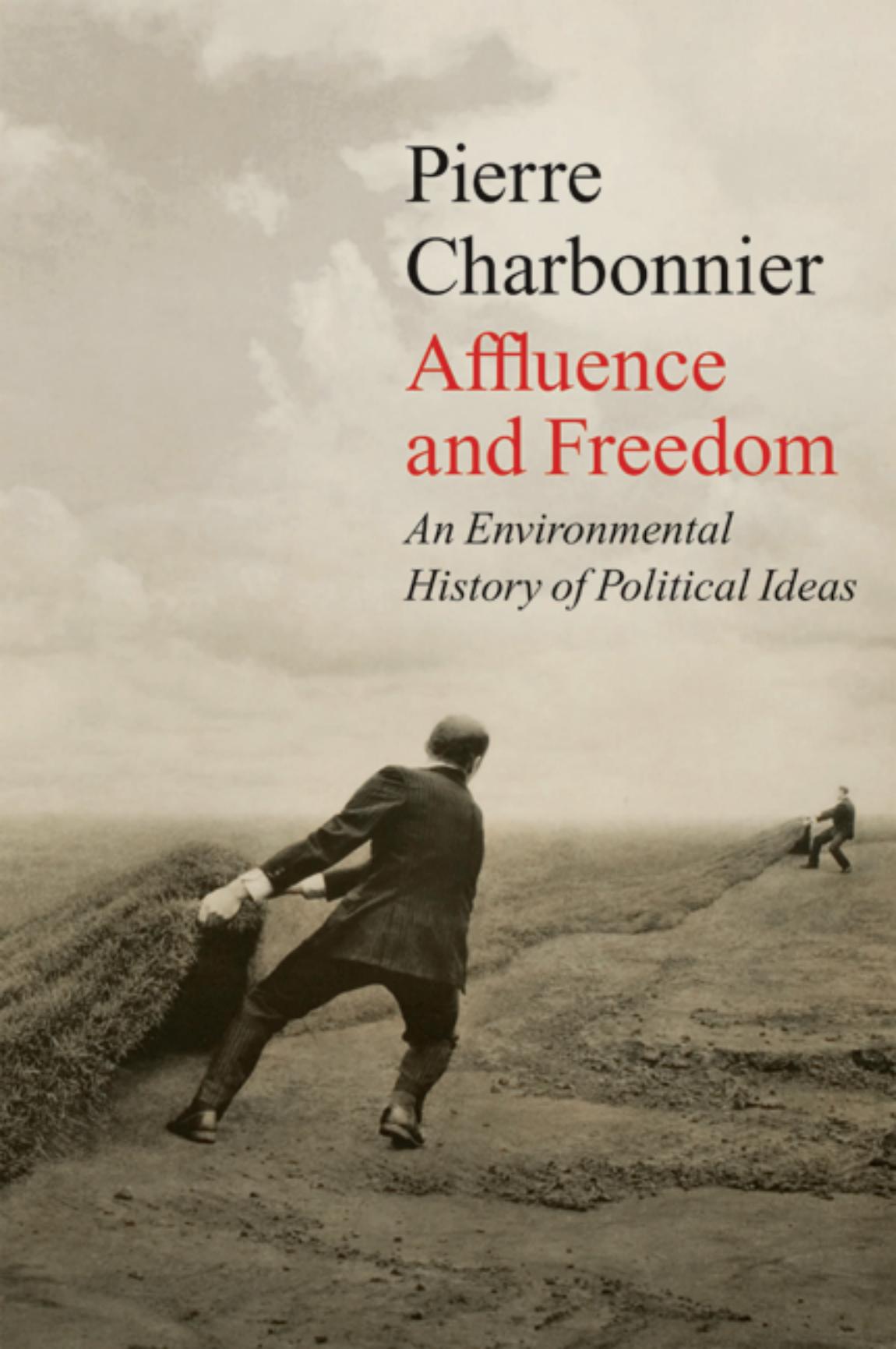
Pierre
Charbonnier
Affluence
and Freedom
An Environmental
History of Political Ideas

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An Environmental History of Political Ideas

Pierre Charbonnier

Translated by Andrew Brown

polity

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Foreword

Dipesh Chakrabarty

A great transformation – to use Karl Polanyi's famous expression in his 1944 book of the same name – is under way in the world today. Its magnitude is such that dealing with it calls for profound and difficult shifts in our ideas about economy and polity. The planet-wide environmental crisis that goes by the name of 'climate change' or 'global warming' calls into question the long-held assumption that the pursuit of human freedoms or autonomy – so central to the idea of politics – was inseparably connected to the pursuit of abundance or affluence. 'Climate change', writes Pierre Charbonnier, the author of this ambitious and brilliant book, 'is exploding one by one all the strata of modern political reflexivity' (p. 237). Charbonnier follows in Polanyi's footsteps in seeking to understand and historicize this transformation in order to articulate the demands it makes on our imaginations of the future. Yet his task is rendered far more difficult than Polanyi's by a difference between the contexts in which they undertake their respective projects. The transformation analysed by Polanyi – the rise of the market economy – had come to maturation in the nineteenth century, a good forty years before he began to work on the topic. He could truly be the historian of the 'great transformation' he wanted to study, for that transformation itself was in the past. Charbonnier, however, is living through the very transition he seeks to historicize. The phrase 'histories of the present' is popular in academic circles, but it signifies an intellectually hazardous enterprise. For the present, as Indian grammarians often remarked in the past, only half reveals itself. You see through it but darkly. How do you describe, analyse, get an intellectual grip on something that is swirling around you? How do you arrest and study the waves you are swimming in? How do you create the intellectual distance that you need for your analysis to have a modicum of objectivity?

Charbonnier rises to this challenge, first, by leveraging his sense of a looming crisis to political relationship not only to the present but,

more significantly, to the received ideas of the political. Hence his statement:

> Climate change is the name of the historic present because it is both a fact, established by geosciences, a heritage to bear, whether we like it or not, and an ordeal to be overcome – in other words, a political condition. And if this ordeal is so difficult to face up to, it is because the current deterioration of planetary ecological conditions is more than just the result of an error committed in the past and needing to be corrected later, or a figure of evil of which we have become aware in retrospect. (p. 241)

Even the standard critiques from the left that assign culpability to the 'capitalist mode of production' or 'technoscientific objectification of the world' appear insufficient. They are relevant for their critiques of exploitation of humans by humans. But their 'productivist' language keeps them committed to the affluence/autonomy duality, with the consequence that the subject of resistance they envisage remains imprisoned within a construction of 'the social' that maintains 'the exteriority of nature'. Within this framework, 'the nonhuman environment' is regarded as a 'stock of available resources' on the basis of which one can 'draw the conditions of emancipation' (p. 238). It leaves unquestioned, says Charbonnier, the 'two totally heterogeneous' spheres that imaginaries of the 'modern' assume: the 'officially recognized … [territory] promoted as the space for the political and legal emancipation of the individual', and an 'unofficial' sphere consisting of 'the geo-ecological space necessary for the material maintenance of subsistence', generally accessed by 'extra-legal means (nebulous commercial contracts, colonization)' (pp. 228–9).

The maintenance of this separation is what has ironically led to the historical conditions Charbonnier finds himself in when he introduces his book to the reader. One the one hand, there is the world described and celebrated, famously, by the Canadian psychologist Steven Pinker, a world where 'poverty, illness and ignorance' are being reduced, where the overall median income almost doubled between 2003 and 2013, and figures relating to life expectancy, literacy, nutrition and the number of children surviving beyond childhood are on the rise (p. 5). The growing size of the human population, one could add, also points to human flourishing. In 1900 humans numbered around 1.6 billion. Today there are nearly 8 billion of us. There is no question that, speaking of material consumption, human beings, overall, are much better off today than their predecessors ever were on this planet. On the other hand, it is also a world – thanks precisely to the growth of human numbers, consumption and technology – where the concentration of

CO_2 in the atmosphere has passed the level of 410 parts per million, where three-quarters of the world's insects have disappeared over a few decades, indicating, as Charbonnier puts it, 'that the transformation of the Earth is now taking place at a pace commensurable with the length of a single life, and even of a simple writing project' (p. 1). It is a world in which the association – 'long viewed as necessary – between autonomy and modernity, between the sense of liberty and the uses of the Earth' increasingly appears unviable (p. 245) The memory of postwar prosperity in the West still lives on, the rising and visible affluence in nations like China and India are there for all to see, and yet the world seems 'so close to us' but 'already so old' (p. 251). Or, as Charbonnier puts it elsewhere, the price of so many humans living it up as if there were no tomorrow is the damage we end up doing to the life-support system of the planet: 'All the biogeochemical cycles that structure the global economy are being pushed beyond their capacity for regeneration by the rhythm of productive activities; the nature of our soil, air and water is changing, thereby creating a new context for human collectives and their struggles' (pp. 4–5).

Charbonnier asks whether humans can continue to flourish in a deteriorating world. This query shapes one of the intellectual horizons for his project – how to imagine the future of human freedoms at a time when we cannot afford any longer to ignore 'the process of planetary disruption that is leading us into the unknown' (p. 6). He writes:

> The theoretical and political imperative of the present is therefore to reinvent freedom in the age of climate crisis – i.e., in the Anthropocene. Contrary to what one sometimes hears, it is not a matter of stating that infinite freedom in a finite world is impossible, but that this freedom can be gained only by establishing a socializing and sustainable relation with the material world. (p. 25)

But what would those freedoms be? And whose freedom? Of humans alone? How did the idea of human autonomy come to treat 'nature' as external to 'society'? If the task with regard to the future was to create a political order inseparable from the ecological one, then the properly historical question would be: how did they come to be separated? And when?

To answer this second question, the one amenable to historical analysis, Charbonnier invents a method that is as impressive for its originality and inventiveness as for the sustained, deep, and vigorously anticolonial erudition that this book presents to the reader. He tells two stories at once. One is the story about how, in modern Anglo-European political thought beginning in the sixteenth–seventeenth centuries, ideas of personhood and autonomy that once acknowledged, in

however attenuated a form, their entanglement in the materiality of the Earth through the category 'land', gradually – in tandem with changes in infrastructures and institutions – yielded place to categories like 'society' and 'economy' that appeared to float free of the Earth, the latter now regarded as a mere repository of 'resources' for the use of humans (pp. 244–5). The result was that projects for 'autonomy', dependent on the assumption of abundance in the sphere of economy, lost all sense of their material entanglements even as the Earth – as all the climate-related statistics make clear – began to approach a state of exhaustion.

To get to the heart of this story, one has to begin with the emergence of the 'modern' world. Announcing his historical interests, Charbonnier tells the reader early on:

> Even before the race to extract resources (a race that combined the notions of progress and material development) swung fully into action in the nineteenth century … the legal, moral and scientific coordinates of the modern relationship with the Earth were already in place. … [T]o understand the empires built on oil, the struggles for environmental justice and the disturbing trends in climatology, we must go back to the agronomy, law and economic thought of the seventeenth and eighteenth centuries; to Grotius, to Locke and to the Physiocrats. (p. 3)

A fascinating series of chapters follows. Charbonnier engages in reading closely a number of key European thinkers and philosophers who made the making of the 'modern' capitalist globe the object of their thought at various points in history. Grotius, Hobbes and Locke, Quesnay and Adam Smith, Rousseau, Kant, Fichte, Guizot, Tocqueville, Mill, Malthus, Jevons, Proudhon, Durkheim, Saint-Simon, Veblen, Marx, Marcuse and, of course, Polanyi, along with many others, crowd these pages, making for scintillating studies in comparison and contrast, but all mobilized masterfully to sustain the architecture of the larger argument that Charbonnier builds.

These European savants raise for our author a 'terrifying question', one that structures the second part of the story he tells. For it turns out that the history of the modern cannot be told in separation from the history of domination and racial violence that European powers unleashed in the colonies and at home, over people of colour, women, minorities and the nonhuman world. The 'terrifying question' is this:

> To what extent is the political autonomy of Western nations, as a project but also to the extent that it has been partly achieved, dependent on these asymmetries of power and knowledge? Is

> autonomy something you buy, a luxury that you can afford when you illegally profit from the riches of others? (p. 87)

The voice of the Surinamese slave who asked Voltaire 'Is it at this price that you eat sugar in Europe?' resonates through these pages (p. 86).

Armed with this historical knowledge, Charbonnier at least knows who his allies are and what principles might be involved in reimagining the futures of autonomy that, by the very logic of his thinking, must regain and retain a consciousness of its material entanglements in the Earth – and for that reason cannot be a project for humans alone – and must not replicate forms of colonial domination. The task is collective. It is not surprising then that, towards the end of the book, we should find Charbonnier in conversation with, amongst others, Bruno Latour, Nicholas Georgescu-Roegen, Kenneth Pomeranz, Timothy Mitchell, Philippe Descola, Ranajit Guha, Achille Mbembe, Eduardo Viveiros de Castro, Tim Ingold, Tania Murray Li, Baptiste Morizot and Joan Martinez-Alier, in a spirit of solidarity. Postcolonial criticism, new materialism, post-humanism, feminism and critical race theory provide him with much of the wherewithal from which he puts together the outlines of a possible post-socialist imagination of the future.

These conversations across disciplines help Charbonnier to figure out what the subject of resistance, the one who ushers in a more sustainable future – a 'critical subject', as he calls it (p. 252) – may look like *in principle*. Understandably, these last chapters are speculative. 'It is probably not philosophy's task', he cautions the reader, 'to affirm by speculative means what will be the name and the exact form of this collective capable of establishing itself as the subject of the ecological counter-movement.' It is even possible that 'the real trajectory of a collective political body and the conceptual expression of its mission' may in fact diverge (p. 257). But Charbonnier's hopes are undiminished by this prospect of divergence. Just as the industrial world called into being 'the socialist counter-movement, and with it a political subject called "society"' (p. 253), our current crisis will eventually produce a new critical subject. It will not look like a class nor 'easily acquire a self-consciousness similar to … "class consciousness"'. A coalition of disparate groups, 'still diffracted by gender and race', may 'compose [note the Latourian diction] with the Earth', a cluster that seeks to know 'on what land and what Earth we intend to live', though 'the sociological profile of the emerging collective is necessarily unstable' (p. 256).

The reader will not grudge Charbonnier the moment of this speculative flight, for he has earned it through the meticulous genealogy of the present that he has also provided in this book. Readers may disagree with particular propositions that he puts forward. But nobody

will miss the stimulation of Charbonnier's thoughts. It will remain a provocation for further thought, reflection and action. Readers will return to this book to agree, to disagree, to ask questions and even to find guidance as we keep negotiating the anthropogenic and planetary environmental quandary in which we find ourselves.

Chicago, 11 December 2020

Introduction

As I was writing this book, the American observation site on Mauna Loa, Hawaii, indicated that the concentration of atmospheric CO_2 had passed the level of 400, and then of 410 parts per million (ppm).[1] This measurement proves that, on the scale of even such a tiny activity as writing a philosophical book, ecological reality is being silently but spectacularly transformed. Let's just point out that this level had remained below 300ppm over the whole of preindustrial human history, and that when I was born the rate was 340ppm. A high-profile German study has also shown that the biomass of flying insects has been reduced by 76 per cent in 27 years:[2] despite protective measures and the creation of nature reserves, three-quarters of the world's insects have disappeared over a few decades. And this is just one piece of evidence from a vast body of research on the deterioration in soil and water quality, and the decline in pollination and ecosystem maintenance,[3] all of which indicates that the transformation of the Earth is now taking place at a pace commensurable with the length of a single life, and even of a simple writing project.

Over the same five-year period, the global political landscape underwent equally dramatic changes. Donald Trump's rise to power in the United States in 2016, Jair Bolsonaro's in Brazil in 2019 and the Brexiteers' victory in the United Kingdom in June 2016 are the clearest signs in a series of events often seen as marking the disintegration of the liberal order. Pretty much across the world, a movement back towards entrenched borders and social conservatism has created a loose alliance between those who have lost out in the process of globalization and are now desperately in search of new protectors, and the economic elites who are determined to force nations to compete with one another so as to preserve capital accumulation. Earlier, however, the Paris Agreement, adopted to general enthusiasm in December 2015, had foreshadowed the emergence of a new kind of diplomacy aimed at bringing the concert of nations into the era of

climate change awareness. Despite the weaknesses that underlay this agreement, it was this attempt to forge a bond between diplomatic cooperation and climate policy that was attacked by the new masters of chaos: there was no question of founding a world order on any limitation of the economy.

During this same period, we were also able to witness the opening up of many new fronts of social protest, all focusing on the plight of the Earth. The latest changes I have made to this book have been in response to the 'yellow vests' (*gilets jaunes*) social protest movement in France; after all, it must not be forgotten that these protests were triggered by a draft fuel tax. People have embarked on a process of creating new relationships with their local territory, as in the ZAD of Notre-Dame-des-Landes in France[4] and in the conflict between the residents of the Standing Rock Indian Reservation and the Dakota pipeline project in the United States[5] – these movements were just getting under way as I was starting, in my seminars, to draw links between the history of modern political thought and the question of resources, housing and, more broadly, the material conditions of existence. In short, recent events are constantly confirming the idea that social conflict is now based on the issue of human subsistence. But as well as all that – the climate marches, Greta Thunberg's speeches and the acts of civil disobedience carried out by Extinction Rebellion in London – there were also Haiti, Puerto Rico, Houston: the intensification of tropical hurricanes and the inadequacy of government responses have turned climate vulnerability into an indicator of ever more politicized social inequalities. The distribution of wealth, vulnerability and the protective measures available means that the destiny of things, peoples, laws and the machinery that assembles them has to be understood as part of the same whole.

Five years is sufficient time, therefore, to record some crucial changes – and also to look back on a past that may be close, but seems a totally different world from the one in which we are now moving, a world, indeed, to which we will never return. The speed of these developments also leaves us facing a darker question: where will we be when five more years have passed?

This book is both an investigation of the origins and significance of these events and one of the many ways in which they have made themselves manifest, albeit on a microscopic scale. Its meaning lies in the context of global ecological, political and social transformations whose importance we can dimly grasp, though we cannot as yet describe them accurately, let alone transcribe them into a theoretical language. In a sense, this work consists of bringing the practice of philosophy to bear on this history, recalibrating philosophy's methods (and the type of attention it pays to the world) in the light of these issues.

My book takes the form of a long historical and conceptual detour, which covers several centuries and very variegated forms of knowledge. This detour can be summarized as follows: to understand what is happening to the planet, as well as the political consequences of this evolution, we must take another look at the forms of occupation of space and land use prevalent in the early modern societies of the West. The deployment of a state's territorial sovereignty, the instruments used to possess and improve the soil, and the social struggles that took place in these circumstances all form the basis of a collective relationship to things, a relationship whose final moments we are currently living through. Even before the race to extract resources (a race that combined the notions of progress and material development) swung fully into action in the nineteenth century, some of the legal, moral and scientific coordinates of the modern relationship with the Earth were already in place. In other words, to understand the empires built on oil, the struggles for environmental justice and the disturbing trends in climatology, we must go back to the agronomy, law and economic thought of the seventeenth and eighteenth centuries; to Grotius, to Locke and to the Physiocrats. To understand why we keep failing to impose constraints on the economy in order to protect our livelihoods and our ideals of equality, we must go back to the labour question[6] of the nineteenth century and the way industry affected the collective representations of emancipation. The current debates on biodiversity, growth and the status of the wilderness are just the last stage in a long history in which our social conceptions, and the very material structure of the world, were being constructed at the same time. The ecological imperative itself, insofar as it is recognized as such, finds its meaning in this history.

In more strictly philosophical terms, this means that the forms of legitimation of political authority, the definition of economic objectives, and popular movements striving for justice have always been closely linked to the way we use the world. The meaning we give to liberty, the means that have been used to establish and preserve it, are not abstract constructions, but the products of a material history in which soils and subsoils, machinery and the properties of living things have provided us with crucial tools. The current climate crisis dramatically reveals this link between material abundance and the process of emancipation. The United States Department of Energy, for example, has recently dubbed natural gas, a fossil fuel, 'molecules of US freedom',[7] thus summoning up the imaginary realm of an emancipation from natural constraints: freedom, it seems, is literally contained in fossil materials. This fantastical statement stands in stark contrast to all the findings of climatology, and the way they translate

into political terms: the atmospheric accumulation of CO_2 not only compromises the Earth's ability to function as a habitat, but requires a new conception of our political relation to resources. In other words, these same molecules contain the very *opposite* of freedom; they are an ecological prison from which we cannot escape.

We therefore need to compose a history and identify a new type of political problem by using our present geological and ecological experience as a piece of evidence, as the visible part of a puzzle that needs to be seen as a whole. The main thread of this history is indicated by the book's title: how did the legal and technological construction of a society based on growth permeate and guide the meaning we give to liberty? How, likewise, did struggles for emancipation and political autonomy draw on the intensive use of resources to achieve their ends? In short, what does a material history of liberty tell us about current political transformations?

* * *

I have constructed this narrative and this analysis out of three great historical blocks, separated by two ecological and political transformations of revolutionary significance.

The first of these blocks is preindustrial modernity: this was a social world in which working on the land constituted the basis for subsistence and the terrain for the main social conflicts, an essential reference point for thinking of property, wealth and justice. Land was simultaneously a disputed resource, the basis of the symbolic legitimacy of power and the object of conquest and appropriation.

Then, gradually, during the nineteenth century, a new ecological coordinate was added to the material and mental world of human beings: coal, and then oil – in other words, fossil fuels. Thus, a second historical block came into being when societies reconfigured themselves on the basis of the way they used these energy forms that were concentrated, space-saving, easily exchangeable and able profoundly to reshape the productive functions and the social destiny of millions of men and women. With fossil fuels, modes of organization and collective ideals would undergo a major and challenging material rearrangement.

