

Six Centuries of Climate Debate

by Alexis Vrignon

From the very beginning of the modern era, Western societies have been debating over and worrying about the climate, its evolution and the responsibility of humans. On this topic, as on many others, the idea of a long prevailing great division between nature and culture is undermined.

À propos de : Jean-Baptiste Fressoz & Fabien Locher, *Les Révoltes du ciel. Une histoire du changement climatique XVe-XXe siècle*, Seuil 2020. 320 p., 23€.

The subtitle of *Les révoltes du ciel* is “Une histoire du changement climatique XVe-XXe siècle” (“A history of climate change, 15th-20th century”), but the authors, Jean-Baptiste Fressoz and Fabien Locher, have no intention of working in the field of historical climatology, which would involve documenting the stages of lasting changes in the global climate of the planet over nearly five centuries. The reader could look for a genealogy of scientific discoveries leading to the contemporary ‘global warming’ diagnosis, from Fourier to the work of the IPCC, via Svante Arrhenius or John Tyndall¹, but then again, this is not the perspective of the two authors.

¹ Svante Arrhenius, “On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground”, *Philosophical Magazine and Journal of Science*, Series 5, vol. 41, april 1896, p. 237-276; John Tyndall, “On the Absorption and Radiation of Heat by Gases and Vapours, and on the Physical Connection of Radiation, Absorption and Conduction”, *Philosophical Transactions of the Royal Society of London*, 1861, t. 151, p. 1-36.

Their environmental history project is different and involves a shift in perspective that makes it all the more interesting. Throughout the book's 16 chapters, 10 of which are devoted to the period from the French Revolution to the last third of the 19th century, they describe the "political, theological, imperial and scholarly contexts within which climate change has been perceived, analyzed, anticipated, feared, endured but also celebrated since the 16th century" (p. 221), demonstrating that, throughout this period, Western societies have debated climate change.

"Ten historical theses on climate change"

The book introduction presents ten "theses" on climate change in a few dense pages, to be expanded upon in the rest of the book. According to the authors, human societies have always been concerned with climate change—its manifestations and its causes—and the idea that it might be possible to act upon it (locally or globally) is by no means new. As a result, in the 18th century, the sometimes-fierce debates on these issues were not limited to scientific circles: writers and politicians also took part in them.

This work is a continuation of the reflections that the two authors (and, more broadly, the field of environmental history) have been pursuing for several years, emphasizing the fact that contemporary societies in no way have a monopoly on environmental reflexivity. In more ancient societies, there were debates and alerts about the consequences of human actions on the environment and their possible degradation. As a result, nineteenth-century societies did not act in this way out of ignorance or sheer blindness to technical progress and industrial development, but as a result of power struggles whose twists and turns need to be retraced.

Right from their introduction, and subsequently throughout the book, the two authors refuse to adopt what they see as a teleological scheme, according to which societies have gradually become aware of the reality of climate change and of its anthropogenic causes. Instead, they highlight the political and economic entanglements of this history, and in particular its links with European imperialism. On all these points—and the title of the introduction alludes to it—Jean-Baptiste Fressoz and Fabien Locher intend to clearly distinguish themselves from the positions taken on the subject by historian Dipesh Chakrabarty. In 2009, Chakrabarty proposed a very different approach in his much-quoted and much-debated article "The Climate

of History: Four Theses”², in which he argued that climate change was causing an anthropological break between past and future, which led to consider humanity first and foremost as a species, and not as various societies with political, economic or cultural power relations. For Dipesh Chakrabarty, the new climatic situation involves the end of the great division between nature and culture that has characterized modernity. For the authors of *Les Révoltes du ciel*, on the contrary, modernity is not characterized by this great division, but rather by a concordance of natural times and history. From the beginning of the modern era to the dawn of the 20th century, far from considering themselves separate from climatic phenomena and possible changes, contemporaries—whether they were statesmen, scientists, engineers or farmers—have discussed them: climatic action—the ability to change the climate—was an object of debate and interrogation for these societies, just as much as the major political developments of the time.

The climatic action of societies from Columbus to the Revolution

It is within this theoretical framework that the two authors demonstrate—with numerous references—that as early as the 15th century and the first European colonization, it was not incongruous to think that climates can change (at least on a local scale) and that mankind could play an important and possibly positive role in this process. At the time of Christopher Columbus, land clearing in the Canary Islands and Madeira fueled reflections on the possible transformation of tropical environments in order to make these new territories more suitable for European settlement. The first climatic reflexivity could therefore be of imperial essence, and the first colonization of the 15th-16th centuries could be central to the crystallization of the idea of human societies affecting the climate.

However, the reasons behind these climatic changes never became clear to contemporaries, giving rise to numerous controversies, which Jean-Baptiste Fressoz and Fabien Locher beneficially draw upon to write their book, in which the history of science plays a major role. Does land clearing have a positive or negative influence on

² Dipesh Chakrabarty, « The Climate of History: Four Theses », *Critical Inquiry*, 35/2, 2009, p. 197-222. It should be noted that, following the debates sparked by this article, the author partially amended his positions in « