Extending the Idea of Environment

New Perspectives and Tools for a new Knowledge

Edited by

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1. Time to Leave the Cartesian World Behind

In mainstream environmental discourse, the acceleration of climate change and the consequent need to adapt the actions and ways of thinking of those involved is becoming increasingly popular. Most scholars and actors in civil society no longer deny the existence of a climate crisis. Very little is being done about it, however, which appears logically and rationally incomprehensible. Giddens noticed this strange behavior in 2009 and tried to explain it with his famous paradox: climate change happens too slowly and fractionally to become an issue in everyday life, so no-one is willing to make sacrifices in its name, least of all politicians embroiled in democratic/electoral short-term dynamics. Even though it may seem absurd, this perspective has a peculiarly human sound to it and might actually explain the impressive lag between the first alarm raised in 1972, thanks to the Club of Rome (Meadows *et al.*, 1972), and the rise of an environmental awareness able to turn into political action and become an active player in this crucial game. To try to understand it a bit better, especially since it could be vital to the survival of our species, it might be interesting to hypothesize the possibility that this paradoxical behavior is a symptom of a much greater misunderstanding of the world and ourselves, which has biased and distorted our very self-representation as human beings and our ways of creating knowledge.

The best starting point to tackle this disquieting suggestion is the famous seventeenth-century philosopher, Descartes, and his theoretical proposition which, albeit contested in the field of the discipline, has permeated the common sense of Modernity until today (D'Andrea, 2017): the distinction, in the world, between *res cogitans* and *res extensa*. Let us briefly have a look at what Descartes affirms in this dichotomy: the first term is the rational human soul, still mindful of its divine origin; the second is everything else, from the corporeal and emotional spheres to the environment reduced to an entity without quality, exclusively measurable and subjected to rigid mechanical

laws: an immense deposit of resources at the complete disposal of the will to dominate and to manipulate of the logical-mathematical *res*. It is difficult to deny the direct co-relation between this vision and the still-prevalent approach to the exploitation of nature, just as it is difficult to 'blame' all this on the Frenchman who went no further – shall we say – than to give an extremely efficient form to an intellectual stance with much deeper roots, from Platonism to a good deal of the Scriptures. It is a fact that Cartesian *res* are among the most influential configurations of human exceptionalism, in its turn a formulation suited to the good old *hybris*. The idea of the human as being incomparable with the rest of the biosphere echoes ancient assertions on the body as the prison of the soul and on our stay on earth as an unfortunate parenthesis before our return to the Empyrean, and it strengthens *the feeling of not belonging, of being foreign to the natural context*. This is one of the less obvious reasons behind Giddens' paradox. We should note in this regard that Giddens was writing in 2009, when it was still possible to think that the paradox originated in the fact that the dangers connected to climate change could not be perceived in day-to-day life and were, therefore, conveniently ignored. Today, such an assumption causes a bitter smile, yet the paradox continues to hold sway.

Given the lack of any rational justification for what appears to be increasingly suicidal behavior, perhaps it is time to cast a doubt on the current Cartesian representation of the human as rational and opt for a complex analysis, acknowledging the multiple dimensions the human being is made of and the influence they still exert on his decisional processes which, in Giddens' paradox, show both an inadequacy and an irrationality that are apparently incomprehensible. This is all the more urgent as one of the more perilous consequences of human exceptionalism is the net separation it poses between the human being himself and the environment in which he evolved, denying any reciprocal influence and, above all, any responsibility for it. As in the most literal, short-sighted interpretation of the Scriptures, nature is at the disposal of man, to do with it as he pleases without setting any limits or doubts and without having to be accountable to anyone. To tell the truth, in the Scriptures there is a clear view of care and cure, which however involves ethical and emotional dimensions which Modernity has weakened and, in the end, totally removed in favor of the instrumental, calculational approach of *Verstand*, the abstract intellect at the base of logical-mathematical intelligence. The aim of this approach is to obtain the greatest short-term gain through efficiency and organization, with no thought for the medium/long-term consequences of its procedures and without wondering why, but only *how* to pursue its own objective. This is the attitude that Weber perfectly recognized in his famous action theory, in the types of means-end rational action and value-rational action: the former describes economical action, which according to Simmel, confuses the means with the ends and ultimately goes in quest of the increase

in the quantity of money possessed, quite apart from the reasons that should motivate it; the latter, on the other hand, is closely co-related with these reasons and the values on the basis of which it is possible to formulate them and to attempt to carry them out; it is therefore disposed to 'sacrifice' part of the profit in the name of ethical behavior and improvement in the general conditions of the group to which one belongs.