Finally, very close to home, a second ecopolitical transformation began, the proportions of which were at least as vast and crucial as the previous one. It inaugurated a third kind of world, one whose initial stages we are now experiencing, and one that can be defined by a catastrophic and irreversible deterioration in global ecological conditions. All the biogeochemical cycles that structure the global economy are being pushed beyond their capacity for regeneration by the rhythm of productive activities; the nature of our soil, air and

water is changing, thereby creating a new context for human collectives and their struggles.

After a general, introductory chapter, Chapters 2 and 3 are devoted to the first historical sequence; Chapter 4 attempts to describe the characteristics of the first great transformation; Chapters 5–9 relate to the intermediate sequence; the last two chapters outline the issues that are becoming prominent at the dawn of the era of climate change awareness. Modern political thought has thus historically unfolded in three worlds very different from each other: a terrestrial, agrarian, highly territorial world; an industrial and mechanical world, which engendered new forms of solidarity and conflict; and a world out of joint, about which we still do not know very much except that, in it, the pursuit of the ideals of liberty and equality takes on an entirely new guise. Each time, collective aspirations and relations of domination have been profoundly affected by the specific characteristics of these worlds.

* * *

Throughout this book, I want to contribute to the politicization of the ecological problem, and more broadly to the construction of a collective reflection on the changes that are affecting the modern paradigm of progress. One can get an idea of the state of this debate simply by indicating the two opposing positions that structure it.

On the one hand, a number of global statistical data show a reduction in poverty, illness and ignorance: the overall median income almost doubled between 2003 and 2013, a decreasing proportion of the population is below the threshold of extreme poverty,[8] life expectancy is increasing and literacy is spreading, the infant mortality rate and malnutrition are falling. Some intellectuals, such as the Canadian American philosopher Steven Pinker, have become celebrities by interpreting this kind of data as proof of the virtues of the liberal utopia. The combination of capital, technology and moral values centred on the individual, a combination that Pinker somewhat monolithically traces back to the Enlightenment, is, he claims, a tried and tested formula for extracting humanity from its difficulties on both the moral and the material level. The partial successes achieved by the dominant pattern of development are thus interpreted in such a way as to block any attempts at social and political reorientation and to discourage those who, by demanding anything more or anything better, would unwisely hamper the machinery of progress.[9]

On the other hand, of course, we find all those who are alarmed by the decline in biodiversity, by the current sixth phase of extinction, global warming, the depletion of resources and the increasing number of disasters – indeed, they sometimes go so far as to foresee the

imminent end of human civilization, or even the end of the world altogether. Although they themselves do not adopt the rhetoric of apocalypse, the major scientific institutions responsible for recording changes in the Earth's system, the Intergovernmental Panel on Climate Change (IPCC) and the IPBES in particular, foster a legitimate sense of loss. But in the same way that we must draw a distinction between the improvement of certain economic and human indicators and the validation of a theory of development dating from the eighteenth century, we must recognize that there is a gap between the horrendous damage inflicted on the planet and the view that modernity is a pure and simple catastrophe. The current vogue for the idea of collapse reveals a heightened awareness of ecological vulnerability, and the belief of some people that it is too late to save the world is just an intensified version of this.

Depending on the indicators that are selected and the way in which they are ranked, we can deduce that we live both in the best of all possible worlds and in the worst. The philosophy of history has long since drawn a contrast between the narrative of the universalizing mission of reason and the counternarrative of the madness inherent in the will to control. But this theoretical commonplace is not only reductive in terms of the history of ideas, it also leaves us unable to grasp the problem we are facing: it is possible, for some at least, to live better in a world that is actually deteriorating. The contradiction we face is not a matter of perception, or even of opinion; it is situated in reality itself, and more exactly in a differentiated social reality. Economist Branko Milanović, for example, has shown that the fruits of economic growth over the past twenty years have greatly benefited a new global middle class – typically the huge Chinese middle class, created by that country's industrial boom.[10] But it is also this population that suffers most from pollution and a crowded urban environment, as well as from fierce labour discipline within the framework of a repressive state.[11]

The measurable growth of the economy, as well as in incomes, is a deceptive indicator. For while it still conveys many of our images of material and moral improvement, it is also inseparable from the process of planetary disruption that is leading us into the unknown. A true politicization of ecology lies in the gap between these two dimensions of historical reality. Angelic enthusiasm and dark prophecies of the endtimes are thus merely two exaggerated interpretations of a far more complex reality that forces us to reconsider the meaning we give to liberty when its dependence on ecological and economic factors means that its own perpetuation lies in the balance.

1

The Critique of Ecological Reason

The fabric of liberty

For a very long time, we thought that social conflicts were woven from rival experiences and conceptions of liberty, that history was played out in the endless struggle between those demanding recognition and those in a position to grant them that recognition. We thought that what mattered was winning the right to enjoy the world and its riches as equals, under the protection of a just state. The conquest of freedom of conscience, protection against the arbitrariness of power and economic justice all seemed to us to be responses to expectations arising from within society, unfolding in an immutable external space. And then there emerged struggles for which relationship to this territory became an issue, forcing us to revise this conception of injustice and how to remedy it. When ecological and climate warnings, for example, lead us to trace back the chain of energy dependencies, life forms and associated interests so as to scrutinize them more closely, we do indeed become aware that the fate of the world as it is known – and not only the fate of society – hangs on the resolution of a political riddle.

Although we thought we were fighting on common ground, we are starting to realize that this common ground is, now more than ever, the object of our differences. The soil, the ocean, the climate and the associations between living beings are undergoing transformations that we are trying to gauge with the help of science and that are forcing us to liberate them from the political silence to which we have long relegated them. As these serial destabilizations occur, the communities that have to face up to them will voice demands for a new kind of justice and a redefinition of what it means to dwell on the Earth. These movements, while prolonging the social struggles with which history has made us familiar, testify to a profound change in the relations between the social body, its own idea of itself and its natural environment.

