the possibility of a new geological epoch in which human beings have risen to the status of geological force, in particular from the changes made to the climate since the industrial revolution.

According to this narrative, the origin of the disaster would lie within a peculiarly human skill, namely the manipulation of fire. As Crutzen and colleagues argue: "The mastery of fire by our ancestors provided humankind with a powerful monopolistic tool unavailable to other species, *which put us firmly on the long path towards the Anthropocene*"⁵⁶². The Industrial Revolution and all related inventions and discoveries would therefore not be the result of intentionality and perhaps of tensions and conflicts, but a mere natural and necessary unfolding of human faculties. According to Malm and Hornborg, such an interpretation of the historical course is not only erroneous, but also dangerous. Firstly, in fact, although the ability to manipulate fire was a necessary condition for the burning of fossil fuels, at the same time it cannot be argued how the condition prescribed the outcome: the manipulation of fire could (and can) be used for multiple and alternative projects. Secondly, it is crucial to remember how the adoption of fossil fuels is a project of an extremely small human group: a minority of the nineteenth-century British population, an infinitesimal fraction of humanity (and its history).

In addition to this, there is a third point, developed a couple of years later in *Fossil Capital*. The adoption of fossil fuels as the primary source of energy was in fact neither a logical and necessary choice, due for example to their

⁵⁶⁰ Malm, A., & Hornborg, A. (2014). The geology of mankind? A critique of the Anthropocene narrative. *The anthropocene review*, 1(1), 62-69.

⁵⁶¹ Crutzen, P. J. (2002). Geology of mankind. *Nature*, 415(23).

⁵⁶² Steffen, W., Crutzen, P. J., & McNeill, J. R. (2007). The Anthropocene: are humans now overwhelming the great forces of nature. *Ambio-Journal of Human Environment Research and Management*, 36(8), 614-621, cit., p. 614.

greater efficiency and cheapness, nor a shared and peaceful one, given the explicit resistance of various human communities⁵⁶³. As Missiroli recalls:

"The *vulgata* according to which coal was discovered at the end of the 18th century and then imposed itself, on the strength of its great convenience, as the source of energy for the two industrial revolutions in the following century and a half, is historically false. Malm, in his book, demonstrates how the most widely available energy on English soil at the time, that provided by the flowing streams scattered across the *countryside*, was far more convenient: more readily available and in greater quantities, at lower cost. Coal, from a purely economic point of view, was then completely inconvenient: the choice fell on this source of energy mainly for political reasons. The rivers and streams from which until the mid-19th century a large part of rising English capitalism drew its main source of energy forced it to come to terms with the resistance of an exteriority that could not be tamed without resistance; in some ways, it can be said that water, in its flowing over channels that could not be infinitely remodelled, prevented capital from fully abstracting itself from the land. Concretely, the capitalist who wanted to extract energy from a watercourse was forced not only to bring means of production and logistically organise the territory, but also had to deal with communities and eco-systems that had already existed for centuries. The relationship between water sources and the communities rooted in the territories, moreover, was difficult for the capitalist to manage: the latter had the tendency, inherited from medieval *ius commune*, to consider the former common property. It is for these reasons that we see during the 19th century a real 'fossil flight from the liquid commons' [...].

Malm also points out how all this was perfectly clear to the masses of English rural workers who were active at the historical juncture he focuses on in the first part of *Fossil Capital*. The social conflicts that shook England in the first half of the nineteenth century, in fact, had at their core the opposition to coal, which the participants in those struggles identified even then as a weapon in the hands of the bourgeoisie - as an anonymous manifesto that appeared during one of

⁵⁶³ Malm, A. (2016). *Fossil capital: The rise of steam power and the roots of global warming*. Verso Books.

the biggest popular uprisings of those years, the *Plug Plot Riots* of 1842, put it: '*Coal supports the money-mongering Capitalists*'.⁵⁶⁴

For these reasons, Malm and Hornborg cannot but reject the concept of the Anthropocene: the same, they say, could be useful for other animal species wishing to analyse the current ecological situation, so that - among the various species - they could focus on the human being as the main cause of the crisis; at the same time, if the concept circulates only within the human debate, then it can only generate confusion, diluting responsibility and not helping to identify the roots of the problem, circumscribing it within the vast and differentiated human community. Thanks to this intuition, a new term will spread within the climate discourse: introduced by Malm and taken up mainly by Moore⁵⁶⁵, the "Capitalocene" allows us to challenge the most accredited (and less politically engaged) narrative, highlighting the shortcomings of the scientific approach that risks blaming the current crisis condition on an abstract humanity, thus forgetting oppositions and resistances to its unfolding. How, then, should we reread this debate in the light of Fleck's insights?

As Armiero⁵⁶⁶ reminds us, the term Anthropocene was not born out of incontrovertible empirical evidence, but rather as a "concept", "intuition", "invention", what we would define with Fleck as a proto-idea: rather than a mere series of "factual discoveries", it served (and still serves) as a guideline for the research of the same. Indeed, since 2009 the Anthropocene Working Group has been established, a research group which defines itself as follows:

"The Anthropocene Working Group (AWG) is an interdisciplinary research group dedicated to the investigation of the Anthropocene. It was established in 2009 by the Subcommission on Quaternary Stratigraphy (SQS), a component body of the International Commission on Stratigraphy (ICS), and since then has worked to assess the Anthropocene as a geological time unit. In 2016, the AWG *decided by a*

⁵⁶⁴ Missiroli, P. (2022). *Teoria critica dell'Antropocene*, cit., pp. 77-80. Translation mine.

⁵⁶⁵ Moore, J. W. (Ed.). (2016). *Anthropocene or capitalocene?: Nature, history, and the crisis of capitalism*. Pm Press.

⁵⁶⁶ Armiero, M. (2021). *L'era degli scarti: Cronache dal Wasteocene*. Giulio Einaudi.

majority vote that the Anthropocene *possesses geological reality*, that it is best considered at epoch/series level, that it is best defined beginning in the mid-twentieth century with the “Great Acceleration,” and that it should be defined by a Global Stratotype Section and Point (GSSP). In 2022, the AWG started the voting process on which of twelve research sites represents the most suitable location for a GSSP for the Anthropocene. In summer 2023, the AWG will present the selected candidate site. If the AWG’s selected GSSP candidate successfully passes through three further stages of voting (by the SQS, the ICS, and finally the International Union of Geological Sciences), it will be officially ratified and gain a place on the International Chronostratigraphic Chart.”⁵⁶⁷

The story cannot but recall the process of ontological articulation described by Fleck: starting from certain active elements - among which the proto-idea of the Anthropocene - an investigation of reality is set in motion with the aim of collecting and regrouping certain “resistances”, which accumulate and organise themselves over time, passing from the uncertainty of articles to the votes of the scientific community up to manuals and codes of institutional legitimisation (in this case the *International Chronostratigraphic Chart*), until they solidify within a fact, an object or, precisely, a geological epoch⁵⁶⁸.

What happens, however, if we replace the Anthropocene with another orientational idea, such as the Capitalocene? First and foremost, we could start by checking the different ecological footprints of different individuals and populations. As Malm and Hornborg point out, from 1850 to 2008, the capitalist and advanced Northern states contributed 72.7 per cent of emissions, with a global population share of 18.8 per cent. Or, again, the poorest 45% of the human population would be responsible for 7% of emissions, while the richest 7% would produce 50%. A single average American citizen would emit 500 times as much as a citizen of Ethiopia,

⁵⁶⁷ <https://www.anthropocene-curriculum.org/contributors/anthropocene-working-group>

⁵⁶⁸ The proposal was recently rejected. See: Zhong, R. (2024, March, 5). *Are We in the ‘Anthropocene,’ the Human Age? Nope, Scientists Say*. New York Times (<https://www.nytimes.com/2024/03/05/climate/anthropocene-epoch-vote-rejected.html>).

Chad, Afghanistan, Mali, Cambodia or Burundi. Having ascertained that it is not the generic human being who is the cause of the problem, new questions capable of interweaving critical theory and hard sciences could emerge, going on to analyse and highlight the links between certain forms of production, certain multinationals, certain economic groups, and the devastating effects of their actions, thus enabling the development of environmental policies capable of acting where the problem is actually mainly generated.

However, the Capitalocene is not the only critical proto-idea that has emerged in recent years. In 2017, for example, the concept of the Wasteocene was introduced in an article by Massimo De Angelis and Marco Armiero⁵⁶⁹, which the latter then explored in greater depth in a dedicated text, *L'era degli scarti: Cronache dal Wasteocene*. According to the author, the Wasteocene⁵⁷⁰, rather than setting a different historical turning point or differently distributing responsibilities, deepens certain insights of the Capitalocene, showing one of the founding characteristics of today's system of production and consumption, namely the generation of waste⁵⁷¹.

Reviewing various phenomena, stories and past and present events, from the Vajont disaster to the waste crisis in Naples, from associations dedicated to the recovery of materials in Brazil to the subaltern, infected and resistant communities of Catalonia and Bosnia, the author shows the possibilities of research (historical in his case) that unfold in conjunction with the creation of an orientational concept such as the Wasteocene - at the same time emphasising how scientific research can be stimulated not only by the production of proto-ideas in the form of terms and concepts, but also by orientations provided through artistic works and compositions: referring to the case of the immense landfill of electrical and electronic waste at Agbogbloshie in Ghana and the precarious work around it, he states, for example, how "scientific data and studies give an idea of

⁵⁶⁹ Armiero, M., & De Angelis, M. (2017). Anthropocene: Victims, narrators, and revolutionaries. *South Atlantic Quarterly*, 116(2), 345-362.

⁵⁷⁰ Defined as "a narrative linking waste, inequality and the world we are creating".

⁵⁷¹ Armiero insists on several occasions on the fact that waste is not limited to the sphere of products, but also to that of living beings: waste is not an object, but rather a process that organises and divides what is worthy of persisting and what - and who - can instead be made discardable.

Agboglobloshie, but photographs and videos can be more powerful tools to visualise the physical materialisation of the Wasteocene⁵⁷².



Figure 8. Valentino Bellini, *The Bit Rot Project*, Plastic monitor casings and other electronic scraps at the Agboglobloshie dump.

In addition to the aforementioned Chthulucene, we then find the Plantationocene, a term coined by Donna Haraway and Anna Tsing, capable of emphasising the process of accumulation initiated by colonial conquests and the parallel plantation slave system⁵⁷³. The adoption of the postcolonial

⁵⁷² Armiero, M. (2021). *L'era degli scarti*, cit., ch. II, par. 3.

⁵⁷³ In addition to the famous position of Haraway and Tsing (Mitman, G. (2019). Reflections on the plantationocene: A conversation with Donna Haraway and Anna Tsing. *Edge Effects*, 18, 1-19), we recall here some attempts to take the postcolonial point of view for the critical re-reading of the Anthropocene. Davis, H., & Todd, Z. (2017). On the Importance of a Date, or, Decolonizing the Anthropocene. *ACME: An International Journal for Critical Geographies*, 16(4), 761-780; Murphy, M. W., & Schroering, C. (2020). Refiguring the Plantationocene: racial capitalism, world-systems analysis, and global socioecological transformation. *Journal of World-Systems Research*, 26(2), 400-415. Another interesting example of postcolonial point of view, coming from a different discipline, can be found in the 2024 Nobel Prize in Economics, awarded to three researchers who, unlike many of their colleagues, attempted to explain the origin of inequalities not so much in terms of geography, climate, culture or religion, but rather in

point of view thus makes it possible to redistribute responsibilities not only from today's different consumption or participation in certain production systems, but also from a historical and geographical criterion capable of alleviating the debt crisis of the countries of the Global South by recognising the responsibilities of colonial countries, i.e. by implementing reparative and compensatory actions.

This attempt to relocate the critical turning point in time can only bring us back to the insights of Fleck, who reminds us how:

“[...] illness - is not an enduring state, but a process which changes continually, and which has its temporal genesis, its course and decline. This scientific illusion, this fiction, this individual entity created by abstraction based on statistics and intuition, the entity called the disease which is virtually irrational, elusive and undefinable univocally, becomes a substantial unit only when grasped temporally.”⁵⁷⁴

Rather than defining disease as an ontologically separate entity with respect to the organism, in the author's view it would perhaps be more useful to conceive of it as a variation of vital parameters: in order to define a point in time from which there is a transition from the “normal” to the “pathological” state (and, thus, define the illness itself), it will be necessary to *identify the most relevant parameters and their reference values* (active element), so as to then verify their trend and identify a moment of critical transition (passive element).

Similarly, the authors cited here attempt not so much to criticise science and disqualify its results, but rather to support it through lateral disciplines and conversations⁵⁷⁵, providing it with guiding “proto-ideas” aimed at

historical and geopolitical terms. See, in addition to the more famous *Why nations fail*, the preliminary article: Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American economic review*, 91(5), 1369-1401.

⁵⁷⁴ Fleck, L. (1927). *Some Specific Features of the Medical Way of Thinking*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986), cit., p. 45.

⁵⁷⁵ We will return to this theme later, but let us already mention that Fleck, as we have seen, has taken a distinctly externalist stance in his writings, i.e. promoting a vision of science as driven not only by its internal dynamics, but also, and above all, by influences and pressures from society as a whole, from disciplines, practices, beliefs and power dynamics external to the scientific field: a scientist, in fact, will certainly participate in a

redefining the field of investigation, the parameters observed, the critical thresholds – so that the moment this crisis started, the main actor that contributed to and suffered from that shift, as well as the different responsibilities, can be consequently reconfigured.

Just as astrology and religion informed the proto-idea of syphilis, tracing a possible trajectory for scientific research, so today critical theory, the arts, the social sciences and the environmental humanities may perhaps contribute to the ontological articulation of the crisis, fulfilling the wish with which Fleck closed his last article:

“New ideals arise: the relation between science and the humanities becomes closer and science becomes more human. Therefore, loyalty to mankind and loyalty to the scientific community will increase among scientists. [...] The sterile problem of idealism and materialism will vanish. Scientific truth will turn from something stiff and stationary into dynamic, developing, creative human truth.”⁵⁷⁶

particular disciplinary group and, even more specifically, in a particular research group, but at the same time cannot but participate in other thinking collectives, be they religious, artistic or cultural, social or political. See Fleck, L. (1939). *Scienza e ambiente*. Italian translation in Coniglione, F. (2019), p. 222. On internalism and externalism see Omodeo, P. et al. (2022). *Epistemologia storica: correnti, temi e problemi*, pp. 47-55.

⁵⁷⁶ Fleck, L. (1960). *Crisis in Science*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact*, cit., pp. 156-157. A similar position is taken in the recent volume *Climate Realism*, where the editors consider the climate phenomenon as a possible way out of the crisis of realism and scientific objectivity, so that “the arts, humanities, and sciences collaborate on the ongoing challenge to detail climate's history, as well as its present and future truths”. The usual oppositional dualism between critical concepts and artistic compositions on the one hand and scientific data on the other will thus be replaced by a cooperation capable of achieving “a unique view of the intimacy of meaning with the distribution of form, [...] a realism that must simultaneously admit the fixed coordinates of scientific fact and the cultural historicity of those facts” (Badia, L., Cetinić, M., & Diamanti, J. (Eds.). (2020). *Climate Realism: The Aesthetics of Weather and Atmosphere in the Anthropocene*. Routledge, cit., p. 10).

3.2 HARMONISING MULTIPLICITY

3.2.1 Beyond Perspectival Incommensurability

The last chapter took us through the multiplication of worlds and crises promoted by the ontological turn, a seemingly winning move to guarantee a good multiculturalism or, even better, a good multinaturalism. Following this path, let us now try to return to the same theory to check its robustness and glimpse its most insidious cracks.

One of the new emerging classics of environmental anthropology is undoubtedly *The Mushroom at the End of the World*, a text by Chinese-American anthropologist Anna Tsing dedicated to the study of matsutake mushrooms. Despite some points of contact with the ontological turn - the author acknowledges, for instance, how the concept of “perturbation” is closely linked to the perspective of the observer⁵⁷⁷ and, similarly, she speaks of anthropological categories as necessarily emerging from encounters, rather than prefabricated by the anthropologist⁵⁷⁸ -, Tsing directly calls into question her colleague Viveiros, arguing how his theories postulate both an incommensurability between seemingly distant worlds⁵⁷⁹, as well as a conception of cosmologies as static, discrete and strictly human:

⁵⁷⁷ “As an analytic tool, disturbance requires awareness of the observer’s perspective—just as with the best tools in social theory. Deciding what counts as disturbance is always a matter of point of view. From a human’s vantage, the disturbance that destroys an anthill is vastly different from that obliterating a human city. From an ant’s perspective, the stakes are different. Points of view also vary *within* species. Rosalind Shaw has elegantly shown how men and women, urban and rural, and rich and poor each conceptualize ‘floods’ differently in Bangladesh, because they are differentially affected by rising waters; for each group, the rise exceeds what is bearable— and thus becomes a flood—at a different point.” (Tsing, A. L. (2015). *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton University Press, cit., p. 161).

⁵⁷⁸ *Ivi*, p. ix.

⁵⁷⁹ “To complicate the situation, however, a new postcolonial theory emerging from Latin America requires sharply drawn West-versus-Other cosmological distinctions” (*Ivi*, cit., pp. 315-316).