Economistic and neo-liberal rhetoric has gone to a good deal of trouble to portray this attitude as naive, idealistic or, deep down, egoistic, for the simple reason that to admit its possibility and, above all, its rationality as underlined by Weber would mean to belie the mono-dimensional belief that says man is eternally reaching for his own greatest gain, against any concern, whether altruistic, co-operative or in any way placing boundaries on his claim to autonomy and freedom. Unfortunately for Friedman's epigones, in the current crisis, many are founding their life choices on this perspective, after discovering that this is actually the ecological, responsible stance that might possibly remedy the havoc caused thus far. The crucial point of Weberian categorization lies in liberating rationality from the imperative of the pursuit of the greatest gain in any circumstance, thus revealing its wider significance as a sensible attitude for understanding the world and the human being's place in it. From this viewpoint, it actually becomes acceptable to criticize the distortions that quantitative obsession has brought about in all sectors – even in education and in the academic world, as Rifkin underlines in his scathing analysis of the "gospel of efficiency" (2022) – and to start to recalibrate descriptions of existing policy and recipes for future policies, since the thrust for efficiency is utterly unable to appreciate the medium- and long-term consequences of its procedures.

And yet, something else is preliminarily required. It is true that most of our current problems may be blamed on economism and the exasperation of its characteristics in the apparently unstoppable run towards more organization and more efficiency; it is also true, however, that this analysis might not be enough, and a more thorough revision of our frames of understanding is required. This is probably what Beck had in mind when he proposed the key distinction between *change* and *metamorphosis*:

> Change implies that some things change, but other things remain the same – capitalism changes, but some aspects of capitalism remain as they have always been. Metamorphosis implies a much more radical transformation in which the old certainties of modern society are falling away and something quite new is emerging (2016, p. 3).

Even though current rhetoric declares an almost pathological passion for change, it seems more lip service than conscious conviction or – to be a bit cynical – a semi-conscious strategy to deal safely with a cumbersome issue: talking about change gives the impression of change happening, just as talking about environment gives the impression of something being done. In both cases, however, things stay the same or start going utterly awry.

On the contrary, metamorphosis happens, as Beck put it, beyond any chance of control or direction. Suddenly, most things stop making sense, and

> the institutionalized national-international *Weltbild*, the world picture, the significance in how humans today apprehend the world, has withered. 'World picture' means that for every *cosmos* there is a corresponding *nomos*, combining normative and empirical certainties as to what the world, its past and its future, is all about. These 'fixed stars', fixed certainties, are not fixed any more (Beck, 2016, pp. 5-6).

If this is even partly true, it might be that one of the profound reasons for the current environmental crisis is that the environment is not what we think it is, and it manifests its otherness by short-circuiting our knowledge system and the categories and dogmas on which it has been built.

One of the main traits of our deep cultural paradigm is the privilege we have granted to the logical operation of disjunction (Morin, 1999), which leads to the proliferation of dichotomies and the division of reality into smaller and smaller fractions. Although an apparently harmless practice, it has shaped and bent our *Weltanschauung* and the world we think we live in, giving it a mechanical and fragmentary appearance. The environment is the perfect place for this delusion to crash, as it can only be understood in terms of interconnectedness and interdependence. Since its first appearance in Haeckel's work in 1866, ecology has stressed ideas against the grain of Modernity: coexistence and cooperation against selfishness and competition, complexity against simplicity and linear causality, and dependence and integration against autonomy. We use these words but need to make proper sense of them. We may even believe in them, but we do not act accordingly, as they are alien to our common sense and our view of the world. The acceleration of climatic change shows that both common sense and the current *Weltanschauung* are wrong. The certainties and dogmas that found them need to be criticized and deeply revised: human exceptionalism, cognitive exceptionalism and a static reality instead of a processual becoming.

The book is mainly about this. A collection of chapters aimed at putting forward new ideas and strategies to cope with climate change, in the shared conviction that a new understanding is crucial to stand a chance against its

consequences and to be up to mending what has so far been broken. Before briefly presenting the various contributions, however, I would like to address again the idea of the need for a significant revision of the current procedures of knowledge production through a few insights from David Bohm's work. This will better show how this is a transdisciplinary, deeply-felt exigency that increasingly surfaces in fields of research ranging from quantum mechanics to biology, from neurosciences to sociology and other Humanities.

2. The Need for an Inclusive Knowledge

To start with, I would like to give an account of Bohm's biography, since he is among those figures who should have been considered outstanding in twentieth-century culture, but about whom no-one, insiders excepted, knows anything. Born in the United States in 1917, with a Hungarian father and a Lithuanian mother, both from Jewish families, in 1943 he achieved his doctorate in Physics, gaining such distinction that he was called onto the Manhattan Project team by Oppenheimer. Suspected of communist leanings, he was stopped from taking part in that enterprise, and a very complicated life ensued, forcing him to a long and complex exodus terminating in Great Britain. Bohm is among the leaders of the theoretical adventure of quantum mechanics, holding an eccentric position towards the 'consolidated' theories stated therein and also, perhaps above all, towards what he defines as "the tacit infrastructure of scientific ideas" (2011, p. 6). Beyond his specific contribution to the implicate and generative order, which will require comment further on, it is on this very point I will focus, since the idea of science proposed and debated by Bohm in *Science, Order and Creativity* (2011) is significantly in tune with what I have so far said, and in my opinion constitutes the proof of the ever-more widespread, interdisciplinary diffusion of a new global vision.

In this book, Bohm discusses the current state of science, recalling and criticizing Kuhn's and Popper's conceptions in a perspective that I can easily define as contradictorial[1]. According to the physicist, the problem is that:

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[1] The term 'contradictorial' comes from the theory of a twentieth-century Romanian philosopher, Stéphane Lupasco. He worked on the development of a non-Aristotelian logic capable of doing without the principle of the *excluded middle*. In his use of the term, it defines *an opposition that cannot be overcome by later syntheses, but that persists generating energy*. 'Contradictorial' is then accepted as the necessary instrument of comprehending reality by another twentieth-century French thinker, Gilbert Durand (1984), intent on the fundamental relationship between reason and the symbolical-imaginal universe and therefore on the omnipresent multiplicity of meanings of each cultural manifestation. What these authors wish to draw attention to by means of this instrument is the tension underlying any attempt to interpret the real, which is central to

> paradigms, especially after they have been established for some time, hold the consensual mind in a 'rut' requiring a revolution to escape from. Such excessive rigidity amounts to a kind of unconscious collusion, in which scientists unconsciously 'play false together' in order to 'defend' the currently accepted bases of scientific research against perceptions of their inadequacy (2011, p. 51).

From this perspective, Kuhn's theory requires retouching and re-thinking, especially with regard to the incommensurability between paradigms and to one of the unintentional consequences of its diffusion: i.e., the fact that it depicts the various hypotheses as inevitably competing with one another, and therefore involves the disappearance or marginalization of those that do not 'win'. The same clear gap between normal science and revolutionary science is queried by Bohm as one of the deep reasons that have led to the fragmentation of knowledge, which is – and this is a crucial point – something quite different from its division into disciplinary fields:

> Fragmentation should not be confused with the act of division of an area of knowledge into particular fields of specialization or with the abstraction of specific problems for study. These divisions may be perfectly legitimate, and in fact, they are an essential feature of science. Rather, as the term indicates, to fragment means 'to break up or smash.' Fragmentation, therefore, arises when an attempt is made to impose divisions in an arbitrary fashion, without any regard for a wider context (2011, pp. 1-2).

In Bohm's eyes, fragmentation corresponds to what Morin defines as the "hyper-specialization" (1999, p. 16) of knowledge: not circumscribing specific objects in order to investigate them more fully and understand them better, but forgetting that this is a cognitive operation, taking it instead for the effective state of things and losing sight of every relation with wider, more complex contexts. At the root of this attitude, the physicist glimpses a reluctance to leave familiar territory – territory fruitful in economic results and prestige – on the part of scientists and the rigidity deriving from the dichotomic imposition of Kuhn's system (I would point out the increasing influence of the deep dichotomic paradigm that shows through Kuhn's reception); to deal with the consequences, identified in a generalized loss of the sense of the cognitive enterprise, Bohm radically believes that "we have to explore in a creative way

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the idea of culture and makes of it not a repertory of ascertained contents, but an infinite undertaking.