Struggles for equality and liberty, and against domination and exploitation, have not ceased to drive human history, but they are more and more often entrenched in a conflict over the very soil that lies beneath these fundamental differences and needs to be protected. Or rather, they shed a tragic light on the way that political and ecological conditions are intimately linked, and subject to joint transformations.

This is what makes contemporary political events so difficult to grasp, given our history and our intellectual reflexes. How, indeed, can we think of these two dimensions of the present – the political order and the ecological order – at the same time? How can we bridge the growing economic and social inequalities and the increasing number of global environmental and climate disasters to which, so far, there is no response? How can we use the same instruments to diagnose the democratic collapse experienced by many states – including the major economic and political powers – and the support provided to these regimes by the main fossil fuel and mining industries? The very shape assumed by contemporary social relations, and therefore the pathologies that they generate, are the result of an increasingly contested arrangement between territorial organization, the quest for productive intensity, the authority of science, the colonial legacy and many other factors that involve the way we use the world.

At the heart of these ecopolitical arrangements is the meaning of our freedom and our capacity to establish it. This is what the climate issue makes tangible in a quite spectacular way. The rise in average temperatures is the result of a century and a half in which fossil fuels have been burned on a huge scale: after having treated the atmosphere as a spillway for industrial pollution, we are starting to understand that its capacity of absorption is limited and that our way of inhabiting the Earth depends on it. So it is the ashes of industrial freedom that are accumulating over our heads; it is the spectacular increase of our technological grip on the world and the cultural imaginary of high modernity that are at stake – urban sprawl, the automobile, household appliances and a certain sense of comfort and security.

In other words, we cannot separate ecology from politics. Social institutions, especially the state, have a material life that is not a technological prerequisite for the deployment of social life. The experience of injustice is becoming ever more apparent from the way that space and land are used, and from the demands for compensation that follow in the wake of disasters: this testifies to the fact that the flows and networks that sustain our lives co-define our political condition. All this forces us to sharpen our knowledge of the material dependencies that make and break our conception of emancipation. It is crucial for example to know that our phones, our cars, the contents of our plates

are the coagulation of a set of supply chains that go back to mines and their employees, to the soil, to geological expertise and to capital flows, and that the price of these goods almost never reflects the real social cost of their production. We are often unaware that our economic cruising speed requires 25 per cent of the Earth's annually produced biomass to be integrated into commercial circuits or sacrificed to make room for them,[1] or that, in the case of the world's wealthiest regions, demand exceeds the environment's biocapacity by 100 per cent.[2] We are experiencing a geological experiment of global magnitude, one that upsets all the familiar eco-evolutionary dynamics.

But we close our eyes to this experiment and its consequences because they clash with what is most dear to us, or what often appears as such, namely the possibility of enjoying absolute, unconditioned freedom. Yet nothing is more material than freedom, and in particular the freedom of modern societies, which have concluded a pact with the productive capacities of land and labour – a pact that is now falling apart.

This is the reason why political emancipation must today be reformulated in material and geographical terms. Whether at a local or global scale, we impose on nature in ways that contravene the simplest principles of sustainability. The erosion of the fertility of agricultural land, the saturation of atmospheric carbon storage sinks and the collapse of biodiversity between them comprise a set of indicators that testify to the limited capacity of the environment to cushion the blows inflicted on it, and on its propensity to return these blows in unexpected, often unpredictable and sometimes catastrophic ways. Some of the biogeochemical cycles and evolutionary dynamics that make the Earth habitable are now being pushed beyond their threshold of tolerance, climate being only one of these transformations, albeit doubtless the most spectacular.[3] Thus, access to territory, our common future, and the most basic conditions of justice, in other words all that constitutes the basis of a political existence, are being simultaneously compromised.

But to say that ecology and politics tend to be superimposed is not enough, because many different ideological strategies are based on this observation. For example, a 'green finance' is emerging, one that tries to label certain investments as responsible, and thereby attract capital to projects that are respectful of natural balances or the principles of low energy.[4] Behind this 'green finance' lurks the ambition to build up markets that are compatible with environmental requirements and thus bypass the longstanding criticism of them on the part of the ecological movement. The assembly and circulation of capital now claim to meet environmental standards without jeopardizing the idea of the fundamental freedom of stock exchange and market operations.

On the side of conservative and reactionary movements, for example, the idea that nature can serve as a norm for social organization is gaining ground.[5] Thus, so-called 'integral' ecology is proposing to re-establish principles deemed quite commonsensical and yet abandoned by modern political culture. Family and nation are considered as natural communities backed by an identity conferred by the soil of one's ancestors in an alleged continuity of settlement, and the preservation of the environment, it is claimed, then fits smoothly into this substantialist framework whose legitimacy is based on the so-called natural order of things. The diffuse requirement that a conformity be found between our modes of organization and the physical, living substratum of the world is reflected in multiple forms that are obviously incompatible with each other, so that the belated marriage between the moderns and 'nature' is celebrated in a rather confused way.