"World making can be understood in dialogue with what some scholars are calling 'ontology', that is, philosophies of being. Like those scholars, I am interested in interrupting common sense, including the sometimes unselfconscious assumptions of imperial conquest. World-making projects, as with alternative ontologies, show that other worlds are possible. World making, however, focuses us on practical activities rather than cosmologies. It is thus easier to discuss how nonhuman beings might contribute their own perspectives. [...]

Finally, world-making projects overlap. While most scholars use ontology to segregate perspectives, one at a time, thinking through world making allows layering and historically consequential friction."⁵⁸⁰

The anthropologist thus seeks to replace the concept of cosmologies with that of world-making, placing more emphasis on processes of articulation rather than on objects and ontologies. In order to better understand this proposal, let us go back for a moment to the ontological turn, highlighting some of the main criticisms and then giving again the floor to Tsing to find possible ways out.

Among the main Italian experts on the movement, we certainly find Roberto Brigati, an author capable not only of presenting to the public one of the most important contemporary reflections on anthropology, but also of highlighting its most problematic aspects, with particular reference to Viveiros de Castro's position.

Firstly, the author notes a certain problem within the OT, namely: although the anthropologists of the turn argue for the existence of multiple (radically distinct or non-communicating) worlds, at the same time they cannot deny that there are certain things that travel between worlds while preserving their identity. The example given is that of the host, which for Catholics is the flesh of Christ, while for Lollards it is a symbol of the flesh (and for others, non-believers, it is bread). If we were really to "take seriously" both positions, i.e. consider the host-flesh and the host-symbol as belonging to two different "worlds" and, therefore, regard them as two radically different objects, then we could not explain the heresy trial against the Lollards⁵⁸¹.

⁵⁸⁰ *Ivi*, cit., p. 292. A reference to Viveiros's texts can be found in the footnotes.

⁵⁸¹ Brigati, R. (2019). *La filosofia e la svolta ontologica*, pp. 334-336.

Clash, divergence, social conflicts are only generated when the object of contention is in some way shared; on the contrary, if “the object of discourse is different, we are literally *changing discourse*”⁵⁸² and, therefore, we are disengaging the conflict and dismantling a possible public square and political arena. Historical encounters/clashes/entanglements cannot but undermine the idea of the radical separation of worlds.

Secondly, an overly rigid interpretation of multiple worlds not only prevents transitions of objects between them, but also internal differences and nuances. If the idea of culture artificially homogenised an entire population as internally coherent and separated from its cultural outsiders, the same risks doing the idea of “cosmologies”. Here, too, the issue can become extremely political, as disagreements, dissidences, inconsistencies, hybridisations, mutations, contestations are erased and sacrificed on the altar of world-ontology (native, indigenous, Amerindian and so on)⁵⁸³. Clearly, the ecological crisis highlights the relevance of these first two criticisms, as it can be seen as a phenomenon that “travels between worlds”, as well as a phenomenon that is internally contested and continually rearticulated.

A third point of criticism then concerns the lack of dialogue with hermeneutics⁵⁸⁴, which, according to the author, could have provided interesting support for the development of the OT. The latter, in fact, seems to reject in toto both the concept and practice of interpretation, which is considered a mere extension of pre-existing categories and, therefore, devoid of creation of (and astonishment at) the new, and that of translation, which is instead accused of political asymmetry due to the imbalance of power between the native-translated and the anthropologist-translator. Moreover, even if we were not to recognise the epistemological pre-eminence of the anthropologist's categories or to locate the production of the new within the interpretative gap, what the OT continues to criticise is the general premise that guides such an undertaking, namely the idea that

⁵⁸² Brigati, R. (2019). In *Amazzonia e altrove*, cit., p. 19. Translation mine.

⁵⁸³ Brigati, R. (2019). *La filosofia e la svolta ontologica*, pp. 346-347.

⁵⁸⁴ In particular, Brigati refers to Gadamer's “fusion of horizons”. It is interesting to note how already in the introduction of one of the earliest texts of *sensory studies* this same concept was referred to as a possible strategy to harmonise perceptual differences (Lambek, M. (1991). *Foreword*, pp. x-xi).

differences are only “interpretative differences”: considered in this way, they will not only be recomposable within a single transcendent point of view capable of levelling out asperities, but almost by their very nature require to be recomposed within such univocity.

So, no surprise and wonder, no unresolvable and unending tension, no perturbing anomaly. No space for (retro)action granted to otherness. According to the OT, on the contrary, this is what we need today: a metamorphosis with the native that gives a turn to ethnographic and anthropological practice itself, to our method, to our metaphysical premises and, therefore, to our world. On paper, it would seem like a good project, but it often remains precisely on paper. The impression, in fact, is that of being faced with a desire and request for a practical turn, which, however, always rests too much on the theoretical level, making this short-circuit the real “constitutive paradox of the turn”⁵⁸⁵. Where the main point seems to be to (1) generate a metamorphosis with the natives (2) starting from the encounter, the empathy and the sensation of wonder and bewilderment that ensues, Viveiros instead seems to proceed along other trajectories.

Firstly, rather than acting a metamorphosis or a dialectic between the two sensibilities⁵⁸⁶, he would almost seem to elevate the native perspective to a possibility that is not so much other, as more correct and real, than that of the bad coloniser. As Grosfoguel recalls:

“If decolonial thinking is different, if with it we define together what is reality, truth or what is best for all people, then the universal we speak

⁵⁸⁵ Brigati, R. (2019). *La filosofia e la svolta ontologica*, cit., p. 316. Translation mine.

⁵⁸⁶ A dialectic that, again, could be closer to the positions held within the field of *sensory studies*: “There is no Archimedean point, independent of any culture or period, from which to conceptualise the bounds of sense, or to assess the different senses’ contribution to the advancement of knowledge. This makes it a matter of first importance to reflect on the sensory biases embedded in mainstream Western thought and culture, instead of taking such biases, or essentialisms, as given. The influence of these biases can be rendered perceptible and moderated to a significant degree by cultivating the capacity to ‘be of two sensoria’ - one’s own and that of the culture or period under study, and continuously tacking back and forth between them. To develop such a hyperacute awareness of sensory difference does not come easily. It requires a high degree of discipline, attunement, and reflexivity, or being in and out of one’s own body and senses at once” (Howes, D. (2022). *The sensory studies manifesto*, cit., p. 8).

of is already pluriversal. We find this pluriversalism in Aimé Césaire, in the Zapatistas and also in many proposals of critical thinkers within colonised peoples. We cannot fall into the trap of making one of these decolonial proposals the only one possible, the universal proposal.”⁵⁸⁷

In fact, Viveiros risks giving perspectivism (and the world-perspective) of natives a new universalist status by taking it “more seriously” than the much-criticised Western naturalism⁵⁸⁸. The affirmation of such metaphysical supremacy, following the anti-hierarchical observation of perspectivism itself, is, according to Brigati, a strategy of political order:

“In fact, it is easy to convince oneself that Viveiros's profound motivation in taking a stance between these systems of thought is political, and concerns ecological politics in particular. That is, Viveiros does not want to compare metaphysics for the sake of it, but because there are some that are, not truer, but more *useful*. For him, I think, Amerindian metaphysics, with its perspectivism, is, so to speak, better, that is, it is a political option to put on the agenda because it allows for a better relationship with the ecosystem [...]”⁵⁸⁹

Secondly, it would seem that Viveiros (and others) works much more with bibliographies and accounts, so as to define new cosmologies, rather than with the so-called “natives”, their bodies and transformative relations in the field. In this way, metamorphosis ceases to be experience, social practice, vital process, to become instead an “explanatory theoretical category”⁵⁹⁰. The point is also emphasised by Gamberi:

“‘The Other’ becomes a theoretical goad: it gives space to ‘materials’, on the one hand, and to the debunking of the Cartesian framework, on the other. The Other's desires, its fears, its everyday life disappear altogether or, rather, are condensed into a depersonalising ‘ontology’. Paradoxically, even the anthropologist in the field becomes purely abstract: yes, one speaks of the body as a bundle of affections, but where are these affections in the anthropologists' description of their

⁵⁸⁷ Grosfoguel, R. (2016). Entretien, RED, 1, www.reseaudicolonial.org. Translation mine.

⁵⁸⁸ Brigati, R. (2019). La filosofia e la svolta ontologica, p. 333.

⁵⁸⁹ *Ivi*, cit., p. 341. Translation mine.

⁵⁹⁰ Brigati, R. (2019). In Amazzonia e altrove, p. 22.

metamorphoses? The impression is often that of being faced with a philosophical exercise rather than an ethnographic description."⁵⁹¹

At the end of the day, Viveiros speaks most often of the natives through a properly European language, borrowed from Deleuze, from his becoming-animal and from the planes of immanence, fluxes and metamorphoses of French post-structuralism; in short, he speaks to us ("same") and with our language about the ("different") natives, without leaving them much room to speak or to transform⁵⁹².

Brigati thus focuses on four main problems of the ontological turn: inability to account for the historical conflicts that generate frictions regarding contested and, at the same time, shared objects; failure to explain ontological differences and conflicts within certain groups and communities; forgetting the practice of interpretation and translation as a possibility of intersection between ontologies; and failure to directly confront with the natives. Returning to Tsing's text, it is possible to glimpse possible strategies capable of overcoming these difficulties, first and foremost the lack of direct relationship: reading the ethnography on matsutake mushrooms, a feeling of active, embodied and passionate

⁵⁹¹ Gamberi, V. (2019). *Metamorfosi: decolonizzazione vera o apparente?*, cit., p. 41.

Translation mine. As bell hooks also states: "Postmodernist discourses are often exclusionary even when, having been accused of lacking concrete relevance, they call attention to and appropriate the experience of 'difference' and 'otherness' in order to provide themselves with oppositional political meaning, legitimacy, and immediacy. [...] Without adequate concrete knowledge of and contact with the non-white 'other', white theorists may move in discursive theoretical directions that are threatening to and potentially disruptive of that critical practice which would support radical liberation struggle" (hooks, b. (1990). *Postmodern blackness. Postmodern Culture*, 1(1), cit., first and sixth paragraph).

⁵⁹² Here Borghi's distinction between post-colonial and decolonial theory is useful: the former concerns a critique of the Western world and its representations, but carried out within that same world and starting from its own assumptions; the latter refers instead to the critical theoretical production coming from the colonised subjects themselves (possibly also supported by that part of the Western academy that renounces speaking out in order to leave room for decolonial texts and figures), articulated according to new criteria, a new lexicon, and new methodologies. See Borghi, R. (2020). *Decolonialità e privilegio*, cap. II, "Manuale di istruzioni. Dove si racconta la proposta decoloniale e perché postcolonialismo e decolonialità non sono per niente la stessa cosa".

involvement of the anthropologist with the analysed environment, with the involved people and with the object of study immediately emerges. But what about the other three problems?

Let us begin with internal differences. If the ontological turn shifts the focus of the differences between perceptions/worlds from *cultures* to *specific bodies* (specific both in the sense of “particular” and as relating to a certain “species”), Tsing will attempt to move from the specific bodies to *multi-species assemblages*. On the one hand, an effort will be made to show how the concept of species as a self-contained and self-sufficient unit is a mere projection: it overlooks both the fact that different organisms require infestation and cohabitation by other species for the development of characters that are fundamental to life (organs, capacity for reproduction, survival in the strict sense)⁵⁹³, as well as the fact that, within the world of fungi and plants, the possibility of fertilisation and reproduction as a criterion for species constitution (and thus the solidity of the concept itself) is often lacking⁵⁹⁴. On the other hand, the author decides to think in terms of “assemblages”, i.e. specific compositions of organisms in mutual

⁵⁹³ Tsing, A. L. (2015). *The mushroom at the end of the world*, pp. 141-142. See also “Tracking” (pp. 137-144), as well as the various texts by Haraway cited above.

⁵⁹⁴ “Ignatio Chapela, a forest pathologist at the University of California, Berkeley, was even more adamant that the idea of ‘species’ limits the stories we can tell about kinds. ‘This binomial system of naming things is kind of quaint, but it is a complete artifact’, he told me. You define things with two words and they become an archetypal species. In fungi, we have no idea what a species is. No idea. [...] A species is a group of organisms that potentially can exchange genetic material, have sex. That applies to organisms that reproduce sexually. So already in plants, where out of a clone you can have change as time goes by, you have problems with species. [...] You move out of vertebrates to the cnidarians, corals, and worms, and the exchange of DNA, and the way groups are made, are very different from us. [...] You go to fungi or bacteria, and the systems are completely different- completely crazy by our standards. A long-lived clone can all of a sudden go sexual: you can have hybridization in which whole big chunks of chromosomes are brought in; you have polyploidization or duplication of chromosomes, where a completely new thing comes out; you have symbiotization, the capture of, say, a bacterium that allows you to either use the whole bacterium as part of yourself or use parts of that bacterium's DNA for your own genome. You've become something entirely different. Where do you break down the species?” (*Ivi*, cit., pp. 231-232). See also “Flying Spores” (pp. 227-239), as well as the text Sandford, S. (2022). *Vegetal Sex: Philosophy of Plants*. Bloomsbury.

interaction, capable not only of bringing together different ways of living, but also of creating, sustaining and keeping them in constant motion. Within assemblages, different species develop and find themselves caught up in “patterns of unintentional coordination”⁵⁹⁵, capable of assembling different rhythms and scales, so that specific (individual and species) arrangements tune in (and, cyclically, diverge), leaving open the possibility of projects for the creation of multi-species worlds, always partially intertwined and overlapping. Two solutions, then, to the internal homogeneity and isolation produced by the OT: contamination, i.e. the demolition of purity, self-sufficiency and independence; coordination, i.e. the unforeseen harmonisation of bodies, of their capacities and, thus, of their worlds.

Let us turn, then, to historical frictions. If Viveiros abandons *points of view* to move towards *perspectives*, we could say that Tsing abandons the latter to focus on *trajectories*. Although they have their advantages, perspectives seems to keep us within a “spatial” and static paradigm, so to speak, where different bodies, side by side, open up different worlds. Trajectories, on the other hand, allow us to think according to a “temporal” perspective, i.e. to follow the historical development of multi-species assemblages. Rather than studying the different perspectives and then comparing them, Tsing’s practice is based on simultaneous tracking, observation and listening to the different trajectories, so as to catch moments of assonance and dissonance. In order to better understand the strategy, the author offers the metaphor of polyphony: a musical composition characterised by the interweaving of different autonomous melodies that at the same time participate in the same sound event. Hence, the peculiarity of polyphonic listening:

“When I first learned polyphony, it was a revelation in listening; I was forced to pick out separate, simultaneous melodies *and* to listen for the moments of harmony and dissonance they created together. This kind of noticing is just what is needed to appreciate the multiple temporal rhythms and trajectories of the assemblage.”⁵⁹⁶

The differences between perceptions and worlds are thus not explained through the opposition between cultures, discrete and spatially distant

⁵⁹⁵ Tsing, A. L. (2015). *The mushroom at the end of the world*, cit., p. 23.

⁵⁹⁶ *Ivi*, cit., p. 24.

points of view or perspectives, but rather through the historical events that bring about encounters and clashes, divergences and harmonisations⁵⁹⁷. Finally, there remains the failure to consider translation as a practice of ontological intersection. Thus, if the ontological turn prefers *multinaturalism* to *univocal nature*, Tsing decides instead to speak of *nature in translation*, moving from discrete and multiple ontologies towards stratified, hybrid and moving ontologies. Instead of discrediting western science or equate it with native perspectives, Tsing tries to understand how nature articulates through scientific practices and collectives. With particular reference to the research related to matsutake, the anthropologist shows us how different research groups present - echoing Fleck - different scientific styles⁵⁹⁸, i.e. different predispositions, premises and basic assumptions, different categories, scales and investigative strategies, as well as different orientations and aims. However, these differences do not preclude communication, since in order to proceed with the research each group usually needs information from some other. Precisely for this reason, even in the scientific field, it is not possible to identify one and only Nature, rather turning to the idea of nature in translation:

“As with capitalism, it is useful to consider science a translation machine. It is machinic because a phalanx of teachers, technicians, and peer reviewers stands ready to chop off excess parts and to hammer those that remain into their proper places. It is translational because its insights are drawn from diverse ways of life. [...] Thus Shiho Satsuka watches nature emerge in just this kind of mixed-up, unresolved

⁵⁹⁷ “Japanese American matsutake pickers are quite different from Southeast Asian refugees— and I can’t explain the difference away by ‘culture’ or by ‘time’ spent in the United States, the usual sociological stories of differences among immigrants. Second-generation Southeast Asian Americans are nothing like Japanese American *Nisei* in their performance of citizenship. The difference has to do with historical events— indeterminate encounters, if you will— in which relations between immigrant groups and the demands of citizenship are formed. Japanese Americans were subject to coercive assimilation. The camps taught them that to be an American required serious work in transforming oneself from inside out. Coercive assimilation showed me its contrast: Southeast Asian refugees have become citizens in a moment of neoliberal multiculturalism. A love for freedom may be enough to join the American crowd” (*Ivi*, cit., pp. 99-100).

⁵⁹⁸ *Ivi*, pp. 221-223.

translation. In transnational practices for interpreting nature, she shows, shared training can go hand and hand with the eruption of difference."⁵⁹⁹

Moreover, the translation activity of science is not limited, according to Tsing, to the mere translation between different national or sectorial research styles, but necessarily extends (especially today) to the integration of local knowledge within its own accounts - knowledge emerging both from the insight of those who live in close contact with the object of research, and through direct involvement in activism and political movements capable of throwing the scientist directly into the concreteness of the addressed issues⁶⁰⁰.

According to Tsing's proposal, therefore, science is not discredited, but simply described according to a renewed grammar, capable of not falling back into the dualism that sees on the one hand scientific "univocity" and on the other a "multiplicity" of local or indigenous knowledge. However, one question still remains open: if science can abandon its claims to universality, integrating specific knowledge and thus configuring the crisis as a phenomenon that is neither unambiguous nor fragmentary, but rather simultaneously sharable and contestable, how will we be able to share it or face the contestation of those denying its existence? Is it really possible to integrate the demands of climate sceptics or denialists within a common world-making project? How to deal with such a clash of perspectives while maintaining mutual respect and, at the same time, sticking to the ecological and environmental cause?

⁵⁹⁹ *Ivi*, cit., p. 217. She also defines translation, through Satsuka, as: "Translation, in Shiho Satsuka's sense, is the drawing of one world-making project into another. While the term draws attention to language, it can also refer to other forms of partial attunement" (*Ivi*, cit., p. 62); "Their work exemplifies Satsuka's concept of 'translation', in which learning another culture both bridges and maintains difference" (*Ivi*, cit., p. 112).

⁶⁰⁰ *Ivi*, p. 220.

3.2.2 Stylising the Collective

In order to address the issue of the multiplicity and fragmentation of climate perspectives, let us return once again to the dawn of postmodern epistemology. The theory of styles of thinking, in fact, cannot avoid addressing fundamental problems such as the cultural-historical articulation of sensory perception, as well as the thornier issue of the onto-epistemic fragmentation of scientific objects, showing us important echoes of situatedness and multinaturalism already in Fleck's early texts.

With regard to the first point, i.e. the conception of a situated perception, we have seen how Fleck rejects both the idea of "normal" man and mind and a basic or "original" faculty of perception, thus anticipating many of the intuitions that later emerged in the field of sensory studies: the author, in fact, will not only highlight the historical and social character of sensibility⁶⁰¹, but will also emphasise its inevitable enactment, thus describing the senses not so much as channels for the passive reception of stimuli, but rather as oriented and intentional acts of articulation⁶⁰².

Perception and the senses are thus from the very beginning activities trained and performed within socially and historically situated groups, arranged according to trajectories of attention and attraction towards certain characteristics, according to specific ways of circumscribing and limiting, of using certain concepts for orientation, of delving into details and integrating missing parts, of connecting and disconnecting, of forming expectations and predicting results, of verifying according to certain procedures. Not only with regard to the perception of ordinary qualities and

⁶⁰¹ Similarly, with regard to cognition, the author states: "But those who consider social dependence a necessary evil and an unfortunate human inadequacy which ought to be overcome fail to realise that without social conditioning no cognition is even possible. Indeed, the very word 'cognition' acquires meaning only in connection with a thought collective. A kind of superstitious fear prevents us from attributing that which is the most intimate part of human personality, namely the thought process, also to a collective" (Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., pp. 43-44).

⁶⁰² Again, with reference to cognition he states: "For cognition is neither passive contemplation nor acquisition of the only possible insight into something given. It is an active, live interrelationship, a reshaping and being reshaped, in short, an act of creation" (Fleck, L. (1929). *On the Crisis of 'Reality'*, cit., p. 49).

objects, the variability of which is more commonly accepted, but also in relation to - as we said - the apparently indisputable fundamental properties of matter, as well as empirical experience and scientific observation:

“The perception of scientifically accepted properties must first be learned. It does not occur ipso facto and, indeed, the ability to perceive scientifically is only slowly acquired and learned. [...] ‘Experience as such’, to which one has or does not have access is chimerical, and thus every being gains experience according to his own fashion. Present experiences are linked with past ones, thereby changing the conditions of future ones. So every being gains ‘experience’ in the sense that he adjusts his way of reacting during his lifetime. Scientific experience in particular derives from special conditions established by the history of ideas and by society.”⁶⁰³

If not even basic properties can be said to be universally perceived and shared, if not even so-called direct experience or objective and scientific observation can repeat themselves in a perfectly identical manner, then the question raised by the ontological turn emerges powerfully once again⁶⁰⁴: are the differences only of a perceptual and epistemological order, or must they be considered as ontological distinctions so that genuine respect can be achieved?

In his '35 article, *Scientific Observation and Perception in General*, Fleck takes up the consideration that medieval anatomy, based on the writings of Galen, was devoid of dissections and, in particular, of intelligent observation. According to this judgment, it is only with the advent of modern anatomy that scientists actually begin to observe anatomical forms

⁶⁰³ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 48.

⁶⁰⁴ As in the case of the OT, Fleck, by mobilising and relativising mind, senses and sensibility, as well as the corresponding ontologies, can only introduce a common element to all of them (“perspective” as the ability to occupy/act a point of view according to Viveiros), namely “style” as a way of perceiving and operating in the world: “Instead of the philosophy of life which undergoes constant changes and is dependent on moment and place, it [the sociology of thinking] will provide the idea of the mechanism of the formation of views. Instead of what separates, it will point to that which will be common to all, and which brings them closer together” (Fleck, L. (1947). *To Look, To See, To Know*, cit., p. 151).

and consolidate them into proper knowledge. On the contrary, the author states:

“Now this legend is erroneous. In the first place they believed in Galen not because no observations were carried out, but because no observations in the present-day meaning of this word had been done, for there was no need to do it: Galen - and even a simplified Galen - completely satisfied the scientists of that age. However, one cannot assert that a medieval scientist did not have any positive relationship to observation. Of course, this relationship was, qualitatively and quantitatively, different from the present one, but it did exist.”⁶⁰⁵

Firstly, then, Fleck historically relativises the method of scientific investigation and observation, rejecting the idea of an improving progression of the same. As he sees it, observation do change, but not according to a necessary refinement, capable of generating a corresponding refinement of the picture of reality, adding detail and making the ontological boundaries of the world increasingly precise and correct. Rather, in line with the conclusions of the ontological turn, different methods of observation will correspond to *different objects* observed:

“It is not only the limiting of the subject of observation that is determined (up to the complete shifting of the limits) by the thought-style of the observer. Stressing some elements and the downgrading others likewise depend on this style. One therefore has to say that two observers possessing fairly different styles have no common objects of observation; each of them observes in principle another object.”⁶⁰⁶

⁶⁰⁵ Fleck, L. (1935). *Scientific Observation and Perception in General*, cit., p. 73.

⁶⁰⁶ *Ivi*, cit., p. 66. In the same year, in his monograph, he went on to argue how even our physical reality did not exist in the past for people who were differently stylised: “Just as we do, these people observed, pondered, found similarities, and associated them. They set up general principles, and yet they constructed a system of knowledge completely different from our own. The ‘heaviness’ in this last example is a concept totally different from that of our physical ‘weight’. Many such examples could be given all of which go to prove that comprehending objects and phenomena in a way similar to our own was completely alien to their way of thinking. Our physical reality did not exist for them” (Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 127).

In addition to the ontological fragmentation produced by temporal distancing, Fleck, assuming an anthropological approach, puts forward the idea that even such a simple and (apparently) shareable concept as the “normal hand” (for us the result of a mere and banal “direct observation”) is not necessarily shareable at every latitude. Referring to various primitive societies⁶⁰⁷ he argues how our idea of a normal hand is based, for example, on the assumption of having five fingers, which in turn necessitates the general concept of a “finger” and the practice of counting - according to him, both matters of style. Fleck thus reports some cases of populations without the general concept of “finger”, having rather different concepts for each (our) finger or accustomed to the use of the word “hand” to denote (our) number “five” - so that they cannot utter the sentence “the hand has five fingers” without incurring a tautology.

The discourse then proceeds, but what becomes clear is how, according to the author, it is not possible to establish either a positive temporal progression towards a more correct ontology of reality, or an ontological hierarchy between populations, particularly between scientific societies and tribal societies. Rather, each society, community, population, develops the style of thinking (and the world) best suited to its own needs: no longer, therefore, judging ontologies according to the degree of reality or unreality, but rather recognising how they are appropriate (and adapted) to different lives, responding to different challenges and environments and thus

⁶⁰⁷ He is referring here to people of Australia or South America, with particular reference to the Papuas or Pygmies of the Andaman Islands. Although he uses the term “primitive”, which in itself suggests a progressive line of social development, at the same time it is perhaps useful to contextualise its use within the era in which Fleck is speaking, acknowledging the scholar's extremely respectful and pluralistic approach to such populations and perspectives - in a way showing the inadequacy of the adjective “primitive” itself (Fleck, L. (1939). *Risposta alle osservazioni di Tadeusz Bilikiewicz*). Again, in his monograph, he criticised (as did the OT anthropologists) the arrogance of the scientist towards so-called primitive and archaic populations: “They believe that our present-day scientific opinions are in complete contrast to all other ways of thinking. As if we had become wise and our eyes had been opened, they believe that we have simply discarded the naive self-consciousness of thought processes which are primitive or archaic. We are supposedly in possession of ‘correct thinking’ and ‘correct observation’, and therefore what we declare to be true *is ipso facto true*. What those others such as the primitives, the old people, the mentally ill, or the children declare to be *true seems to be true only to them*” (Fleck, L. (1981). *Genesis and Development*, cit., p. 50).

enabling different individuals and communities to live and navigate according to different trajectories⁶⁰⁸.

Notwithstanding the respect Fleck shows for the multiplicity of temporally or geographically distant and faintly communicating perspectives, we can now ask whether such reflection ends in a substantial ontological untranslatability and incommensurability or whether, on the contrary, glimmers of intersection can be detected within his stylistic theory. To answer this question, let us therefore try to give a brief description of the functioning of thinking collectives, as described by Fleck in some of his articles and, in particular, in his monograph⁶⁰⁹.

The style of thinking is enacted by a community, which is divided by Fleck into two main circles, the esoteric and the exoteric (possibly organised internally according to different degrees and hierarchies). The former is narrow and is made up of the experts, the “initiates” of the highest and most up-to-date knowledge regarding the objects of study and the products of social life proper to the thinking collective, while the latter is broader and includes within its ranks all those who place their trust in the experts, thus supporting their discourse and action. According to the author, a person in most cases participates in several exoteric circles - relying on many personalities to instruct and guide them within various disciplinary fields and facets of reality - and very few, if any, esoteric circles.

Moreover, although investigated primarily within their scientific expression, thinking collectives are not reduced to that field alone⁶¹⁰: a scientist, in fact, will certainly participate in a particular disciplinary group and, even more specifically, in a particular research group, but at the same time cannot but participate in other thinking collectives (which in turn can be broken down into esoteric and exoteric circles), simultaneously embodying and acting in multiple styles (e.g. geological, physical, chemical, Catholic, footballing,

⁶⁰⁸ Fleck, L. (1939). *Risposta alle osservazioni di Tadeusz Bilikiewicz*, pp. 230-231.

⁶⁰⁹ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, pp. 98-125.

⁶¹⁰ “Fleck’s theory ends up being more an overall theory of culture, also valid for science (with the specificities it obviously presents) insofar as it is one of its expressions, than a specific theory of science or epistemology” (Coniglione, F. (2019). *Lontano da Vienna*, cit., p. 40).

Italian, bourgeois and so on)⁶¹¹. Thus, while a group is characterised by a high degree of internal harmony and agreement, at the same time it is inevitably traversed by external stylistic bundles that feed it and keep it in constant tension and movement. Each subject participates in several thinking collectives, thus producing an interweaving that could hardly lead to a rigid compartmentalisation of their components⁶¹².

Already from this consideration, it becomes clear how the incommensurability Fleck speaks of can only refer to thinking communities that are extremely distant both temporally and geographically (such as the medieval and contemporary ones, or two present-day thinking communities that have never entered into a mutual relationship, such as two almost isolated communities in the Andes and Antarctica). Beyond such a remote scenario, we rather see how within any society, especially the globalised one of today, the intersections between styles are so proliferating and dense as to necessitate an effort of thought capable of holding the two dimensions together: on the one hand, the possibility of circumscribing - more or less adequately - communities characterised by strong affinities and similarities, and on the other, recognising the unique intertwining of each individual, which does not permit reducing it to a single community nor to a mere mathematical summation of the styles it participates in, rather making it an unforeseen and creative agent of trans-collective movements of re-stylization. Thus, while different collectives certainly exist, we cannot but think of their relationship in terms of permeability and overlapping - except, of course, when considering high spatial or temporal distances that are now extremely rare.

⁶¹¹ This reflection brings us back to the story of syphilis and proto-ideas, discussed in the previous chapter. Syphilis came into being as an onto-epistemic unit thanks to knowledge and discourses from astrology and religion that were able to inform the first "ethical-mystical" proto-idea of pathology. This was precisely because scientists, then as now, participated not only in the scientific collective, but also in external collectives from which they imported and reworked thoughts and concepts useful for the research.

⁶¹² Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, p. 45.

The Élite-Public Fragmentation

Having dealt with the issue of ontological multiplicity and the intersectionality of styles, let us now try to place it within our field of investigation, recalibrating the analysis with respect to a different division that has so far been little touched upon but is perhaps among the most interesting and urgent in the climate field. Rather than looking at the ontological divide produced by temporal distances (a relatively minor instance as far as the climate crisis is concerned, given the narrow temporal extension that its ontological discourse has hitherto known) or geographical distances (already dealt by the OT with reference to indigenous peoples which, however, can no longer be considered as hermetically sealed with respect to the scientific discourse revolving around the crisis), I would like to focus on the gap that exists, within the countries of the Global North, between the perspective of climate scientists and, more generally, researchers and academics engaged in the environmental discourse and the perspective of those citizens that are distant or opposed to such a discourse.

Focusing on scientific thinking communities, Fleck in fact highlights a particular difference from other communities, such as the religious one. The latter is characterised - as already stated - by a narrow esoteric circle and an exoteric circle that often covers almost the entirety of national or transnational populations; on the contrary, the scientific community sees a narrow esoteric circle of experts, a medium-sized exoteric circle of "laymen with general education" and, finally, a third large space with the "general public" who, in fact, participate in a feeble or almost non-existent manner in scientific discourse, practice and style of thinking. After introducing this specific circle, Fleck points out a possible emerging problem, i.e. the different distances existing between scientific professionals, general educated laymen and the general public. According to the author, if between the first and second circle there is a certain communicative capacity and interchange, between them and the third one - despite the spatial and temporal proximity - an "impassable border" is often generated:

"[...] there are in current social conditions no direct transitions between the circle of laymen with general education and the 'wide public':

general education is acquired before maturity; whoever failed to acquire it in school remains mostly for good in the circle of the wide uneducated public. [...] we have here the most impassable border of social strata, [...] this border of social strata is naturally not absolute: scientific education percolates also, without the help of an official school, to the layer of the general public, and it does happen that an uneducated layman enters the circle of laymen with general education even in his period of maturity. Still the gap between the public at large and educated people is very clear.”⁶¹³

Why, then, this distance? Where and how is the incommunicability generated between the scientific thinking community (particularly between its esoteric elite circle) and the general public?

First of all, according to the author, science, despite having set itself the task of making nature accessible, has instead generated a universe of languages and technical procedures that are incomprehensible to most:

“Once it was thought that science would somehow make the complicated and enigmatic complex called nature something that could be understood with thought in a simple and clear way. In the meantime, science itself has turned into a product that in essence is in no way simpler than nature and far more difficult to understand. It is easier to orient oneself in a forest than in botany. Easier to cure a sick person than to really know what illness they have.”⁶¹⁴

Rather than discrediting scientific advances, what Fleck is trying to tell us, in my view, is that scientific knowledge needs to progress in harmony with a good dissemination of knowledge. Recalling on several occasions how science is a creative human endeavour, he insists that the ultimate goal of science is not to reach a clear and complete picture of reality (an illusory goal, moreover) but rather to provide the community that nurtures and supports it with all those tools that are useful in navigating and facing the challenges that the world poses.

Starting from this first observation, we can derive a second insight. According to Fleck, there is a fundamental difference between a collective

⁶¹³ Fleck, L. (1936). *The Problem of Epistemology*, cit., pp. 106-107.

⁶¹⁴ Fleck, L. (1939). *Scienza e ambiente*, cit., p. 225. English translation mine.

such as the religious one and the scientific one, given the degree of relationship between the elites and the masses. If the former, in fact, is characterised by a distance, an isolation and a centralised power of the elites with respect to the masses, thus producing a dogmatic system founded on mystery and secrecy, the latter, on the other hand, is a democratic system, since the masses occupy a stronger position: in this case, the stability of the elites depends on the continually renewed validation by the exoteric circle and the masses. Where religious elites can (and, to a certain extent, must) assert without regard to common sense, scientific elites always need to be supported and reproduced through a system of acknowledgement and citation by the exoteric group, as well as to respect and not clash head-on with public opinion and common sense.