what a new notion of science might be, a notion that is suitable for our present time" (2011, p. xxii). These new lines strike melodious echoes with what we are trying to say in these pages: given that, in many cases, science has become this mechanical, bureaucratical process, we need to change it, re-think it; for example, going beyond one of its founding axioms, i.e., the fact that only one 'right' theory exists, capable of describing a phenomenon:

> Many other examples of the coexistence of very different and perhaps 'incommensurable' concepts can be drawn from the history of science. However, in the usual way of doing science, such ideas are not allowed to exist side by side, for one of them generally acts to overthrow the other, along with the earlier paradigm that it represents. Or alternatively, one idea is reduced in force and co-opted or absorbed into the other as a special limiting case or interesting mathematical artifact, so that its deeper meaning is neglected (Bohm, 2011, p. 32).

And yet "there is no logical reason, however, why, in the unfolding of scientific ideas, several theories may not offer an alternative, but equally valid and important accounts of a particular aspect of nature" (2011, p. 44).

This, however, is no longer just a question of power or reassurance, but a philosophical discourse that invests the process of the becoming of knowledge and its relation with the 'real': if science, in its self-congratulatory cognitive exceptionalism, claims to be a verifying discourse competent to achieve objective reality beyond any approximation, distortion or defect of the human capacity to know, *there simply cannot be any room for alternative theories*, since the truth is *one*. The 'Malay boot' effect of the paradigm aims to safeguard this claim up to the limits – and sometimes beyond – of the possible and the plausible. Here again, we encounter one of the corollaries of the dichotomic approach, the universalizing tendency to valorize one of the terms in opposition as the more eminently desirable and to banish the other to oblivion or annihilation (Corvino and D'Andrea, 2018). Such a dynamic cannot accept complementary and divergent visions, since their existence would negate its very foundation, and it is this dynamic that shapes and distorts the tacit infrastructure of thought, acting as an implicit pre-assumption of its every aspect and, at the same time in synergy with them, as an independent vector. One of the favorite derivations in support of this rigid fundamentalist point of view is the belief that a multiplicity of perspectives would inevitably lead to chaos and failure of the cognitive enterprise. However, according to Bohm, this is debatable since, giving free rein to confrontation and play among the various theories,

> then a more dynamic approach would be possible in which new ideas constantly appear and are then gathered together in creative ways to form limiting cases of yet more general ideas. Within such a dynamic unity there would be an intense motivation toward limiting divergence while, at the same time, avoiding conformity (2011, p. 44).

Yet all this brings into play the relation between knowledge and reality, and creative tension sounds loud and strong in Bohm's response to this query, such tension being a feature of the alternative vision of culture that is reshaping itself:

> This proposal, of a creative plurality in scientific ideas and theories, does, however, raise a significant question: What is the relationship of science to reality? Is this plurality simply a matter of developing a number of different points of view that depend on the requirements of society or the particular preferences of the individual? If this is true, then it would appear that the idea of objectivity within science, as a means of obtaining some relative truth about nature, would no longer be valid. We suggest that there is indeed a meaning to a reality that lies outside ourselves, but that it is necessary that we, too, should be included in an essential way as participators in this reality. Our knowledge of the universe is derived from this act of participation, which involves ourselves, our senses, the instruments used in experiments and the ways we communicate and choose to describe nature (2011, p. 45).

3. A Brief Overview

There is a growing, shared awareness of the limits of the current procedures of producing knowledge, limits that the self-same verb 'to produce' shows quite clearly. It is still in a fluid state, and I dearly hope it will stay this way for a long time, as the urge to structure and norm everything is one of the most troublesome aspects of the 'simple' paradigm we are dealing with and trying to go beyond. This book is a good example of another kind of creative knowledge dynamics, which I would call "synchronicity" after Jung, and Morin would define "living self-organization" (1999, p. 22). It started in Melbourne in 2023, on the occasion of the XX ISA World Congress of Sociology, where I gave a speech – online, so the geography is fluid too – about the *Environment as a Short Circuit in the Knowledge Production System*, which was to become this introduction. Someone at Vernon Press was impressed, and they contacted me about the possibility of issuing a call for papers about what I discussed in my speech, and here we are, with a fine constellation of chapters from all around the world that illustrate the network of sensibilities which is building up from the bottom. The authors focus on various facets of the complexity of the

environmental issue, and their arguments enter in a powerful resonance that shows their inner interconnectedness and how letting it flow achieves interesting and useful results.

The book is composed of three parts: the first, *Perspectives*, contains chapters putting forward alternative ways of understanding the environment and its dominant narrative. The authors are mostly committed to changing the reference frame through which the whole question is being addressed. The second part, *Propositions*, is focused on highlighting significant aspects of the environmental crisis that still need to be properly taken into account and on suggesting new policies and tools to cope with it. It has an ethical and strategic flavor. The third part, *Cases*, deals with the 'real' world, making use of field research and accurate analysis that illustrate the close link between what we are used to calling 'theory' and 'practice' and how this is a false and misleading dichotomy that we should finally renounce. You will find it easy to establish parallels and connections between the chapters, as the brief presentations that follow will already make clear. I hope you will enjoy it.

3.1 First Part – *Perspectives*

Andrea Lampis's chapter – *Planetary Ecology and the Monopolization of the Ecological Transition* – goes straight to the heart of the matter this book means to address. Mainstream ecological discourses, he argues, are produced within the same science and knowledge system that is largely responsible for the crises they describe; these discourses, then, tend to offer an ideological reference frame that obscures the dynamics and hides the uneven distribution of accountabilities for the current situation. The keystone of the hegemonic narrative is the notion of Anthropocene, where the myth is established "that there is a singular humanity responsible for the current planetary crisis." This universalist façade is reinforced by framing "environmental issues in strictly scientific and technical terms, which can obscure the underlying social, political and economic dimensions." Against the primacy of these discourses, many voices are making themselves heard, which formulate new, different perspectives on the subject: Planetary Ecological Thinking is a fitting example, as well as Latin American Political Ecology. Authors rallying to these movements advocate the need for a less instrumental and exclusive way to cope with the climate crisis, which, on one hand, recognizes "the colonial and capitalist roots of the ecological crisis and the need for a more just ecological transition"; on the other hand, it has to be open to context-based analysis and to the contributions of other forms of knowledge coming from the Majority World, where the main part of those affected by the environmental crisis live, those who are marginalized and impoverished by the predatory practices of Western capitalism. Lampis aptly warns against the risks of replicating, within

these new movements, the exclusive and divisive behaviors characteristic of the Western approach, with reciprocal vetoes and refusal of cooperation. The environmental issue is too complex to be faced with simplistic, mono-dimensional tools, such as theoretical frames of engineering policies: it requires fresh *Weltanschauungen* and the stout-hearted willingness to accept faults and legacies and settle their scores without creating new ones.

Chryssoula Mitsopoulou's chapter – *Henri Lefebvre's Theory of Space: Critical Points on the Idea of 'the Environment'* – delves into the work of the French thinker in order to formulate and clarify a few insights about the environment, which could be crucial for the foundation of an alternative vision of the matter. Lefebvre did not put forward an explicit interpretation, but hints and phrases allow us to sketch a critical perspective that radically goes beyond lots of prejudices and reaches for hidden, fundamental dimensions of the issue. Lefebvre's skepticism towards the ecological thought of his time has its roots in his famous argument against "abstract space", which is the way in which Western societies (or capitalism) are used to understanding it. Here Lefebvre singles out the core issue on which to focus to radically criticize the current order of things and to set in place an alternative vision of the world. In fact, abstract space can be conceptualized with the aid of two major taken-for-granted ideas: the fact that it is something given and unchangeable, and the notion that it is nothing more than a container waiting to be filled with contents. It is then a static, mechanical set on which humanity can stage whatever activity and behavior it deems convenient. Both ideas are easily traceable back to Descartes, which is hardly surprising (D'Andrea, 2017), and have become dogmas that no one ever questions. According to Lefebvre, on the contrary, space has a processual, creative quality and is deeply connected to human beings, who are both *space* and *in space*, so as to be the result of a constant, generative interaction akin to Simmel's *Wechselwirkung*. Denying this dynamic character means missing the crucial problem that abstract space implies, that is, the fact that it severs any founding link between humanity and "natural space" and makes it impossible to devise ways of life and policies capable of mending the damage inflicted so far. A paradigm shift that places the body in space at the center of any reflection and knowledge about the environment is then the first condition for a new ecological perspective; other approaches hide this crucial issue and ideologically strengthen the partial and dangerous understanding that caused the current crisis.