For some people, peace can easily be restored to this ecological battlefield by limiting the stakes to simply slowing down the economic and extractive machine. Once we have eliminated the accumulative drive inherited from the past and now rendered obsolete by technological efficiency, the economic mega-machine will obediently bend to natural constraints to allow the same society to carry on as before, with the same political organization, albeit rid of its productivist excesses. But, as has already been suggested, moving away from ecological forcing and decarbonizing the economy implies a total redefinition of what society is, a rearrangement of relations of domination and exploitation and a redefinition of our expectations of justice. In other words, it is the democratic organization and the aspirations that sustain it that need to be decarbonized – not just the economy. Gaining access to 'prosperity without growth', to use the title of a famous work,[6] is the result not of a technological solution but of a political transformation whose historical equivalents are to be sought in the great technological and legal revolutions that founded modernity and served as a laboratory for our shared ideals.

Climate change and the disruption of eco-evolutionary dynamics are therefore not crises of nature, but events that require a redefinition of the project of autonomy. This project was born in the age of the early nineteenth-century revolutions, and then perpetually postponed and hindered, especially outside the area of Western industrialization; it consisted of dismissing arbitrary authorities and entrusting the assembled people with the power to provide themselves with their own rules, to grasp the rudder of history, and to realize the liberty of all as equals. This conquest was never brought to any real completion; furthermore, these days, we feel uneasy about the material possibilities that first supported it. The growth and technological intensification that for so long made control of our historical destiny a tangible ideal

now induce an increased sense of submission to the arbitrariness of nature. This is the main hypothesis of this book: affluence and freedom have long walked hand in hand, the second being considered as the ability to escape the vagaries of fortune and lack that humiliate human existence, but their alliance and the historical trajectory it has followed have now come up against a dead end. Faced with this, the alternative that presents itself sometimes contrasts the pure and simple abandonment of the ideals of emancipation under the pressure of severe ecological constraints, on the one hand, with an enjoyment of the last moments of autonomy that we still retain, on the other. But who would want an authoritarian ecology or a freedom without tomorrow? The theoretical and political imperative of the present is therefore to reinvent freedom in the age of climate crisis – i.e., in the Anthropocene. Contrary to what one sometimes hears, it is not a matter of stating that infinite freedom in a finite world is impossible, but that this freedom can be gained only by establishing a socializing and sustainable relation with the material world.

The other history: ecology and the labour question

How, these days, can we embark on a theoretical and political inquiry into these questions? First, by telling the right kind of history. Contrary to what philosophy has traditionally suggested, sensitivity to nature and the desire to treat it as a person rather than a thing are not the only, or even the main, framework within which the emergence of an environmental critique can be understood. Instead of abstractly conceiving a nature for which we might feel empathy, we would like to set the contradictions we have just described within the history of the labour question – a question that can therefore no longer be separated from the ecological question, as both of them are two stages of the same internal conflict within our history.

The term 'labour question' refers to the tension that results from the orientation of societies both towards increasing material well-being and towards the construction of a political-legal system of rights focused on equality and liberty. In fact, the requirements of the first objective and the sacrifices made to that end by a large part of the population have jeopardized the project of equalizing conditions, a project of which the French Revolution was the main historical symbol. The labour question is the search for the right balance between enrichment and equality, between growth and the distribution of its benefits. Forged semantically in the nineteenth century, this term refers to all the pathologies affecting industrial societies and the measures taken to mitigate or compensate for them: the transformation of the

division of labour and, in particular, the way it has been shaped as a market expose society to the risk of fragmentation. Institutions respond to this risk by protecting the socializing nature of labour. To put it another way, poverty poses a specific problem in an economy of abundance: it becomes, as it were, even more scandalous than it was in a subsistence regime (where it appeared as, if not permanent, at least as structural), because it now affects not only people's lives, but also and above all their civil status.

To assert that political ecology is based on a historical line that leads us to such issues is also to suggest that the labour question has a deep affinity with the way in which the material world has been endowed with a central political value. Social relations are thus closely related to, and in fact inseparable from, relationships with nature. The massive transformation of the material structure of societies, as a result of the new ways of relating to space and resources that have developed in European countries and their colonies, has been central to the reconfiguration of working conditions, and thus of social dynamics. While it is true that the construction of modern industrial societies has not been indifferent to the physical and living environment in which they have spread, this is simply because the hope of a relationship with a prosperous world, one that is under our control and can provide us with security – in other words, the development of a nature that is productive, familiar and stable – has functioned as a general framework in which ideals more commonly considered to be political have been embedded.

These ideals are therefore immediately fitted into a historical dynamic that ignores the permeability of the natural and the social spheres. Once the system of rights and the material system are considered as two dimensions of the same historical process, there is no longer any reason to reserve the term 'political' for the former.

In an essential study of these questions, English historian Gareth Stedman Jones noted that the intellectual and moral impact of the Enlightenment on the emergence of political republicanism cannot be reduced to ideas of equality and liberty. Equally important was the promise of an end to poverty, that is, the elimination of the hitherto rampant problem of scarcity.[7] This simultaneously ideological and practical ambition, of which we find the clearest formulation in authors such as Nicolas de Condorcet and Thomas Paine, gives a material meaning to the principle of equality, since the development of technology and commerce was conceived as a way of reducing the gap between the propertied classes and the rest. Of course, the idea of improving living conditions for the greatest number is closely linked to the conception of nature as a productive resource, and may not be unrelated to its exploitation. But if we keep this idea in mind, the

fact remains that we are being given an indication of the relationship between nature and politics in modern societies. Although nature has not been protected or promoted as a heritage, nor has it been the stage on which an essentially sociocentric dramaturgy has unfolded. The social, the political and the material domains are linked, both because these different levels of reflection and historical evolution are conjoined, embedded in each other, and because the space of theoretical elaborations is saturated with considerations on what our relationship to nature can and must be. There is just one movement that affects labour, rights and the material world all at once, and it is as such that it must be considered.

This historical reflection on the labour question is linked to a broader questioning of the division between nature and society, resulting from the anthropology of modernity, which – in particular in the work of Bruno Latour and Philippe Descola – has indeed nourished a salutary scepticism with regard to the modernist triumphalism that prevailed in the nineteenth and twentieth centuries in the Western world, and which long boasted of having set mankind on the path of progress by winning a decisive victory over nature, lack and heteronomy. Indeed, the conception of the social as an autonomous sphere, as a space that produces its historicity by means and ends of its own, progressively imposed itself in the wake of the Enlightenment as a central feature of societies that sought to be modern. It was particularly crucial in the French revolutionary and post-revolutionary periods,[8] but it also extended to the struggle for emancipation of the slave colonies against the European empires: the fight for self-determination was thus an avatar of the project of autonomy, now turned against the very same people who had first conceived of that autonomy.[9]

This form of reflexivity has also played a central role in the establishment of the social sciences, since they were quick to note that the endogenous nature of social transformations is what renders 'the social' observable as a scientific object in its own right, but especially because they set themselves the task of elucidating the practical realization of this ideal of autonomy, as well as the pathologies proper to it.[10] It is still this form of reflexivity that makes it possible to establish a close link between this new type of political thought and democratic principles, since autonomy thus conceived carries with it the demand for an ideally complete control of the people over their political destiny. But we can now perceive a tension between this modernity, for which the endogenous character of the constructive and critical process is central, and the current re-evaluation of this same historical phase, for which political autonomy overlaps and obscures in many ways a constitutive mode of relationship to nature. In other words, the rethinking of our understanding of the concept of nature over

the last two or three centuries has brought about an upheaval of our categories of thought that goes beyond the question of whether or not nature should be given a value of its own. What is in question, rather, is the way in which nature's material, spatial and productive properties have been incorporated into the dynamics of modernization as it has actually been shaped, in both its successes and its failures.

An environmental history of ideas

The following investigation is based on a number of changes to what is usually considered the basis for an environmental critique of the political order.

The dominant formulation of the ecological problem in philosophy takes an essentially normative form: it consists of elaborating principles intended to modify the hierarchy of values and, from an apologetic point of view, to convince the greatest number of people that we need to rebalance relations between humans and nonhumans. These values are generally rooted in socially situated practices, where new preferences, new attachments and new conceptions of justice and injustice are elaborated; but philosophical work is often confined to a purely normative retranslation of these practices: it focuses on principles first and foremost. Philosophy sets itself the task of shaping a pre-existing conviction about the value of nature in order to better justify that nature, rather than observing or provoking transformations in practices that relate to the forms of exploitation of nature.

One of the most important consequences of this theoretical perspective is that it tends to separate conceptualizations that are recognized as 'ecological' from others that are not. But this theoretical dissociation acts as a historical methodology for a great number of thinkers, since it supposes that one could write the history of ecological thought by taking as a guide the ethical conviction being promoted. The spontaneous attitude of the ecologist to the history of ideas thus consists in producing a narrative staging the gradual emergence of ideas whose prototypical form is provided by environmental ethics, by the critique of technological instrumentality, or by other paradigms that seek to relativize or eliminate anthropocentrism and objectivism in philosophy.[11] The main limitation of this type of work is that fundamental environmental intuition works only partially. Indeed, it must be admitted that this intuition consists in pleading for a systemic reassessment of the relations between humans and the material world, and thus making these relations a focal point of conceptualization. But if we follow this theoretical and historical track in a consistent way, it is impossible to organize a chronological survey in accordance with

the principle of similarity of ideas. Too often, indeed, the ecological history of thought retraces the steps of its own normative principles, which it observes as they gradually appear and which it follows back until they are dissipated in a too distant past. Another model sometimes replaces this paradigm of the gradual emergence of the same: the game of historical and geographical leap-frog in which John Baird Callicott, for example, indulges when he seeks ecological traits in a wide range of non-Western ideas, at the cost of decontextualizing certain statements that meet the requirements of resemblance.[12] But the underlying logic remains the same, since it is still the principle of identification that plays the role of historical methodology.

The *history of environmental ideas* thus wagers on an intellectual separatism for which a certain tradition of thought is set out in successive touches to the canvas, and differs from a common fund of moral and political thought that is implicitly considered as irrelevant. To this, one can contrast an *environmental history of ideas*, where the centrality of the relations between nature and society functions as a way of analysing all ideas, theoretical controversies and their history. The difference between these two patterns is that, in the second, the corpus that is most likely to appear relevant is now completely different and includes all conceptual operations mobilizing these relations, whether or not these operations are oriented towards the constitution of the environmental normative ideal. But we must recognize that, from the moment we leave the immediate past, the epistemic locus at the intersection of the natural and social realms is mainly occupied by philosophers, economists and sociologists who cannot be identified as environmentalists: it is not their consideration for nature that makes them relevant.

This is the second difference with the separatist model: historical enquiry is no longer oriented by the principle of doctrinal resemblance, but by the search for historical transformations that affect the relationship between the natural and the social realms in the history of thought. Before the galaxy of ideas and norms that could legitimately be called 'environmental' or 'ecological' was formed, and before social struggles were explicitly oriented towards these ideals, collective relations to nature were already subject to reflexivity and critical distance. It is these types of knowledge and these debates that we are likely to miss if we insist too much on the principle of identity, both as a historiographical instrument and as a basis for ideological recognition. Bentham's thought is one example of this problem. He has often been presented as an ancestor of the animal cause since, at the centre of his moral thinking, he placed the elimination of suffering in sentient beings – human or not.[13] But what is the value of this abstract normative principle if we separate it from the reflections of the same