As mentioned, for this condition to come true, there is therefore a need for active participation, for the scientist to listen attentively and respectfully to the community to which he or she belongs, to which he or she will then respond by providing tools to navigate reality and address problems - rather than offering a detailed, meticulous and shiny "picture" of reality. On the contrary, we often see how the scientific community today oscillates between an anxious search for clearness, a certain "knowledge for the sake of it" (and "for the sake of colleagues and careers"), and an enterprise aimed at solving problems posed mainly by those who finance, i.e. large corporations and multinationals, sometimes leaving in the shade (for various structural and economic reasons) the third way envisaged by Fleck, i.e. scientific activity at the service of the community as support for collective challenges.

At this point, it is necessary to ask ourselves: what strategies can be extrapolated from the microbiologist's texts to deal with these critical issues? How does knowledge circulate and how does this relationship between the scientific community and the public unfold, particularly with regard to environmental and climate issues?

Bridging Distant Styles

A first, immediate answer concerns scientific communication, divided by Fleck between the transmission of knowledge between different collectives

and that within the same collective⁶¹⁵. The first case refers to what the author calls *propaganda*, operated through a re-stylisation of thought capable of creating a common, intermediate collective. Fleck brings here the example of the Christian propaganda carried out by the Jesuits in China in the 17th century, suggesting how this first strategy applies to those cases of incommensurability inherent to extreme temporal or spatial distance. Having, however, already rejected this hypothesis for the climatic case, let us now move on to the second set of strategies, aimed at internal transmission, to test possibilities of communication between the scientific elite and the general public.

According to Fleck, in this case we have three main strategies: *popularization* to the public, *information* for peer specialists and *legitimization* as a formulation capable of standing as an official synthesis, thus forging the framework of the thinking collective. Let's now focus on the first and the third. The former is defined by the author as follows:

“*Popularization* uses the everyday language, i.e. inexact expressions; it leaves out criticism and reservations, and stresses some aspects of the problem by way of pictures and comparisons.”⁶¹⁶

Thus, not just simplification and metaphors, but also pictorial aspects are fundamental to disseminate scientific concepts. Indeed, in his monograph, Fleck will also emphasise the potential of the new emerging media:

“The printed word, film, and radio all allow the exchange of ideas within a thought community. They also make possible the connection

⁶¹⁵ Fleck, L. (1936). *The Problem of Epistemology*.

⁶¹⁶ *Ivi*, cit., p. 86. He also states, again with reference to the subject of visual rendering: “In place of the specific constraint of thought by any proof, which can be found only with great effort, a vivid picture is created through simplification and valuation. [...] No matter how a given case may be described, the description is always a simplification permeated with apodictic and graphic elements. [...] The achievement of vividness in any knowledge has a special inherent effect. A pictorial quality is introduced by an expert who wants to render an idea intelligible to others or for mnemonic reasons” (Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., pp. 113-117).

between the esoteric and the exoteric circles even across long distances and in spite of little personal contact”⁶¹⁷

In addition to popularisation, we could then consider to some extent the potential of legitimization, which unfolds through the production of manuals dedicated to school learning and study by the “generally educated layman”. The production of this kind of science is not achieved through a quick and simple juxtaposition of scientific articles, but requires work of selection, refining and framing⁶¹⁸. Thanks to this activity, as stated earlier, “a statement appears ipso facto more certain and more soundly established in the organised system of a discipline as presented in a vademecum than it does in any fragmentary description found in a journal. It becomes a definite thought constraint”⁶¹⁹. The production and dissemination of such *vademecums*, i.e. of manualised and ready-to-use knowledge in educational contexts, makes it possible to produce evidence and guidelines in a much more decisive and widespread manner than the scientific journals and articles that proliferate therein.

Moreover, it is important to highlight how both popularisation and legitimisation are *transformative* and *operative* transmissions of knowledge. In fact, information does not pass from one subject to another in a direct and perfect manner, but inevitably undergoes continuous and slight variations, so that one cannot speak of transmission without at the same time analysing the way it is transformed: “Thoughts pass from one individual to another, each time a little transformed, for each individual can attach to them somewhat different associations. Strictly speaking, the

⁶¹⁷ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 107.

⁶¹⁸ “The vademecum is therefore not simply the result of either a compilation or a collection of various journal contributions. The former is impossible because such papers often contradict each other. The latter does not yield a closed system, which is the goal of vademecum science. A vademecum is built up from individual contributions through selection and orderly arrangement like a mosaic from many coloured stones. The plan according to which selection and arrangement are made will then provide the guidelines for future research. It governs the decision on what counts as a basic concept, what methods should be accepted, which research directions appear most promising, which scientists should be selected for prominent positions and which should simply be consigned to oblivion” (*Ivi*, cit., pp. 119-120).

⁶¹⁹ *Ivi*, cit., p. 121.

receiver never understands the thought exactly in the way that the transmitter intended it to be understood"⁶²⁰. This not only in the case of popularization, where the transposition into images, broadcasts or movies makes the activity of re-stylization obvious, but also in the case of legitimization, which through the production of manuals or official codes can only simplify, restructure, make information differently intelligible⁶²¹. In addition, just as the knowledge circulating within thinking collectives is often described by Fleck not only as a system of verbalised knowledge and codified utterances, but also as habits, preferences and skills⁶²² - obviously closely linked to the specific procedures, materials, substances devices and apparatuses with which they are combined -, similarly we could argue that knowledge transmitted to the public is not to be considered as a mere sum of propositions or information, but rather as a useful tool for analysis and reflection, as well as for interaction and manipulation of the phenomenon under scrutiny. The acquired climate knowledge would thus not only allow for the composition of a specific image of the phenomenon, but to act on it according to different oriented trajectories.

For it to be possible to interrupt certain (missing) climate beliefs and practices, it will therefore be good to take action where they have been formed or, in our case, where they have failed to form. The inclusion of the climate theme in school books, the publication of introductory texts on the ecological crisis, the launching of training projects inside and outside schools, interdisciplinary reflection on the effects of the crisis, as well as the opening of advanced courses on the environmental theme, make it possible to establish the crisis as a solid and consistent scientific object (even if, in the awareness of experts, its status always remains provisional and in the

⁶²⁰ Fleck, L. (1981). *Genesis and Development*, cit., p. 42. And again: "Another fundamental phenomenon of epistemology is the *fact* that the circulation of thought is always related, in principle, to its transformation" (Fleck, L. (1936). *The Problem of Epistemology*, cit., p. 85).

⁶²¹ We could argue that even in the case of communication between peer specialists there is always a certain degree of re-stylisation, given by the need to communicate in different formats (papers, monographs, conferences, private discussions) to different audiences (although always scientific, probably interested in different topics and focal points of discourse).

⁶²² See "La dimensione tacita della conoscenza" in Coniglione, F. (2019). *Lontano da Vienna, lontano da Leopoli*, pp. 45-56.

process of being defined)⁶²³. Moreover, however much the academic system directs towards an endless production of scientific articles useful for personal career advancement, a stronger commitment to scientific popularization would allow elitist knowledge to meet popular eyes (in particular through today's new popularizing media - from television to festivals, from YouTube channels to comics⁶²⁴ - as well as through opportunities for meetings and discussions in presence) thus benefiting the climate cause and, perhaps, in the long run, also the possibilities of recognition, support and funding of the researchers themselves.

In conclusion, can these activities of transmission of knowledge – be them connected to popularisation or legitimisation – be effective to change the mind of climate sceptics and denialists?

Drawing on Fleck's insights, Victoria Min-Yi Wang attempts to reflect on the current state of scientific communication, particularly with regard to hot topics such as COVID or the ecological crisis. According to the author, one of the main causes of the current proliferation of scepticism and denialism lies in the lack of understanding of the processes of knowledge transmission, often described according to a caricatured view that sees on the one hand the scientific community endowed with information and on the other the vast ignorant public waiting to be educated. This model is usually referred to within scientific communication studies as the “deficit model” and can be briefly described as follows:

“The classical version of the deficit model of science communication posits that one-way transfer of value-neutral knowledge – in the form of scientific facts – from scientific experts to laypeople will a) fill

⁶²³ The need for such manuals and consolidations is more necessary today than ever, since, as Smith reminds us: “The relevant information is technical, complex, and not easily absorbed or retained by individuals, even those with specialised training. Such information is also neither ready to hand nor easy to come by, and much of the data is, in fact, disputed among experts” (Smith, B. H. (2020). *Perplexing realities: Practicing relativism in the Anthropocene*. In *Climate Realism*, cit., p. 149).

⁶²⁴ Among the many popularization initiatives, we would like to mention here the interesting work resulting from the encounter between a famous cartoonist and an energy and climate expert, able to synthesise scientific data within a creative and enjoyable framework. Blain, C., & Jancovici, J. (2021). *Le monde sans fin*. Dargaud.

knowledge gaps, b) lead to desirable attitude/behavior changes, and c) increase trust in science. This *information* deficit model assumes that scientific 'facts speak for themselves' in the sense that 'the interpretation of these facts is assumed to be identical for all members of the public' and occurs in a 'rational and objective manner'.⁶²⁵

Born in the 1960s and then reinforced in the following decades, this model is today the subject of increasing criticism, especially given the evidence that more information provided to the public often does not lead them to act as the scientific community would expect. Precisely for this reason, the author attempts to highlight some of the problems that characterise the model, as well as to propose solution strategies.

A first problem concerns the lack of knowledge regarding the actual functioning of scientific activity. Already in the last of his writings, *Crisis in Science*, Fleck invited us to resolve "the gap between the obsolete, but still generally held, official opinion on the nature of Science, and the practical, though limited, insight into Science possessed by the ordinary scientific worker"⁶²⁶. In his view, scepticism and denialism would only emerge if the sociology of science is not fully understood, reduced to mere relativism or anti-realism. It is precisely for this reason that Fleck ends his career by calling for the development of more adequate models of science, capable of describing its actual and everyday functioning, providing a more truthful and correct representation of the same⁶²⁷.

Indeed, contrary to Malm and against Latour's concerns, we can see that

⁶²⁵ Wang, V. M. (Forthcoming). Dismantling the deficit model of science communication using Ludwik Fleck's theory of thinking collectives. In Tsou, Jonathan Y., Shaw, Jamie, and Fehr, Carla (Eds.). *Values, Pluralism, and Pragmatism: Themes from the Work of Matthew J. Brown*. Boston Studies in the Philosophy and History of Science. Springer. Available at: <https://philpapers.org/archive/WANDTD.pdf>, cit., p. 1

⁶²⁶ Fleck, L. (1960). *Crisis in Science*, cit., p. 153.

⁶²⁷ It is interesting to note how the article opens by arguing that scientists have essentially assimilated this new conception of science and knowledge, whereas in a previous article fourteen years earlier, the author acknowledged the lack of such an awareness: "It is highly interesting to establish to what extent scientists who devote the whole of their life to the problem of distinguishing illusions from reality are unable to distinguish their own dreams about science from the true form of science" (Fleck, L. (1946). *Problems of the Science of Science*. Republished In Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact*, cit., p. 113).

the reduction of trust in science seen in recent years is not so much due to the development of a critical approach to scientific knowledge, but rather to its exact opposite, i.e. to a stereotyped view of science and its companions “truth” and “objectivity” on the part of the general public. The latter in fact still seems to be attached to an idea of scientific objects as mere factual findings by the scientists, perfect reflections of an ultimate reality or, possibly, provisional sketches simply waiting to receive more details - within a vision of science that is incremental and characterised by one and only one main path, capable of leading us to the well-defined totality of the picture of reality⁶²⁸.

This is how, for example, during the pandemic, the lack of a quick, certain and, above all, unambiguous response from the scientific community led many people to doubt every new claim made by experts and politicians⁶²⁹. Confusion began to reign and the lack of knowledge of the actual workings of science - made up of trial and error, suppositions and intuitions, methods, procedures and theories of multiple working groups, only gradually integrated within codified and stable knowledge, albeit always revisable - led the public to wonder how such a multiplicity and variability

⁶²⁸ This theme is explored in Fleck, L. (1946). *Problems of the Science of Science*, where Fleck describes several characteristics of scientific activity. Firstly, according to the author, one cannot speak of science, but rather of sciences in the plural, not necessarily conflicting, but certainly capable of advancing different and only partially overlapping perspectives of reality. Secondly, there can be no eternal and unchanging scientific knowledge; while there is undoubtedly a part that tends to be more solid and stable, this does not mean that it cannot (as history teaches us) be revised. This is not only because of a historical and temporal discourse, but also because science is in itself a democratic process that cannot admit absolute fixations or unchallengeable dogmatisms regarding its contents and statements. Thirdly, the idea of a final and complete stage of knowledge, where “all problems” have been resolved, makes no sense, for the simple reason that the idea of “all problems” is meaningless; each resolution opens up in fact indefinite new questions, some explored, others abandoned, with no possibility of definitively closing off the ability to further question perspectives and aspects not yet considered. Added to all this is the fact that science is not “knowledge”, i.e. the sum of cumulative propositions capable of reflecting reality according to a ‘representational’ approach, but rather a “knowing activity” that brings into play a mixture of concepts and bodily abilities to constantly - and provisionally - investigate reality.

⁶²⁹ Löwy, I. (2020). Ludwik Fleck where are you now that we need you? Covid-19 and the genesis of epidemiological facts. *Somatosphere*, p. 12.

of opinions was possible: is science not made up of eternal and indisputable “truths”? Do not suppositions and interpretations pertain instead to the speculative and creative professions? Similar difficulties arise in the environmental field, where the constant renewal of problems and objects of investigation (as well as their temporal evolution) inevitably shows a science in its making, a “knowing” in fieri, rather than the classical static reserve of “knowledge” and objects given once and for all. As Fleck states:

“Sciences do not grow as crystals, by apposition, but rather as living organisms, by developing every, or almost every, detail in harmony with the whole.”⁶³⁰

Precisely for this reason, according to Wang, scientific communication should not be limited to the mere transmission of information concerning the phenomena under investigation, be it pandemics or ecological crises, but also highlight uncertainties, describe networks and collectives active in the field, as well as possible incursions of values and socio-political orientations within the articulation of scientific facts. Similarly, school education could include within the scientific disciplines a part of the textbook and course of study dedicated to analysing the functioning of research activity, showing the process leading from the first “resistances” towards the final results, as well as bringing concrete examples of such knowledge processes.

In addition to the lack of knowledge of how science actually works, a second problem highlighted by Wang concerns the public’s lack of trust in the scientific community, as well as the feeling of not being effectively listened to and taken into account. Giving some recent examples, she shows how the transmission of information has failed especially in those cases of absence or deterioration of the human bond between scientists and the community⁶³¹, as well as in those cases of forgetfulness or disregard of

⁶³⁰ Fleck, L. (1946). *Problems of the Science of Science*, cit., p. 114.

⁶³¹ “For example, Maya Goldenberg stresses that it is frequently not a lack of knowledge that makes parents hesitant to have their children vaccinated, but rather an often-understandable lack of trust. Given the now-infamous Tuskegee syphilis experiment, she argues, it is no wonder that some Black Americans today harbour mistrust towards governmental and scientific authorities” (Wang, V. M. (Forthcoming). *Dismantling the deficit model of science communication*, cit., p. 8).

certain instances and problems of the community⁶³².

According to Wang, a possible solution to the problem concerns the diversification of the scientific community, i.e. the implementation of policies capable of ensuring a high degree of heterogeneity within it. By guaranteeing and fostering access to the scientific field for the most diverse segments of the population, particularly the most marginalised groups, the perception of it would shift from the idea of a restricted elite capable of self-reproducing its power to a more participatory and democratic vision of knowledge. The new members, by maintaining a human and trusting connection to their environments and communities of origin, would thus give a familiar and recognisable face to science, guaranteeing a strengthening of credibility in the field.

Another possible solution would then be to generate situations aimed at listening to the public and its demands, as well as involving it in processes of co-production of knowledge⁶³³ - an increasingly central theme in studies on scientific communication. This strategy aligns perfectly with Fleck's intuitions, according to which science is not constituted of static and propositional knowledge to be transferred from the elite to the public, but rather of a multiplicity of practices of knowledge production and re-stylisation, practices in which the public participates at various levels: by granting legitimacy to the scientific community or, on the contrary, by discrediting it and demanding accountability for the results obtained; by

⁶³² "There are many instances in which relaying facts from places of scientific authority to people lacking institutional scientific expertise have been ineffective in changing people's behaviour (and sometimes rightly so). For example, one prominent case report details how (institutionally credentialled) scientific experts tried to impose restrictions on hill sheep farming in Cumbria, England in the wake of the Chernobyl nuclear accident. While mitigating risks from the radiation, farmers however needed to continue to make their livelihoods and felt that 'scientists ignored local variations in radioactive fallout effects and... were evidently ignorant of local farming realities and neglected local knowledge'. More recent studies show that communicating the cancer risks associated with alcohol consumption can change beliefs but not drinking patterns, and that relaying information about vaccine safety and efficacy does not necessarily increase vaccine uptake" (Ivi, cit., p. 3).

⁶³³ Rosa also illuminates the reverse situation, in which knowledge is not produced by the scientific community, but entirely by the public, especially concerning illnesses and medical topics (Rosa, F. (2018). Ludwik Fleck, p. 31).

feeding common sense and thus providing insights and cues for the generation of proto-ideas and new lines of research; by actively participating, within the limits of one's abilities and knowledge, in situations of public debate and, indeed, even in dynamics of knowledge co-production. These possibilities are realised in particular thanks to the presence of what Coniglione calls "zones of intersection"⁶³⁴, overlaps between collectives that allow contact, exchange of ideas and opinions and, possibly, harmonisation of styles and objects.

The shift from the reservoir of "knowledge" to the practices of "knowing" thus also brings us back to Tsing's insights, who, in order to overcome the idea of discrete and static cosmologies, decides to turn rather to intersecting and dynamic world-making activities:

"Finally, world-making projects overlap. While most scholars use ontology to segregate perspectives, one at a time, thinking through world making allows layering and historically consequential friction."⁶³⁵

Many more situations and areas of intersection and many more frictions, i.e. encounters/clashes between different collectives and styles capable of generating temporary co-constructions of worlds. In spite of divergences and possible conflicts, in fact, such conversations will inevitably also produce assonances and harmonisations, thus enabling partial intertwining and overlapping between the perspectives of the different collectives. Returning to the climatic discourse, we might therefore ask: is it still possible to detect or generate zones of intersection within the current highly polarised and antagonistic socio-political atmosphere? Do today's frictions between climate collectives and disinterested, sceptical or denialist ones only produce further conflicts or do they allow the construction of common horizons? In what situations and in what ways have two such distant

⁶³⁴ "In essence, in Fleck's conception, there are a multiplicity of thinking collectives (with their respective styles) that are either partially overlapping or completely disjointed or commonly immersed in a larger collective (e.g. that of 'common sense'): it is these zones of intersection or common belonging that give the possibility of mutual communication and allow for the 're-stylization' of one style within another" (Coniglione, F. (2019). *Lontano da Vienna, lontano da Leopoli*, cit., p. 41. Translation mine).

⁶³⁵ Tsing, A. L. (2015). *The mushroom at the end of the world*, cit., footnotes p. 292.

collectives been able to enter into conversation, producing a shared knowledge, a shared world, a shared crisis?

3.2.3 Conversing at the Intersection

In a recent contribution, Barbara Herrnstein Smith, retrieving Fleck's reflection on thinking collectives, argues how the same can help us understand and address the current state of *impasse* we experience in global north societies with regard to the climate crisis. The thinking collectives of climate sceptics and climate deniers (part of what we have previously defined as the general public) possess in fact a particular "tendency to inertia"⁶³⁶, produced through a mutual attunement of beliefs, perceptions and practices and capable of generating a tenacious resistance towards any element that might contradict the collective's thought⁶³⁷. In order to overcome this condition of impermeability, the author does not invoke the dissemination of scientific knowledge, but rather the reverse processes of listening and building mutual trust.

Smith therefore recalls the work of social psychologist Arlie Russell Hochschild who, by traversing and interviewing the population of Louisiana, investigates what she calls "The Great Paradox", that is: how is it possible that people living in some of the most oil-polluted regions of the United States regularly vote for candidates who support both the extractive and the oil industry? After much research, the psychologist can only point out how climate scepticism and denialism proliferate not so much because of postmodern epistemological critique, but rather from a feeling of forgetfulness and marginalisation, caused in particular by the so-called

⁶³⁶ Fleck devotes a few pages of his monograph to the topic, titling it "The Tenacity of Systems of Opinion and the Harmony of Illusions; Viewpoints as Autonomous, Style-Permeated Structures". This is how the section opens: "Once a structurally complete and closed system of opinions consisting of many details and relations has been formed, it offers enduring resistance to anything that contradicts it" (Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 27).

⁶³⁷ Smith situates this phenomenon within the general climate produced both through constructivist epistemology and STS, as well as through the ontological turn in anthropology (Smith, B. H. (2020). *Perplexing realities*, cit., p. 147).

“liberal-elites”, who are too busy paying attention to and advancing the lgbtqi+, black and migrant communities. In order to solve this distrust and resistance to change, Smith invites us to pay attention to the attitude adopted by her colleague Hochschild during the research:

“Hochschild’s determination to report their views impartially is evident throughout the book. Of particular interest here are her efforts to find counterparts, in her own sentiments, to those expressed by her subjects and also to find parallels to them in feelings, views, and values commonly expressed by her liberal friends and associates.”⁶³⁸

In this way, the psychologist reminds us how the study of the crisis is not only about the analysis of environmental data - carried out by a restricted scientific community - to be passed on to the general public, but also about listening to common voices, tuning in to their sentiments and understanding their problems (including - and, perhaps, above all - those of people who reject the existence of the crisis). Indeed, these intersections would facilitate a research orientation capable of linking the problems of the more sceptical and reticent communities of the global north to the broader web of relationships, causes and effects that is the climate crisis. While recognising the greater impact of the crisis on people in southern countries, it is of the utmost importance to be able to make the crisis more consistent, proximate and concrete also and above all for those who, to date, hold more decision-making and political power, as well as a greater share of consumption and emissions.

A similar approach is reported by Tsing, who describes the work done by Beverly Brown, an organiser able to bring together several precarious forestry workers in the Northwest US. Aware of the obliviousness and failure of urban elites to listen to rural populations, Brown decided to enter into dialogue with both private and white loggers of rural origin and immigrant mushroom pickers and gatherers of more varied origins, in order to grasp and articulate possible common interests and horizons:

“Without progress, what is struggle? The disenfranchised had a common program to the extent that we could all share in progress. It

⁶³⁸ *Ivi*, cit., p. 147.

was the determinacy of political categories such as class— their relentless forward motion— that brought us the confidence that struggle would move us somewhere better. Now what? Brown's political listening addresses this. It suggests that any gathering contains many inchoate political futures and that political work consists of helping some of those come into being. Indeterminacy is not the end of history but rather that node in which many beginnings lie in wait. To listen politically is to detect the traces of not-yet-articulated common agendas."⁶³⁹

This practice makes it possible to identify what Tsing calls "latent commons", interests that could be mobilised for a common cause⁶⁴⁰.

Let us therefore delve even more into the concrete and try to analyse a further example of such a strategy, in which I was lucky enough to participate, perceiving at first hand the difficulty of intersecting different conflicting interests and perspectives. The case concerns the dispute that has emerged around the Grave di Ciano: a protected natural reserve, located in the Treviso area, it is now endangered by the regional project that envisages the construction of four detention basins to contain possible overflows of the river Piave⁶⁴¹. Despite the fact that the project may seem to be in line with the objectives of adaptation with respect to emerging environmental risks, it presents various problems, both from an ecological and political point of view.

On the one hand, the detention basins would destroy the complex ecosystem of the Grave⁶⁴²: in order for the four basins to be built, the ground would have to be excavated for 4 metres over an area of about 5.5 square kilometres, removing 20.6 million cubic metres of gravel underneath and allowing the basins to be built with reinforced concrete walls 6-8 m high, thus creating a storage capacity of 32.6 million cubic metres. Considering that the total extension of the Grave is 13 square kilometres, the cementing of almost half of the land will inevitably compromise the animal and plant

⁶³⁹ Tsing, A. L. (2015). *The mushroom at the end of the world*, cit., p. 254.

⁶⁴⁰ At the same time being aware that every condensation of interests and every project can only leave someone out, so that "the best we can do is to aim for 'good-enough' worlds, where 'good-enough' is always imperfect and under revision" (*Ivi*, cit., p. 255).

⁶⁴¹ For further information: <https://graveciano.com/>.

⁶⁴² Part of "Natura 2000", one of EU most ambitious biodiversity protection projects.

life of the reserve, as well as the possibilities for the local community to walk, relate and appreciate.

On the other hand, it can be noted how the project, which first appeared in 2009, has proceeded over time through a continuous (voluntary) disregard of various legal obligations, i.e. by not considering (or, rather, discarding without justified reasons) less impactful and cheaper alternatives. This has been repeatedly challenged by both local mayors (led by the municipality of Crocetta del Montello) and the Grave di Ciano Protection Committee, a citizens' group established in 2019 in defence of the threatened territory. Predictably, the demands of the municipalities and the committee, as well as their attempts to highlight procedural shortcomings and non-compliance with prescribed obligations, were not heeded. On the contrary, the implementation of the project, first promoted by the region, has recently passed into the hands of a government commissioner, making resistance increasingly complex and exhausting.

Penetrating within this dense web, we, the students of the national PhD in Climate Change and Sustainable Development promoted by the IUSS Pavia, have had the opportunity to directly experience the issue and to sense the tension that has been running through the region in recent months. On the initiative of Professor Pietro Daniel Omodeo, a workshop was organised last June in the municipality of Crocetta, thanks to which we were able to meet the local committee and discuss the case together, as well as the potential of the academy within the current affair.

Thus was born, at the end of the three-day workshop, the idea of a shared glossary⁶⁴³, i.e. an attempt to bring together an academic thinking collective, often committed to promoting the dissemination of the most scientifically accredited and universally shared environmental discourse, and a citizen thinking collective, more focused on pressing local problems and, in all likelihood, less concerned - if not outright hostile⁶⁴⁴ - to global ecological issues.

⁶⁴³ Fava, G., Melina, F., Savoldelli, M. (Eds.). (Forthcoming). *Acque contese. Un glossario per le Grave di Ciano*. Ventura Edizioni.

⁶⁴⁴ Without classifying this latter group as sceptics or denialists, at the same time it is interesting to note that the municipalities that have risen up against the project (Crocetta del Montello, Giavera del Montello, Montebelluna, Moriago della Battaglia, Nervesa della



Figure 9. *Photo taken in the Grave di Ciano during the three-day workshop.*

Gathering the voices of doctoral students, professors and, at the same time, various representatives of the local committee, the glossary thus presents itself as an attempt at mutual listening and co-production of knowledge: on the one hand, the generalisations of the academy are placed within a specific context, broadening their field of action and, inevitably, reconfiguring themselves through encounters with local communities and specific challenges⁶⁴⁵; on the other hand, the concerns expressed by citizens

Battaglia, Pederobba Vidor and Volpago del Montello) have tended to be led in recent years by political parties usually intent (at a national level) on discrediting the climate discourse – thus allowing us to hypothesise how a large part of the local population may also be untouched or opposed to this discourse.

⁶⁴⁵ We thus also take up Tsing's invitation to promote conversations capable of transcending the boundaries of the university, where collaboration with non-necessarily-professional thinkers can generate new ideas and alliances: "One of the strangest projects of privatisation and commodification in the early twentieth- first century has

present in the area and active in its defence are placed within a general framework capable of shedding light on the widespread dynamics of ecological injustice. The hope, therefore, is twofold: to give voice to those who often perceive their demands as unheard by the academic elite and environmental activism and, at the same time, to create a more accessible and appealing text for this same community, capable of giving greater consistency and credibility to the ecological crisis.

If we want to harmonise perspectives, thus generating a partially shared Crisis, we should abandon both the idea of pre-given universal concepts, as well as that of radically fragmented local perspectives, rather focusing on the situations where common challenges force different collectives to engage in translation, so that partially shared and overlapping concepts can emerge and become useful for both sides. As Tsing stated well before her research on matsutake mushrooms:

“Critical environmental scholars who address the problem have often taken us directly to the local, endorsing local or indigenous knowledge as the counterpart to universalist expertise. This reaction draws attention to cultural specificity but again misses the point. [...] Universals are effective within particular historical conjunctures that give them content and force. We might specify this conjunctural feature of universals in practice by speaking of engagement. Engaged universals travel across difference and are charged and changed by their travels. Through friction, universals become practically effective. Yet they can never fulfill their promises of universality. Even in transcending localities, they don't take over the world. They are limited by the practical necessity of mobilizing adherents. Engaged universals must convince us to pay attention to them. *All* universals are engaged

been the movement to commoditise scholarship. Two versions have been surprisingly powerful. In Europe, administrators demand assessment exercises that reduce the work of scholars to a number, a sum total for a life of intellectual exchange. In the United States, scholars are asked to become entrepreneurs, producing ourselves as brands and seeking stardom from the very first days of our studies, when we know nothing. Both projects seem to me bizarre- and suffocating. By privatising what is necessarily collaborative work, these projects aim to strangle the life out of scholarship. Anyone who cares about ideas is forced, then, to create scenes that exceed or escape ‘professionalisation’, that is, the surveillance techniques of privatisation” (Tsing, A. L. (2015). *The mushroom at the end of the world*, cit., p. 285).

when considered as practical projects accomplished in a heterogeneous world."⁶⁴⁶

The Ecological Crisis is therefore not to be considered as a universal concept pre-constituted by scientific discourse, simply waiting to be communicated through the activity of popularization and legitimisation - in clear opposition to local knowledge, representing a completely different and incommensurable perspective. On the contrary, for the Crisis to *operate* as a shared concept, that is, to serve as a reference and common tool to address current and future problems, it will need to spread through perpetual frictions within which knowledge proliferates as long as it is renegotiated and employed. As the case of the Grave di Ciano demonstrates, respecting the perspective of other collectives does not imply a distancing and acceptance of it as radically different, but rather the acceptance of a reciprocal questioning: the local struggle will thus be perceived as part of a broader crisis and, at the same time, the environmental crisis will be reconfigured by incorporating new instances and local specificities. It will only be through friction, intersection, and continual re-stylisation that a shared perspective, a shared world, and a shared crisis will be able to nourish and sustain themselves throughout time.

⁶⁴⁶ Tsing, A. (2005). *Friction. An ethnography of global connection*. Princeton University Press, cit., p. 8.

3.3 ORIENTING ENGAGEMENT

3.3.1 Beyond Sensible Bewilderment

Following Rancière's call for the continuous questioning of the common sensible, we have seen how the seemingly natural and unbreakable distinction between human and animal is nothing more than a *possible* ethical-perceptual configuration, always open to contestation and useful reworking. The human being can therefore very well be considered as an animal among animals, possibly even different, but never more than an elephant can be said to be different from a bat: in short, even if there is a difference, there is no difference capable of "making a difference", especially from the point of view of ethical consideration. The invitation accepted and developed by Animal Studies, however, seems to have opened up unexpected and curious possibilities, particularly within the emerging field of plant philosophies. If the former contest the clear separation between human and animal, the latter seem instead interested in problematising (rather than dissolving) the separation between animal and plants.

Among the leading voices of the new movement is Stella Sandford, who, in her *Vegetal Sex: Philosophy of Plants*, succeeds in outlining the general effort towards a new recognition and respect for plants, in particular by (critically) focusing on the field of plant advocacy. If the botanical sciences attempt as far as possible to free themselves from animal categories as instruments of investigation⁶⁴⁷, plant advocacy reworks the results to show instead

⁶⁴⁷ The only (or, perhaps, the most widespread and obvious) animal category that still persists within botanical science is that of sex, which would later become the main theme of Sandford's text: "What is vegetal sex? Or, what does it mean to say that plants are sexed? Do 'male' and 'female' straightforwardly mean the same when applied to humans, trees, fungi and algae? Given that the discovery of the sex of plants is taken to be a major step in the development of scientific botany, it might seem regressive to ask these questions. That plants are sexed is, in most respects, simply taken for granted today by most plant scientists, horticulturalists and amateur gardeners alike. It is also

precisely the analogy with the animal. In Calarco's terms, we could say that the botanical sciences attempt to bring us closer to plants through an approach to difference, i.e. by inducing a sense of wonder at the new, which is to be respected and protected precisely because it is different; on the other hand, the more widespread activity of plant advocacy employs the strategy of identity, aimed at promoting shared traits, proximity, common belonging, capable of moving us ethically towards that which most resembles us.

The latter, therefore, attempts to superimpose plant and animal characteristics, as we see for example in reference to sensitivity and perception. A first case concerns the fact that plants possess photoreceptors capable of capturing different wavelengths of light, a fact that is quickly translated by authors such as Mancuso into the recognition of "sight" in plants⁶⁴⁸. As Sandford points out, however, although we share with plants the ability to detect light, they do not have a nervous system capable of translating light signals into images, but rather use these signals as cues for growth. Similarly, although plants do not possess any apparatus capable of making the reception of vibrations into a sound experience, the fact that they are sensitive and react to vibrations in the soil leads Mancuso and colleagues to recognise the ability to "listen". Finally, the release of volatile organic compounds in response to various stimuli, compounds that will in turn be received producing new stimuli and responses, is clumsily translated into the ability to "communicate" or even "talk to each other"

generally taken for granted that the progress of scientific botany depended on its freeing itself from proceeding through analogies between plants and animals, where the animal always provided the model, and on its freeing itself from the mystifications of philosophy. As these plant-animal analogies were most developed in philosophical texts on plants, these two constraints on scientific progress are, indeed, seen as inseparable. But how is it, then, that in one exceptionally important case – the discovery of the sex of plants – progress is measured not by the rejection of the animal model but, on the contrary, by its total and literal embrace?" (Sandford, S. (2022). *Vegetal Sex*, cit., p. 1).

⁶⁴⁸ "According to Mancuso, 'plants have all five senses, just like us. And... fifteen others'. But he devotes thirty pages of his *Brilliant Green* to plant sight, smell, taste and touch and only three pages to the other fifteen senses, only three of which he identifies [...]" (Ivi, cit., p. 20).

using such signals as “words”.

Despite the good intentions - i.e. the desire to present little-known phenomena and aspects to the public using familiar terms and concepts - the failure to recognise the differences between animals and plants risks, according to the author, leading us towards misinterpretations of the plant world. An example of this is the so-called “movement” of the sundew, which bends its own leaf within a few hours in order to wrap a fly entangled in its sticky hairs. An anthropomorphic reading might lead us to read this phenomenon as a sort of grasping, a hand slowly moving and catching its prey. However, such a reading would miss the specificity of the action and the difference it presents with animal possibilities. The movement is in fact given by the rapid growth of cells on one side only, which generates a sort of “bending”, which to our eyes may appear, erroneously, as a movement of a pre-existing body of the plant⁶⁴⁹.

Similarly to the critical point identified by Calarco in certain animalist positions that, by humanising the animal (i.e. recognising specificities previously attributed only to humans), rest on a naive anthropomorphism and reproduce a dangerous anthropocentrism, according to Sandford, plant advocacy rejects a certain kind of moral zoocentrism (the unquestioned superiority of animals), to reintroduce, however, zoomorphism (interpreting plant traits through animal categories) and a different form of zoocentrism (attributing value and recognising respect to the plant only on the basis of the degree of similarity to the animal)⁶⁵⁰.

Slightly different is the question of intelligence, which, in a way, seems to need no special concessions from the animal world, as the general definition circulating in biology already seems to make room for plants. Taking the latter from David Stenhouse, who describes intelligence as “adaptively variable behaviour within the lifetime of the individual”, Anthony Trewavas, considering plant behaviour as “growth and development”, defines plant intelligence as “adaptively variable growth and development during the lifetime of the individual”, without therefore generating any

⁶⁴⁹ *Ivi*, p. 19.

⁶⁵⁰ *Ivi*, pp. 2-3.

particular discontinuity between animal and plant intelligence. In fact, the (often enormous) differences in behaviour between the two kingdoms should not, in the author's opinion, lead one to infer the presence or absence of intelligence, as the latter can only be assessed on the basis of the organism's possibilities and the challenges posed to it by the environment, i.e. its specific capacity to survive and progress. Intelligence once again becomes a useful vector for the coagulating strategy of identity (in this case, however, without zoomorphising attitudes), leading the author to conclude that biological intelligence is synonymous with "life" itself: to be alive is to be an intelligent organic system (or aggregate of systems), be it animal or plant⁶⁵¹.

As was the case in the field of Animal Studies, the insights of Plant Studies can only prompt us to reconfigure the environmental crisis and the resulting responses. While Sandford already recognises the need for such an effort⁶⁵², other voices have taken up the task more decisively. In *The Work That Plants Do*, several authors unite to bring to light the hidden work of plants that can guarantee us the conditions of possibility for our own progress. Just as

⁶⁵¹ It is important to emphasise, however, how, according to Sandford, unfortunately even her colleague Trewavas, after such an interesting theoretical movement, will again fall into the usual trap of zoomorphism and zoocentrism. In fact, once he has recognised the presence of intelligence, he will go on to argue that the behaviour of plants is "purposeful", not so much in a functional sense, but rather in an intentional sense. In other words, after recognising plant intelligence as "adaptively variable growth and development", he then rereads it in terms of "choices" and "decisions", describing the adaptive behaviour of plants through a purely animal intentionality narrative. It is precisely for this reason that the author then turns her gaze to a third way, namely the philosophy of plants. If science focuses on difference and plant advocacy on identity, we could instead say that plant philosophy exploits the strategy of indistinction, inviting us to direct encounters and prompting us to recognise the plant dimension that inhabits us and runs through us.

⁶⁵² "According to writers in these fields, we simply do not pay enough attention to plants. We take them for granted, objectify and 'exploit' them, notably in their reduction to agroc capitalist commodities. As plant life stands metonymically for 'nature' as a whole, the devaluation and commodification of plants is at the same time the devaluation and commodification of nature as a whole, which has contributed to the capitalist-driven global environmental catastrophe that faces us today" (Ivi, cit., p. 2).

Barca echoes Federici's reflections on social reproduction as a forgotten form of female labour, extending it to the activity of racialised subjects and non-human animals necessary for the constant advance of the modern productive enterprise, we see here a further extension towards what we might consider the "margin of the margin".

Among the papers in the collection, we find the contribution of Harold Perkins, aimed precisely at extending the concept of social reproduction to the plant world⁶⁵³. The author will show, for example, how the labour of human and non-human animals, as well as the metabolic labour of plants, aimed at the constitution of urban elm forests in America - which can be considered as "consumption funds" necessary for social reproduction - was extracted free of charge by the capitalist machine in favour of its incessant productive activity (in particular with regard to the rest and "recharging" service offered to its workers)⁶⁵⁴. Attempting a synthesis between the approach to labour proposed by classical Marxism and that advanced by Latour in ANT (*actor-network theory*), the author thus describes vegetal labour in terms of "*nonsocial* forms of labour", thus questioning the Marxist presupposition of labour as strictly social/human. At the same time, however, a second and more profound distinction remains intact, namely the distinction between life and non-life: "life itself, and the difference between living and dead labour, constitutes a crucial ontological divide"⁶⁵⁵. Just as Trewavas contributes to the renewed respect for plants by recognising biological intelligence as a synonym for life, i.e. as an umbrella

⁶⁵³ Perkins, H. A. (2021). *Ecologies of actor-networks and (non) social labour within the urban political economies of nature*. In Ernwein, M., Ginn, F., & Palmer, J. (Eds.). (2021). *The Work That Plants Do: Life, Labour and the Future of Vegetal Economies*. transcript Verlag. The reference to Barca's theory of (extended) social reproduction appears in the introduction of the book (p. 26).

⁶⁵⁴ "[...] the consumption fund is an association of commodities produced by social labour as directed by capitalists and state governments so that human laborers can consume them in their own process of rejuvenation. Only by consuming the use-value of these objects can laborers return to their toils well rested, ensuring continued human social reproduction and renewed accumulation" (*Ivi*, cit., pp. 92-93).

⁶⁵⁵ Perkins' quote from Kirsch, S., & Mitchell, D. (2004). The nature of things: dead labour, nonhuman actors, and the persistence of Marxism. *Antipode*, 36(4), 687-705, cit., p. 698.

capable of uniting human, animal and plant within a common belonging, so too does his colleague Perkins by focusing on the work carried out (and extracted) within the field of the “living”, i.e. the work of human, non-human animals and plant entities. Proceeding with the doubting enterprise, we might at this point ask ourselves: is it perhaps useful to question even this further (or conclusive) distinction? More importantly, is it really possible to question the boundary between living and non-living?

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In her recent *Geontologies*, Elizabeth Povinelli undertakes the challenge, advancing a revisitation or, rather, an accompaniment of Foucauldian biopower. If the latter concerns the management of life, the channelling within certain forms of life and the violence towards what diverges from these trajectories, according to Povinelli there must necessarily be a deeper power – “geontological power”⁶⁵⁶ - capable of maintaining and promoting a distinction between what is life and what is not, a distinction that is fundamental to the operation of biopower itself⁶⁵⁷.

The particularity of this power lies in the fact that it acts not only by separating living and non-living entities, but also by keeping distinct those human beings who are firmly convinced of the incontrovertibility of this ontological separation from those who, on the other hand, reject it and

⁶⁵⁶ Long present and underlying biopower (p. 5), it only slowly becomes an object of analysis and begins to become legible in the present day, mainly due to the environmental crisis and the challenges it poses. In fact, the author highlights the recent focus on ontology and “inanimate” objects, on “things in themselves”, within various strands of contemporary philosophy (new materialism, speculative materialism, speculative realism, object-oriented ontology), directly or indirectly engaged within the field of ecology (Povinelli, E. A. (2016). *Geontologies: A requiem to late liberalism*. Duke University Press, pp. 69-91). Another interesting extension of biopower as the ability to decide who and how can live and die – useful to better understand Povinelli critique – can be found in Mbembe, A. (2003). Necropolitics. *Public Culture*, 15(1), 11-40.

⁶⁵⁷ Foucault himself considered “life” as emerging at the advent of modern biology; not in the sense that nothing was “alive” before the advent of the discipline, but rather that that regulatory device, of action, thought and orientation, norm and deviance, was not previously operative (*Ivi*, p. 97).

constantly question it (the so-called - or "called" by some - "Animists"⁶⁵⁸). This latter activity unfolds, for instance, by granting rights to indigenous peoples on the condition that they confirm that their metaphysics - defined by Povinelli as an "analytic of existence"⁶⁵⁹ - is no more than a mere "belief" or "narrative", so that the traditional and unchallengeable metaphysics of law and state (i.e. the firm separation of living and non-living) is reinvigorated by opposition, rather than broken down and rearticulated⁶⁶⁰. Having worked closely with Australian indigenous communities, the author offers us concrete cases from personal experience of conflicts. When in 2013, for example, the geological formation of "Two Women Sitting Down" - two female ancestors, bandicoot and rat - is deliberately damaged by the mining company Om Manganese Ltd., the (seemingly) progressive legislation on the protection of indigenous sites will only allow the community to sue the company for desecration of a sacred site, certainly not for murder. The population will thus have to affirm (and confirm) before the law that the two women are nothing more than their "beliefs", rock merely "interpreted as" ancestors - all in order to obtain a (small) fine for desecration and, moreover, without the site's custodians receiving any part of it. Will it be possible, then, to destabilise the incontrovertible assertion that "clearly, *x humans* are more important than *y rocks*"⁶⁶¹, as well as the ontological separations it implies? Povinelli advances along the two paths already explored in relation to both human-animal and animal-vegetal separations, namely through science and philosophy. Starting from today's biochemical definition of life⁶⁶² ("a physical

⁶⁵⁸ "[...] the Animist insists that the difference between Life and Nonlife is not a problem because all forms of existence have within them a vital animating, affecting force" (*Ivi*, cit., p. 17).

⁶⁵⁹ The expression "analytics of existence" (*Ivi*, p. 27) or "analytics of entities" (p. 123) is introduced in order to avoid terms such as "point of view", aimed at devaluing the indigenous perspective as an interpretation of (our) data.

⁶⁶⁰ *Ivi*, pp. 34-35.

⁶⁶¹ *Ivi*, cit., p. 9.

⁶⁶² Interestingly, Fleck had already questioned the scientific conception of life (and thus non-life), arguing that "before the content of the notion 'life' had been fixed, there was an unclear proto-idea of the identity between the essence of life and fire. This unclear

compartmentation from the environment and self-organisation of self-contained redox reactions”), the author argues how, given the presence of redox reactions even in the geological realm, what characterises biological life with respect to geological non-life would be the “self-organised, self-oriented, and self-contained” character of its redox reactions, considering “every part of the living being as having its own very narrow and contained goals and yet still being part of a living being’s broader purpose”⁶⁶³. According to the author, this perspective only holds up by assigning a high value to the epidermal dimension, i.e. considering the “skin” as a possibility of containment, identification and separation. If life needs to be functionally and structurally compartmentalised in relation to the environment, the author argues at the same time that nothing can remain alive if it is hermetically sealed: the idea of an enclosed organism is therefore actually an analytical abstraction useful for the study of a fictitiously circumscribed life. Starting from this consideration, various natural scientists, rather than focusing on the life/non-life distinction, have attempted to develop new study methodologies capable of rethinking the connection between “the

thought became the guiding principle of the development of the notions of life and fire: we have even today just such an understanding of life and fire as to satisfy that proto-idea” (Fleck, L. (1936). *The Problem of Epistemology*, cit., p. 94). Starting, then, from the active element according to which there is a close similarity and correlation between life and fire, life as passive materiality would take shape. The scientific conception of life, apparently among the most obvious and incontrovertible, is therefore also contextual and contingent: “The entire development of science in this field can be considered *ex post* to be the solution of this problem: how to define fire and how to define life so as to maintain between these two definitions the same connection which prehistory considered to be obvious. But it would have been *theoretically* possible for the development of the notion of life to take place in the morphological direction, and not the functional one. In such a case, crystals, for instance, could be counted among living beings, and life thus understood (i.e. as the ability to produce specific shapes) would bear no relationship to combustion” (p. 93). Had it been otherwise, says Fleck, we could have lumped crystals together with what are now living beings, and the distinct perception that now prevails would perhaps have seemed bizarre. A similar reflection is advanced by Povinelli, who argues that “carbon-based metabolism” and the idea of self-organisation at the basis of so-called “life” could be read as an outgrowth of the Aristotelian (proto)idea of the soul (Povinelli, E. A. (2016). *Geontologies*, p.49).

⁶⁶³ *Ivi*, cit., pp. 38-39.

geochemistry of Earth and the biochemistry of life"⁶⁶⁴. Apart from such rare attempts, however, it is inevitable to recognise how the natural sciences today continue to structure and subdivide themselves on the basis of the radical distinction between life and non-life, thus weakening the possibilities of alliance with them.

With regard to philosophy, on the other hand, Povinelli seems both to propose strategies already explored by the field of *Animal Studies* and to make specific proposals for the dimension of the non-living being. For example, following a similar line of reasoning to that made by Agamben in his analysis of the "ape-man" as a "potential man", a non-man endowed with an "excess of forces" that will realise it as a human being, the author asks:

"What conditions of a prebiotic broth led to the first cellular process? What are the geochemical conditions in which the break from Nonlife to Life emerged, absent a God who declared that it be so? If we focus on the difference between Life and Nonlife we won't be tempted to wonder what if the miracle was not Life, the emergence of a thing with new forms and agencies of potentiality, but Nonlife, a form of existence that had the potential not merely to be denuded of life but to produce what it is not, namely Life? Nonlife has the power to self-organize or not, to become Life or not. In this case, a zero-degree form of intention is the source of all intention. The inert is the truth of life, not its horror."⁶⁶⁵

Rather than keeping her gaze turned towards the past and towards animal approaches⁶⁶⁶, Povinelli then opens up the discourse to disparate emerging voices, particularly from the aforementioned new materialisms: from those who reread entities as assemblages to those who recognise them not so

⁶⁶⁴ Povinelli, E. A. (2016). *Geontologies*, p. 43.

⁶⁶⁵ *Ivi*, cit., p. 45.

⁶⁶⁶ Recalling Agamben a few pages later, she shows the inadequacy of his "Open" for the case at hand: "Any other animal, or form of life, that wishes to walk into Heidegger or Agamben's Open must conform to this form of doubled potentiality. It is very unclear how Two Women Sitting Down would do so. The Rat and the Bandicoot seem not merely to have failed to finish the race - they were never allowed to get to the starting line" (*Ivi*, cit., p. 50).

much from intentionality, agency or the capacity for self-organisation and orientation, but rather from the capacity to “make a difference”. Similar to the criticisms that have already emerged in Animal and Plant Studies, Povinelli also wonders whether the idea of vibrant assemblages capable of “making a difference” is not more an operation of extending the categories, forms and capacities of the so-called “living” (a sort of “biomorphism”) to the field of the so-called “non-living”, so as to grant them value according to a biocentric perspective.

After reviewing other philosophical possibilities, more or less convincing, as well as refuting philosophies that, to date, seem to more convincingly establish the distinction between life and non-life⁶⁶⁷, Povinelli thinks about the indigenous peoples with whom she has lived. So, she stops and asks herself:

“But, of course, these theorists do not come and engage my friends—nor do they seem to think they must—given that philosophical thought

⁶⁶⁷ In addition to the new materialisms, we also have exponents of speculative realism, engaged in dismantling the influence that Kantian correlationism had on metaphysics, leading it towards a “subjectivist” turn and delivering us into the jaws of constructionism, relativism, and multiculturalism (pp. 71-72). Meillassoux attempts, for example, to question such correlationism by advancing the idea of “ancestral statements”, i.e. confirmations of realities that predate life on earth. One example is the “archaeo-fossils”, materials capable of embodying the existence of such a pre-life reality, of a “being before being-given (for) humans or life-being outside or before or after givenness or (human) thought” (cit., p. 73). Justin Clemens, however, points out to his colleague how, once the technical practice and scientific theory (radioactive decay) that allows for the measurement and temporal location of the material in question is brought to the fore, the aura of autonomy and non-life that permeates the object (as well as the temporality that housed it) slowly fades away. Meillassoux then responds by arguing that, regardless of any kind of technical-scientific mediation, human beings have the capacity to grasp a specific kind of thing, what he defines as the “absolute nature of reality”. According to Povinelli, however, this complicity that the author expects to receive from his readers is guaranteed from the looming danger of the consequences of disagreement, namely being considered creationists, supporters of a view according to which the divine created life and matter at the same time, or, even worse, boorish primitives. Put another way, animists. In addition to the distinction between life and non-life, Meillassoux confirms the duplicity of geontological power, i.e. the ability to discriminate between human types according to different analytics of existence.

defines itself as a kind of thinking that can generate thought for all beings without engaging most; and all truths remain the same no matter where you perceive them. Does their disinterest matter?"⁶⁶⁸

Realising how the philosophical discussion on life and non-life takes place within closed circuits, with little concern for engaging with those who suffer the most serious consequences of that distinction in late liberalism, as well as recognising the few possibilities offered by the scientific sector today, the author therefore decides to try a third way, namely the anthropological way. Following the native perspective, Povinelli describes certain existences (Tjipel, durlgmö, Two Women Sitting Down, Old Man Rock...) not so much according to a logic of temporal containment ("where was she born?" and "where did she die?"⁶⁶⁹) or epidermal ("where is the she (or it) that does so? Where does she begin and end?"⁶⁷⁰), but rather as a series of embodied reciprocal obligations, a bundle of habits of attention, action and correspondence, a clot of mutual orientations and involvements (cognitive, sensory and material); not an entity, a phenomenon or a finalised event, but a continuous effort of attention and interaction between different human and non-human modes of action⁶⁷¹:

"Some might say that Tjipel is a 'contingently varying' environment that can 'restrict the range of possibilities' of the 'contingently varying anatomies' that move within it. And these contingently varying anatomies also can change the form of her nature as environment. She is not, in other words, in any self-evident way an organism or a synthetic self-determining structure able to enclose herself in the skin of her birth, able to reproduce a form of life like herself, able to anticipate a new form, able to die or destroy. She is more like a lung in

⁶⁶⁸ *Ivi*, cit., p. 85.