Ali Arshad's chapter – *Grasping Gaia* – challenges our most consolidated ideas about the planet we live on by suggesting that there may be another perspective – or several others – to represent and understand him/her/it. There have been lots of hypotheses about the shape of the Earth and the quality of the bond that links us together until the one scientific truth stated that it is an almost perfect

rock sphere orbiting around a not-so-special star and every relation in the universe must be comprehended under mechanical and physical laws: abstract, objective and universal. This is the only currently accepted definition, even though science itself has long gone beyond its naïve claim of a global understanding of the universe and, as we have seen, "fixed certainties are not fixed anymore." Perhaps the need for new cognitive tools goes as far as a new imaginal representation of the environment that rejects its being just another object amongst many, which can be managed and understood like all others. It might be worthwhile to explore the consequences of understanding the world as something unique and perhaps indescribable by our categories, as they came into being according to an anthropocentric perspective which decided we were the yardstick of everything, so that everything had to share our rhythms and limitations, including having a beginning and an end. We need to break free of long-lived illusions, if we are to handle our being in the world in a new, respectful and dynamic way that might be able to right whatever wrong is still being done. From this point of view, Arshad's chapter is a welcome attempt at querying old certainties, as well as at finding new ways of coexistence, which will likely aim at regaining a spiritual, qualitative dimension.

3.2 Second Part – *Propositions*

Isabella Corvino's chapter – *Environmental Sustainability: Ideas about the Future, Expectations and Justice* – deals with an aspect of the environmental issue that is attracting more and more attention: its intimate connection with the unequal distribution of resources, support and even risks, as Beck pointed out with his insightful reflections about the goods and the bads of Modernity (2016, pp. 79-97). In so doing, Corvino chooses an original perspective, seldom adopted by mainstream sociology: her research question aims at highlighting the actual consequences of a mindset built on "the dogmatic assertion of humanity's boundless power and dominance over resources and space, thanks to ever more sophisticated technological tools," a mindset which plays a crucial role in the dynamics of expectation. Some things are deemed so obvious as to be almost invisible: the iron-bound conviction of being able to manage and resolve every issue, whether on a micro- or on a macro-scale, is one of them. It is a main feature of the cognitive exceptionalism that complements the still predominant anthropocentrism, but the blind trust it used to inspire is rapidly fading: both Beck, since *World at Risk* (2009), and Rifkin (2022) wrote extensively about what we don't know we don't know, and about known and unknown unknowns, just to mention two sharp readers of contemporaneity; current rhetoric, however, seems untouched by uncertainty and by the limits to knowledge or control capacity, whose effects unfortunately become more and more conspicuous in everyday experience, leading to what Beck called "the collapse of ontological security" (2009, p. 40). Corvino tries to intercept this

phenomenon in its imaginary dimension – which has nothing to do with fantasy and wishful thinking; rather, it gives shape to projects and planning and leads to biased expectations, which in this case cannot but fail, twisting and bending policies and hierarchies along the way. Images of power and images of the future blend and interact in a complex interplay that affects self-perception and ideas on the environment and social justice. Only by taking the actual influence of these images into account will it be possible to cope with the huge problems they have caused so far.

Tea Golob and Matej Makarovič's chapter – *Planet-centric Knowledge as a Mechanism for Combating Environmental and Climate Challenges in the EU Context* – links the fundamental idea of a real paradigm shift to the evolution and strengthening of the EU. This is one of the more interesting, challenging and risky enterprises of the twentieth century (Rifkin, 2004); its trajectory has seen accelerations and abrupt stops, yet a steady growth that has brought about divisions and misunderstandings, but has guaranteed its people against global risks and unforeseen catastrophes such as the COVID-19 pandemic. The jerky advance, however, is starting to lose momentum and many scholars put forward the hypothesis that this is due to the mono-dimensionality of its plan and realization. Humanity has recently chosen to interpret the world, and its role within it from an exclusively economic perspective, and consequences are piling up that show this to be an utterly inadequate approach. Without an emotional and imaginal background, no institution can hope to inspire a sense of dedication and belonging in its members that allows them to accept changes and sacrifices; non-rational dimensions substantiate commitment and openness to demanding suggestions, a mental availability totally different from the arid accounting of profits and expenses. This is what the authors have in mind when they design "a conceptual model of planet-centric European citizenship", where a new planetary awareness is matched to a clear perception of the sense of citizenship and its connected responsibilities. They have been reflecting on it for some time and base this next step on the results of previous research, which show that this kind of attitude is really at work within significant parts of the Slovenian population. There is obviously much to be done to allow this potentiality to bear fruit; it is worth noting, however, that agency and proactivity do exist and nourish bottom-up movements and initiatives and orient many people in their day-to-day activities. It is high time to try and let this energy flow freely.

Elvira Martini and Maria Carmina Sgambato's chapter – *The Importance of Foresight Studies to Address Environmental Challenges* – builds an interesting case towards an original approach to the theme of foresight studies. Technically, foresight is a systematic attempt to observe and explore the future of science, economy, technology and society in order to better understand the

"forces that shape the long-term future that should be considered in policy-making, planning and decision-making." It goes well beyond the scope of what used to be defined as 'technological forecasting', as it tries to deal with possible scenarios and uncertainty through a network of co-relations and systemic interdependences that cannot but open itself to the issues of creative imagination and cooperative shaping of the future. The shift from 'technological forecasting' to 'technology foresight' can easily be read through Bohm's proposals: it shows a growing awareness of the need to take into account dimensions and spheres that have been separated and neglected for a long time, in favor of a statistical, mono-dimensional approach. It is this need for complexity and the renunciation of the 'logical' predominance of the usual explicative factors that make it possible for the authors and other researchers to put forward the Quintuple Helix Model, where a public subsystem based on media and culture and the natural environment are finally called to play a significant role in the making of knowledge and in the strategies and policies meant to orient future developments, along with the more traditional socio-political and economic instances. It is a stimulating enterprise, as it is poised in a dynamic balance between the well-known reassuring exigences of control and organizational anticipation and the hard-to-handle but harder-to-ignore perception of their limits: "A system with five helixes is not linear, it is a web of interrelationships, different systems, niches and paths that come together to sustain life." The chapter ends by discussing the close relation that might exist between foresight and sensemaking – "a particularly relevant theoretical perspective for managing external uncertainties and changes." Beyond technical definitions, this evidently highlights the need for an integrated, creative capacity of prospective vision issuing from belonging to a multidimensional environment.

3.3 Third Part – *Cases*

Francesca Cubeddu and Lucia Picarella's chapter – *Sustainability Cultures and Communication between Woke Capitalism and Greenwashing: Case Studies in Latin America and Europe* – focuses on the communication dimension of the sustainability discourse and its awkward relationship with the economy and its claims. One of the main catches in the current debate about what to do about the climate crisis is to be found in the delusional conviction that the environment – just as other trap words such as 'world', 'universe', and even 'society' that give a false sense of understanding and reassurance – easily fits within the anthropocentric *Weltanschauung* and its inherent hierarchy (D'Andrea, 2021). It can, therefore, be treated as an object among objects, with any number of clauses and delays originating from the economic sphere and its most essential exigencies. So every policy and initiative must be double-edged: it has to serve both an economic and an environmental end, which is all

well and good in an abstract way. What of the actual relationship between these two almost always non-coherent ends, however, should things not go according to plan? It is sadly obvious that economic interest towers above any other concern, so much so that, more often than not, it bends out-of-shape processes that could even work out as projected and tweak them into something else, something more profitable. This is what the authors highlight in their case studies: communication practices in companies both in Colombia and in Italy show similar dynamics that are labeled – and denounced – by many as *greenwashing*, where "targeted communication techniques manage to spread a false idea of the sustainable strategies implemented, while also culturally permeating the social dimension." In two crucial economic sectors, food and oil, leading actors choose to favor pleasant (strategically elaborated) lies against costly changes in vision and production, which could however result in more sustainable products and, above all, in widespread, lively consumer awareness, strengthened and empowered by good, sincere practices. Cubeddu and Picarella stress the importance of this seldom addressed cultural sensibility which is the only available tool to try and change lip service and propaganda into a real paradigm shift.

Ignacio Rubio Carriquiriborde's chapter – *The Rationale for Environmental Justice in the Conflict of Mexico City's New International Airport (2001-2018)* – makes use of the case study about the long struggle against the building of a new Mexico City airport to show how environmental themes and issues are being incorporated in – or, we might say, are shaping – discourses and strategies regarding social justice and a new construction of the idea of 'risk'. The story of the ever-widening opposition to the airport is the story of a slow yet constant growth in public awareness that brings to light the deep and contradictory connections between social and environmental agency, (un)equal distribution of goods and bads and identitarian recognition. These finally come forth in a blurring of the usual distinction between human and non-human and in a more complex and nuanced understanding of humanity's place in the world. Rubio's argument frames a theoretical approach where Beck's risk society, although criticized by many, plays a crucial role and is being challenged and integrated by Honneth's normative model of justice, "in which legitimate claims refer to one or a combination of three 'spheres of recognition': care, equality and merit." Once again, it is hard to deny that all these aspirations and demands are strongly linked to the environment, thus blurring yet another dichotomy, the one between 'nature' and 'culture'. Here, they find a strategic formulation that results in a new tool for those willing to oppose exploitative and unsustainable initiatives. In so doing, the new collective agents also become an example of a critical, instrumental and disenchanted way to cope with science's cognitive exceptionalism. Its limitations and opportunities are clearly illustrated in this affair, where experts and counter-experts are enrolled

by the different factions and are forced to exploit the essential uncertainty that modern science should have forever banned. Thus, "beyond the criticism of the technocratic or rationalistic character of risk narratives, it should be recognized that the language of risk is a further tool for the formulation of principles for collective action."

Mary Okumu and Sagie Narsiah's chapter – *Gendered Waterscapes: A Case Study of the Ahero Irrigation Scheme in Kenya* – makes use of a case study on an irrigation scheme in Kenya to show the intricate relationships that are usually hidden by an exclusively organizational approach to environmental issues. The project rarely fits within reality, which is more nuanced than current common sense might think and quite stubborn. The gap between what we think we perfectly know, and the complexity of each context in which we get involved is already apparent in agriculture itself, where disregard for this complexity and

> a single-minded focus on yield has incurred steep costs. Agriculture causes widespread environmental destruction and is responsible for a quarter of global greenhouse gas emissions … In viewing soils as more or less lifeless places, agricultural practices have ravaged the underground communities that sustain the life we eat" (Sheldrake, 2020, p. 143).

The idea that the world is a simple, mechanical place is one of the main roots of the encroaching environmental catastrophe, and it affects every aspect of society. The environment, the biosphere, is more than likely one of the most vertiginously interconnected habitats in the universe, and yet we claim it can be understood and described by a handful of laws. It is no wonder that this 'simple' perspective (Morin, 1999) fails when dealing with complex issues, as it is no wonder that these issues are almost always tightly linked to the environment. In Okumu and Narsiah's chapter, this is evident in the choice of a theoretical framework centered on the idea of 'waterscape', which "is not water situated in pristine nature. The waterscape relates to how nature is harnessed in the service of an exploitative practice." In the Kenian case, the authors make it clear that access to water is not a neutral bureaucratical step – but has to do with gender, family roles and cultural traditions. All these factors, unsurprisingly, have a negative impact on women's empowerment, independence and autonomy, under the guise of the difficulty of achieving unhindered access to water.

Aditi Basu's chapter – *Exploring Ecological Conservation and Ecofeminism in India: A Case Study Analysis of Jharkhand in the Twenty-First Century* – introduces the reader to a most interesting grassroots movement that started in the Indian state of Jharkhand at the end of the nineteenth-century and was able to stand up against colonialism and then industrialism under its different

guises. In this chapter, many of the themes intertwined in these pages clearly show their close connection: Jharkhand's women have been the protagonists and torchbearers of the various movements and committees that have finally succeeded in making themselves heard, although being part of the "so-called 'unheard voices of the twentieth century'." The deep spiritual and religious roots of their commitment gave rise to numerous initiatives through which they managed: to preserve ancient forests against the claims of "developmentalism"; to get the help and support of the male component of their communities, thus modifying age-old traditions; and to influence the Indian government's legislation. Through the Forest Rights Act in 2006, an essential tie was recognized and institutionalized among the environment, well-being and identity of the indigenous peoples living in sub-tropical forests, making sure their rights are affirmed and protected. The tight link between inequality and environment is evident in these dynamics; the same can be said of the close connection with marginalization and gender issues, as each leading woman "has faced innumerable hindrances in facing adversity": they nonetheless got to set up "a traditional rural community-based self-governance system by empowering women through actively engaging in village's affairs," which resulted in their socio-political and economic empowerment. Most crucially, their religious, almost mystical, view of the world – through the accent on care and love of nature – has been a key factor in raising a new widespread awareness of the need for a significant shift in policies and everyday lifestyles. Without such meaningful changes in consciences and behaviors, it is hard to envisage the chance for treaties and regulations to play an effective role in mending our relationship with the environment. Jharkhand's women should be an example to study and ponder towards this goal.

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