⁶⁶⁹ *Ivi*, cit., p. 93.

⁶⁷⁰ *Ivi*, cit., p. 99.

⁶⁷¹ *Ivi*, p. 79.

relation to its body. She is outside herself as much if not more so than inside.”⁶⁷²

Such existences, which persist as continuous demands for co-ordination and mutual responsibility between (so-called) living and non-living, which live on the edge between something and something else, which blur their origins and remain open to various possibilities of future intensification, multiplication, transformation or dissolution, effectively challenge the distinction between living and non-living.

Returning to our starting point, Povinelli points out how Rancière's aesthetic-political theory, which can be partially used by animal philosophies, is in this case limiting and ineffective: indeed, the same is often reduced to a narrow “political theory of voice”⁶⁷³, considering as dissent (and therefore as a new political subject) only that linguistic act which, denying its character of mere sound (*phōnos*) obtains recognition as word (*Logos*), thus bringing such interlocutors within the field of the *demos*, i.e. recognising them as part of a more extended political “we”. Assuming this conception of politics, where every *common* always presents an internal possibility of expansion - a *coming common* -, it would seem that the only way forward for existents such as Two Women Sitting Down or Tjipel is to have their voices and demands recognised, so as to be admitted to the

⁶⁷² *Ivi*, cit., pp. 99-100. But she is also much more: “She is an object of mourning and remembrance of Yilngi for Linda Yarrowin and others. She is a potential gas, rare earth, and mineral deposit for Rinehart and other owners of mining corporations. She is the composite or setting for the specific materials she is composed of, which represent specific potential extractions of value: the extraction of gas through technologies of fracking; the extraction of various ores and the extraction from these ores of marketable minerals and metals; and the containment of the chemicals that flood into her during these extractions. [...] But Tjipel is also an indicator of global warming insofar as climate scientists and activists can use her ecological variation as an indication of warming due to carbons released by mining. She is an anthropological and archaeological archive of precolonial material and social organization. And she is a legal device for measuring cultural retention and distinguishing the territorial boundaries of Indigenous traditional owners. She is the source of electoral value for endless politicians. And she is an index of the continuing normative force of gender and sexuality in settler colonialism” (cit., pp. 114-115).

⁶⁷³ *Ivi*, cit., p. 124.

group of certified political subjectivities (as is increasingly the case with the recognition offered to natural sites and the - dubious - attempt to offer them spokespersons capable of translating and articulating their demands). On the contrary, the author proposes to look at the conception of politics as expressed by Foucault and Deleuze, where disagreement and participation are rather realised through the refusal to be encompassed within a fanciful, normalising “we”. Politics - and critique - are realised when, once capacitated, recognised as endowed with *Logos*, one takes the courage to put oneself at risk, that is, to question the very conditions of possibility (symbolic, institutional, material) that have guaranteed access to *Logos* and the very dualistic structure of *phonos* and *Logos*, that is, to maintain oneself “as *noise*, as an irritant, as a buzzing swarm of mosquitos”⁶⁷⁴. The existents accompanying Povinelli do not demand to be integrated within the field of “life”, nor that their demands be recognised as *Logos*; they demand a turbulence on the border between life and non-life, a porosity between *phonos* and *Logos*, they ask us to inhabit that border, to flank and support them in that critical midland - or, as Calarco would say, to allow ourselves to be caught up in the mystery of indistinction - so that their chances of survival remain more anchored in the attention, involvement and commitment of various allies, rather than in the mere recognition offered to them only by philosophy, science or law:

“The purpose of these topological extensions and distensions is not to claim *what* existents *are* for them, but *how* all my friends and their existents improvisationally *struggle to manifest and endure* in contemporary settler late liberalism.”⁶⁷⁵

So what does Povinelli's reflection imply for the discourse developed so far on the intertwining of ethics and aesthetics, sensibility and politics? If Animal Studies called for a critique of the rigid boundaries (acted and perceived) between human and animal, in order to extend respect and care

⁶⁷⁴ *Ivi*, cit., p. 134.

⁶⁷⁵ *Ivi*, cit., p. 28. Emphasis added.

towards our forgotten companions, would the same movement operate in relation to plants and non-living beings? Would not such an unlimited extension risk eliminating any useful distinction for orientation, leading us towards a (certainly respectful, but surely unworkable) immobility?

For instance, how will it be possible to respect all the interests of non-humans, when they sometimes seem to harm our own and other species?

“Take the recent work of the anthropologist Anna Tsing in which she mobilizes the matsutake mushroom to make the case for a more inclusive politics of well-being; a political imaginary which conceptualizes the good as a world in which humans and nonhumans alike thrive. And yet this thriving is, perhaps as it must be, measured according to specific human points of view, which becomes clear when various other species of fungi come into view—for instance, those tree fungi that thrive in agri-capital nurseries such as *Hevea* root fungal parasites: *Rigidoporus lignosus* and *Phellinus noxius*. I might not want plantation capitalism to survive, but *R. lignosus* and *P. noxius* certainly do. *P. noxius* is not noxious from the point of view of nowhere but because it can be understood as the companion species to a specific form of human social existence, agri-capitalism. So will I deny *P. noxius* a ballot?”⁶⁷⁶

And, furthermore, which interests to choose between the living and the non-living, when they do not seem to align?

“Is it more important to keep Two Women Sitting Down in place than to support the lifestyle and well-being that most Australians have come to expect? And what about Indigenous people who wish to put their

⁶⁷⁶ *Ivi*, cit., p. 12. Perkins himself, speaking of the reproductive work done in favour of urban elm forests in America, will point out that not all extra-animal activity contributes to this sustenance: while on the one hand the metabolic activity of plants maintains the forests, on the other we see how a pathogenic fungus known as *Dutch elm disease* (DED) operates according to the logic of exploitation and extraction, decimating entire forests or plant species.

children through private school and look at sites like Two Women
Sitting Down as potential capital with which to do so?"⁶⁷⁷

Taking the strategy of Rancière and Animal Studies to its extreme consequences leads towards a possible uninterrupted questioning of boundaries, that is, towards a complete and, perhaps, inauspicious indistinction. Without abandoning the idea that any perceived separation is always imbued with interests and shaped by power dynamics, will it at the same time be possible to avoid abolishing any boundary, rather identifying a criterion, a pivot, a compass capable of helping us articulate useful distinctions and, above all, solid alliances?

3.3.2 Styling the Subject

According to Badino, Ienna and Omodeo, Fleck's fundamental contribution to historical epistemology - as stated earlier - consists in the inclusion of the collective and the style of thinking as a third element in the equation that normally sees only subject and object within the knowledge process. In other words, it:

"[...] concerns the epistemological triangulation [...] according to which knowledge emerges from the conjunction of a historical-collective and rhetorical element, the style of thinking, a second cognitive-psychological element, the gestalt perception (according to which the perception of the part is determined and concomitant with that of the whole), determined by the style of thinking at the individual level, and a third material-objective element, the resistance of the real to the arbitrariness of theory."⁶⁷⁸

Through such triangulation, we thus become aware of the cultural and historical dimension that incessantly articulates both members. What

⁶⁷⁷ *Ivi*, cit., p. 36.

⁶⁷⁸ Omodeo, P. D., Ienna, G., & Badino, M. (2022). *Epistemologia storica*, cit., p. 59.
Translation mine.

reflections unfold, then, regarding the known object and the knowing subject once this process of social stylisation has been recognised?

The first strategy – defined in the previous chapter as “(De)constructing the referent” – sees the collective production of meaning intertwined with the materiality of the object, thus preventing it from being considered as a temporally static and universally recognisable and describable entity. This observation opens up to the first of the three main tactics used today to criticise the validity of scientific objectivity, defined, according to Montuschi, through the argument of “construction”, that is: “if X is ‘constructed’, X is what it is because X is the product of a contingent process of invention, and not of a given and transcendent existing state of affairs. [...] It is our theories, our actions, our cognitive investigations, our history that make X what it is. However, what makes X what it is, although necessary for the existence of X, is not itself necessary”⁶⁷⁹. Put in Fleck's words, every object is necessarily stylised, but the style that articulates it is itself not necessary, but rather afferent to a particular and contingent thinking collective.

The second strategy – “Situating the gaze” – reminds us how our own senses are from the outset socially and historically trained and moulded, in other words, how the idea of direct and immediate perception is mere illusion. Science, too, has suffered a similar attack which, in Montuschi's words, takes the name of the “context” argument. According to the latter, the social, cultural and historical environment within which scientific observation and practice are carried out and realised is capable of limiting them, orienting them and fixing their conditions of possibility. The moderate interpretation argues that the objective assessment of scientific results is preservable, since methods and criteria of judgement are independent of context, while according to the radical interpretation (towards which Fleck seems to lean, given his statement that mere and direct objective “observation” is in reality also historically and geographically variable) not only contents and results, but also the methods, criteria and standards of judgement themselves cannot be considered socially impermeable and temporally stable.

⁶⁷⁹ Montuschi, E. (2006). *Oggettività e scienze umane*, cit., p. 48. Translation mine.

Going back to Fleck's insights allowed us to address two of the difficulties that have emerged from the chaos of postmodern theory, namely the problem of ontological indeterminacy related to the irruption of the semiotic into the material, as well as that of perspective fragmentation given by the recognition of the historical-cultural stylisation of perception. In the first place, the author recalls how every scientific object always and only emerges in response to the interrogation carried out through active elements and proto-ideas capable of orienting research. This observation, however, does not imply complete arbitrariness: while, in fact, proto-ideas, assumptions and devices inform the articulation of the object, they do not operate in a vacuum - according to a radical constructionist approach - but always in conversation with an ineradicable "resistance" that makes them possible. We may therefore also deconstruct every referent, but a certain "resistance" will inevitably continue to counterpoint us, requiring possible stylisations that enable us to articulate reality and, thus, face collective challenges, navigate the environment and inhabit everyday life.

Secondly, while recognising the possibility of ontological incommensurability between two collectives due to radically different perceptual and perspectival stylisations, the author reminds us that this is a rare eventuality (especially, as we have seen, in our climatic case) and that every group is in fact animated both by transversal stylisations across the various collectives and by stylisations within them, i.e. operating on the axis that links elites, laymen with general knowledge and the general public. The presence of "zones of intersection" thus allows for conversations between different collectives and between different internal circles, so that incommensurability can be addressed and relegated to a mere theoretical contingency. Again, we could even contextualise all perceptions, but always with the awareness that contexts are not hermetic bubbles in a relation of externality, but rather overlapping, intertwined and mutually animated social fields.

Political Disturbances

To the two previous criticisms, however, a third must be added, namely that relating to the ethical-political dimension. The last strategy set out in the previous chapter – “Politicising Sensibility” – had shown us how basic sensibility, what we consider to be so immediate and free of external shaping, is in fact itself an ethical and political issue. Similarly, we could argue how the introduction of the social, of its clashes and tensions within the classical subject-object dichotomy reveals a further dimension of knowledge practice: research activity and observation and, therefore, the objects of study and scientific results, are always entangled within collective dynamics of power and interest. According to Montuschi, the third critical argument to scientific objectivity, which can be defined as the “value argument”, states precisely how every premise, question and mode of enquiry is always articulated from the interests, beliefs and aims of the researchers. Extending the argument through the wide-ranging investigation of historical (and political) epistemology carried out by Badino, Ienna and Omodeo, we can argue how such individual dispositions are often the result of external pressures and tensions, so that science can never be considered as autonomous or elevated above the economic and political interests that run through the social structure. What, then, is Fleck's view regarding this danger?

First of all, it should be noted how the author often treats politics almost in a Foucauldian sense, shifting the focus from the pressures of extended political groups to inter- and intra-collective relational dynamics and, consequently, conceiving power not so much as violence and coercion, but rather as seduction and resistance, agreement and disagreement, belief and disbelief, influence and friction between elites and more and more external circles, as well as between different thinking collectives⁶⁸⁰. Despite

⁶⁸⁰ Describing the Foucauldian conception of power, Deleuze states: “Power must be grasped at the level of molecules and corpuscles rather than at the level of great institutions. [...] The State, classes, the law, these are powers that we will call molar. And, well, no, in order to grasp power, one must go all the way to molecules” (Deleuze, G. (2018). *Il potere*; english version at <https://deleuze.cla.purdue.edu/wp->

this, it is still possible to trace in some rare passages the recognition of politics as a macro-environmental force capable of limiting and directing the scientific enterprise:

"Simplicius. Do you want, following the example of the sophists, to convince me that there exists no difference between truth and illusion?
Sympatius. No, my dear friend, I am not as naive as that. What I want to do is to say that scientific results and views are basically determined exclusively as single historical events at successive development stages of the scientific thought-style which is the outcome of the specific structure of the scientific thinking collective. Neither a Robinson Crusoe, nor a group of Robinsons, even if equipped with technical means, will glide automatically onto the tracks of science, if they are isolated from the scientific community. Even a partial isolation, brought about e.g. by political limitations, causes a partial difference between the results - and here lies the secret of the effect of the environment on science."⁶⁸¹

[content/uploads/2022/05/09a-Foucault-010786-Eng-Rev-2022_0.pdf](#), cit., p. 19).

Similarly, Coniglione argues how Fleck shifted his attention to the so-called "molecular" level, influenced, more than by Durkheim's sociology, by Gumpłowicz's. The latter, in fact, takes the "group" as the basic unit of social events, considering the influences exerted between individuals within the same, as well as the clashes and conflicts between collectives (Coniglione, F. (2019). *Lontano da Vienna*, pp. 42-43).

⁶⁸¹ Fleck, L. (1946). *Problems of the Science of Science*, cit., pp. 123-124. Going back to the case of syphilis, Löwy points out that even the creation of the Wasserman reaction (and, therefore, the articulation of the pathology) was from the very beginning intertwined with political dynamics: "From the very beginning the rise of the Wassermann reaction was not based upon purely scientific facts alone. A rivalry between nations in a field that every layman considered very important, and a kind of vox populi personified by a ministry official, constituted a social motif for the work. The effort expended on this scientific project was correspondingly great. It involved the cooperation of hundreds of experts and the publication of thousands of scientific articles. [...] The 'collective experimentation' that led to the genesis and development of the diagnosis of syphilis started with political considerations. It ended with political decisions. The 'scientific fact' studied by Fleck was not only an intriguing piece of new scientific knowledge but also a development that directly affected people's lives. 'Wasserman-positive' individuals were told that they were carrying dangerous germs that put at great risk their own physical and mental health, and the health of their sexual partners and children. This information, coupled with the persistence of a stigma attached to syphilis (at least until the advent of

Aware of this influence, in his last article Fleck expresses concern about the values of the scientist, who, when seduced by greater interests, compromised in their integrity and neutrality or moved only by career and profit, risk degrading the scientific enterprise and its social utility:

“There is no doubt that science is becoming a servant of politics and industry, to the great detriment of its cultural mission. In almost all countries throughout the world politicians and industrialists dispose of scientists, often decide on their work and sometimes even on their beliefs and convictions. This happens not only because some modern scientific activities require large resources. A more dangerous factor is the growing opportunism of many, mainly young, scientists to whom Science is only a modern way to a good career.”⁶⁸²

Hence, also according to Fleck, there is a risk that the sensibilities, inclinations, beliefs and convictions of individual scientists are directed and shaped by politicians, industries and major interests. Such a consideration, however, leads us to a further dead end. Just as the deconstruction of the referent has risked relegating it to indeterminacy or, worse, to anti-realism, just as the contextualisation of the gaze has risked leading us towards extreme fragmentation or, worse, towards a total incommensurability of perspective, here too it is important to highlight an important limit of the politicisation of scientific objects and gazes, a limit that we could define through the feeling of sensible bewilderment. If, in fact, not even scientific knowledge, often regarded as a synonym for facts stripped of values, can be said to be neutral, where will it be possible to root one's own vision of reality while avoiding the risk of co-optation? That is, if every researcher is co-opted by larger interests and oriented in undesirable directions, whom can we trust? Can the researchers themselves find a safe haven, an

penicillin) often changed the ways they saw themselves and were perceived by others. It was also enshrined in law. In the late 1930s and 40s many countries introduced mandatory prenuptial testing for syphilis, and obligatory testing of other social groups, such as soldiers or pregnant women” (Löwy, I. (2020). Ludwik Fleck where are you now that we need you?, cit., pp. 10-11).

⁶⁸² Fleck, L. (1960). *Crisis in Science*, cit., p. 153.

anchorage to their own criteria of judgement, a stable sense of direction, so as to free themselves and resist such power dynamics?

Fleck's Struggles and Engagement

To answer the question, I think it is useful to look not so much at Fleck's writings, but rather at his life and the choices he made within his own scientific activity⁶⁸³. We started the story earlier, but then stopped in 1923, when Fleck was still assisting Weigl at the University of Lwów. In the same year, he decided to leave the university to take up a job at the chemical-bacteriological laboratory of the city hospital, where he would remain until 1928. From 1928 to 1935, he would instead take up the role of director of the bacteriology laboratory of the city's health insurance agency, before returning for the next four years to the bacteriological analysis laboratory founded in 1923.

In 1939, with the outbreak of the Second World War, Lwów was occupied by Soviet troops; despite this, Fleck's life was not greatly affected. In fact, the scientist continued his laboratory work and, at the same time, became a lecturer in microbiology at the university. 1941 marked a turning point: Lwów was occupied by the Germans and Fleck was forced to hide with his wife and son until they were captured and deported to the city's ghetto. The family would remain in the ghetto until December 1942, during which time they would witness the violence and abuse of the SS, as well as the miserable conditions in which the ghetto population would live during their two-year stay. Among the many misfortunes they suffered, some 70 per cent of them contracted typhus. Fortunately, Fleck was allowed to work in the bacteriological laboratory of the ghetto hospital, where he succeeded in developing a method for diagnosing typhus and a procedure for extracting a vaccine from the urine of infected patients.

In August 1942, Fleck decided to test the vaccine on himself and then

⁶⁸³ We refer here to the reconstructions provided in Schnelle, T. (1986). Microbiology and philosophy of science, Lwów and the German Holocaust: Stations of a life. Ludwik Fleck 1896-1961; Coniglione, F. (2019). Appendice bio-bibliografica, pp. 285-292.

injected his wife, his son, two other residents and, finally, 500 other Jews. In December of the same year, the family was deported to the "Laokoon" factory, where Fleck was given the task of producing the typhus vaccine for German soldiers. After only two months, in February 1943, they were deported to Auschwitz, where the microbiologist's research was interrupted for a few months until he was assigned to Block 20, part of the SS Institute of Hygiene, where it was possible to resume research on typhus, syphilis and malaria. Finally, in January 1944, the family was deported to Buchenwald, where the Institute of Hygiene had set up a special laboratory for the production of typhus vaccines.

It was here that the intertwining of ethics, science and politics became central to Fleck's life. In agreement with the other members of the laboratory, in fact, the microbiologist took part in a work of sabotage against the German army by secretly producing two types of vaccine: one effective and produced in small quantities (approx. 6 litres); a second completely ineffective (and harmless) produced on a large scale (approx. 600 litres). Clearly, the group would keep the first vaccine for themselves and other Jews, shipping the ineffective substance to the front. It was in this situation that Fleck came to better understand the social nature of science, as well as the possibility of erroneous but nevertheless consistent results within a certain style of thinking:

"[...] Fleck uses this fact as the point of departure for his proof that the 'thought collective' of serological laymen in Block 50, like every other scientific collective, constructed a self-consistent edifice of knowledge due to social factors at work within it related to the cooperation of its members. In comparison to 'real' serological knowledge it is based on an error, but since it was systematically taken up into the conceptions of the collective, it did not lead to any internal contradictions."⁶⁸⁴

In 1945, the camp was liberated, and Fleck was able to go back to Poland, returning to his profession and teaching in Lublin. As reported by historical records, in the years following the war and the concentration camps, not

⁶⁸⁴ Schnelle, T. (1986). *Microbiology and philosophy of science*, cit., p. 27

only did Fleck's attitude change significantly, moving away from arrogance and intolerance towards greater compassion and concern for others⁶⁸⁵, but also the theme of ethics emerged in his writings⁶⁸⁶, leading him to reflect more and more on the potential and responsibility of scientific activity towards humanity.

How then does the story illuminate the relationship between ethics, science and politics? First of all, we could argue how Fleck rejects the subordination of scientific activity by a specific party or political programme (given also the scientific assertions made by the Nazis in order to justify and promote their own actions and policies), orienting himself rather towards ideals, values and projects linked to the well-being of the entire human community. This approach will emerge particularly in his later writings, although some traces already appear in an article published just before the war:

"Since all knowledge depends on the environment, then the process must be reversed: through the artificial change of the environment, knowledge corresponding to it must be obtained. There is no objective science anyway! So we must 'make' as quickly as possible a left-wing or right-wing, proletarian or national physics, chemistry and so on. We have to produce the evidence for the political necessities and to

⁶⁸⁵ "Fleck's character during this period of intensive scientific work is described as being totally changed with respect to the pre-war period. All witnesses have agreed in discussing his great human compassion and constant concern for his colleagues, students and family. All of the intolerance with which he reacted before the war to things displeasing to him had vanished, converted into its opposite. But none of the horrible phases of his fate during the war were able to destroy his awareness of his own intellectual strength" (*ivi*, cit., pp. 31-32).

⁶⁸⁶ "In the post-war phase, the most important article is the one in which he analyses his own observations concerning the theory of science for the case of a lay collective - indeed his lay collective which worked under the terrible conditions of a research laboratory on methods of producing typhus vaccine within the Buchenwald concentration camp. A final phase of Fleck's thought is represented by a paper he wrote shortly before his death: in it, he expresses his opinion with respect to a discussion about 'science and human welfare' in the American journal *Science* in July 1960. This impressive paper, not previously published, was rejected by four well-known periodicals as 'of no importance'" (Cohen, R. S., & Schnelle, T. (Eds.). (1986). *Cognition and Fact*, cit., p. xi).

produce the results assumed at the outset. We will introduce a planned economy of thought, bureaucratic centres will replace creative freedom, and propaganda will replace autonomous permeation by society. These manipulations would be laughable if they were not in some ways threatening.”⁶⁸⁷

If not within a political party and, as we were saying, certainly not within economic and productive formations, where can one find orientation possibilities for research and scientific activity? Fleck's case, without offering us a clear-cut and decisive answer, shows how belonging to an oppressed (and a resistant) collective, as well as awareness of one's own potential within such challenges, are all experiences capable of orienting the work of the scientist, without thereby crystallising within a circumscribed and precise set of criteria or values. Similarly, we could argue for the importance of a certain independence of climate science with respect to the parties linked to the environmental cause, without for this reason renouncing a stance of scientists. The latter could indeed take a stance after experiencing the suffering and difficulties lived by other human or non-human beings due to the crisis, recognizing its own role within the resolution of the same, as well as participating in movements and groups of environmental struggle and awareness.

Rather than extrapolate an effective strategy, prescribe values or political directions, I believe it is appropriate to reflect on the example offered by Fleck, perhaps much more incisive and pregnant than any theoretical reflection on the subject: an example and an invitation for the scientist to take an active part not only in scientific, but also in social, political, human and, we would add today, non-human and environmental progress.

3.3.3 Participating in Collective Struggles

Questioning the neutrality of sensibility, as well as of the scientific gaze and

⁶⁸⁷ Fleck, L. (1939). *Scienza e ambiente*, cit., p. 221. English translation mine.

of its objects, has led us towards a possible dead end. On the one hand, the insights that have emerged in the field of *Plant Studies* and in Povinelli's anthropological research have highlighted the difficulties posed by a critical approach aimed at demolishing all distinctions: once the separations between animal and plant and between living and non-living have been shaken, it becomes increasingly difficult to understand who to include and who to exclude from one's concerns, one's communities, one's future projects. On the other hand, Fleck's early insights into scientific non-neutrality, which blossomed and proliferated in the decades that followed, show us how scientific observation and practice can never shy away from value judgements, inevitably positioning themselves within the political challenges of their time and, at the same time, risking losing their role as *super partes* judge. Both the everyday and the scientific gaze are thus always caught up in power plots, inevitably partisan and oriented according to certain values and aims.

Despite these difficulties, I believe that a shared path can emerge, capable of providing both a compass for ecological sensibility and for scientific research in the climate and environmental sphere. Returning to Calarco's writings, for example, we see how the field of *Animal Studies* has recently been challenged by a different approach, defined as *Critical Animal Studies*, according to which the theoretical and perceptive critique of the distinction between humans and animals, as well as the recognition of value and rights for the latter, cannot but be accompanied by the active, daily, strenuous commitment to the implementation of this vision within society and its dynamics of production and consumption. Vegetarianism and veganism, boycott actions against industries that exploit animal labour and bodies, desertion from practices deemed immoral, liberation and care of animals: no longer mere accessories to theoretical and perceptive reconfiguration, but spontaneous consequences of the positions advocated. Or, even better, possibilities for the orientation of sensibility itself. Aesthetic engagement and political commitment would thus go hand in hand, supporting each other and, at the same time, maintaining a constant mutual critical reconfiguration.

"CAS scholars and activists are, in general, committed to animal rights and veganism [...], with some proponents of CAS maintaining that veganism constitutes the moral baseline for being involved in the field. CAS, then, is driven by a more activist orientation and maintains that the primary goal of animal studies should be to contest violence and discrimination against animals. It is important to note that, according to CAS scholars and activists, the mistreatment of animals does not result simply from sloppy thinking or irrational beliefs but instead reflects the social and economic interests of the capitalist ruling class and various animal industries. Hence, the CAS framework is broadly anti-capitalist and promotes the idea that justice for animals can only be truly achieved in post-capitalist economies and ways of life."⁶⁸⁸

Similarly, Povinelli invites us to go beyond Rancière's approach to politics, based on the inclusion/exclusion of certain categories from the *demos*, i.e. from the field of those who are given a voice, attempting instead to show how the survival of (by many considered as) non-living entities does not depend (only) on their perceptual, philosophical, scientific or legal inclusion within the field of the "similar" (the common "we"), but rather on the level of engagement, support and participation that we are able to provide them. Tjipel, durlgmö, Two Women Sitting Down, Old Man Rock, will only be able to persist through attention and coordination, presence and exposure, commitment and willingness to make their bodies an integral and active part of our own, as well as to confront those extended and global dynamics that threaten their existence and continuation.

"When we become exhausted trying to solve this problem, we can swap our telescope for a set of binoculars, looking across the specific human modes of existence in and across specific social geographies. In other words, we can give up trying to find a golden rule for universal inclusion that will avoid local injustices and focus on local problems. Say, in the case of this book, I stake an allegiance with my Indigenous friends and colleagues in the Northern Territory of Australia. Here we see that it is not humans who have exerted such malignant force on the

⁶⁸⁸ Calarco, M. R. (2020). *Animal studies*, cit., p. x.

meteorological, geological, and biological dimension of the earth but only some modes of human sociality. Thus we start differentiating one sort of human and its modes of existence from another. But right when we think we have a location—these versus those—our focus must immediately extend over and outward. The global nature of climate change, capital, toxicity, and discursivity immediately demands we look elsewhere than where we are standing. We have to follow the flows of the toxic industries whose by-products seep into foods, forests, and aquifers, and visit the viral transit lounges that join species through disease vectors. As we stretch the local across these seeping transits we need not scale up to the Human or the global, but we cannot remain in the local. We can only remain *hereish*.⁶⁸⁹

Povinelli thus invites us to abandon the exhausting search for a “golden rule” useful for the inclusion and exclusion of certain existences within the realm of our ethical consideration, turning instead towards a direct commitment to their survival, which, however inconsistent it may sometimes be on a logical or identity level, may today have greater impact in the ecological struggle.

But what about the scientific gaze? Similarly to Calarco and Povinelli, Fleck's life experience shows us how the criterion capable of guiding scientific activity and defining its concerns was not so much predetermined and categorical, but rather contextual, empathic and, above all, engaged: an orientation based on the support given to those who, within the situation at hand, were in the greatest difficulty. Fleck's scientific activity, aware of its potential to favour or disfavour certain groups and individuals, was inevitably based on the involuntary inclusion within the collective that was the victim of violence, but also and above all on the intentional participation in the sabotaging collective, a resistant collective devoted to overturning the relations of power and domination⁶⁹⁰. It is in this way that Fleck omitted

⁶⁸⁹ Povinelli, E. A. (2016). *Geontologies: A requiem to late liberalism*, cit., p. 13.

⁶⁹⁰ It is interesting to note how, even though most of the members of the laboratory were Jews (often not competent in bacteriological matters but passed off by the research team as researchers - Coniglione, F. (2019). Appendice bio-bibliografica), Fleck's alliances were not based on an identity criterion: Kogon was in fact a German intellectual,

information, altered compounds, built knowledge systems capable of self-verification, so as to act no longer only according to criteria of truth, but also and above all according to collective trajectories of justice. To conclude, how can this stance to direct engagement help us face the ecological crisis and renew its political and scientific perception?

In the first section we argued that a disease is not to be considered as an ontologically separate entity with respect to the organism, but rather as a critical variation of certain vital parameters, i.e. a gradual phenomenon of alteration of the affected organism. As said, one fundamental issue is thus the definition of the most relevant parameters, as well as their critical and dangerous thresholds. At the same time, we could argue how a parallel and equally important issue is that of defining the so-called “affected organism”, where it begins and where it ends:

“An organism can no longer be construed as a self-contained, independent unit with fixed boundaries, as it was still considered according to the theory of materialism. That concept became much more abstract and fictitious, and its particular meaning depended upon the purpose of the investigation. For the morphologist it has changed into the concept of genotype as the abstract and fictitious result of hereditary factors. In physiology we find the concept of ‘harmonious life unit’, according to Gradmann, ‘characterized by the notion that the activities of the parts are mutually complementary, mutually dependent upon each other, and form a viable whole through their cooperation’. Morphological organisms of the type which are self-contained units do not have this ability. But a lichen, for instance, whose constituents are of completely different origins, one part an alga, another a fungus, constitutes such a harmonious life unit. The constituents are closely interdependent and on their own are usually not viable. All symbioses, for instance, between nitrogen-fixing bacteria and beans, between mycorrhiza and certain forest trees, between

Ciepielowski a Polish Catholic scientist and Waitz a French medical scholar, all three interned because of political positions opposed to the regime. Alliances drawn from a common future horizon, a shared sensibility, a similar trajectory of action (Schnelle, T. (1986). *Microbiology and philosophy of science*, cit., p. 25).

animals and photogenic bacteria, and between some wood beetles and fungi form 'harmonious life units', as do animal communities such as the ant colony, and ecological units such as a forest. A whole scale of complexes exists which, depending upon the purpose of the investigation, are regarded as biological individuals"⁶⁹¹

Thus, even before, or perhaps concomitantly with, the definition of the crisis as a pathological state, it will be necessary to stylise a certain "affected organism", be it the human race, the animal kingdom, the field of living beings, the planet, or a mosaic of different intermediate or transversal formations: a state of concern can thus be studied on condition that we simultaneously define what existences we are concerned about.

Indeed, as we saw in the last chapter thanks to Barca's reflection, one possible way to rearticulate both our climatic gaze and the climate crisis itself is the reconfiguration of the dominant and the struggling collective: no longer "humans" versus "earth", but rather "forces of production" against "forces of reproduction". This shift will provide us with a new compass for our sensibility, enabling us not just to reframe our political interests and projects, but also our scientific concerns and research. What we came to understand, however, is that the redefinition of this compass, this "affected (and, at the same time, resistant) organism", cannot expand by incorporating all "categories" of existents. Such an approach, by questioning every boundary, risks resolving itself not only in a sense of bewilderment and disorientation, but, potentially, in a mere theoretical exercise devoid of real implications and concrete support.

Various forces shape our perception, operating exclusions and placing only those lives that meet certain standards and interests at the centre of attention: if perception is always caught within plots of power, perhaps what remains to be done will not be an operation of distancing ourselves from the interests that articulate sensibility, but rather a greater support to alternative interests, a greater involvement within collective ecological practices, a greater participation in those groups capable of supporting the

⁶⁹¹ Fleck, L. (1981). *Genesis and Development of a Scientific Fact*, cit., p. 60.

existences that are most harassed and endangered today, a greater engagement with those communities that face and struggle with particular environmental challenges⁶⁹². If an “affected and resistant organism” is to articulate itself, guiding our daily activities, our political projects and our scientific research, let it articulate through an increasingly solid network of alliances and mutual support: a compass for ecological sensibility no longer fabricated according to unquestionable criteria, but shaped and moulded in dynamic, unceasing, collective participation.

⁶⁹² This same research (and my own environmental sensibility) has been nurtured and fuelled through participation in various collectives. In addition to the aforementioned experience of the Grave di Ciano, I would like to thank the Rhythms of Resistance collective and the Disgraca space, in which I have had the pleasure of participating in this last year of research.

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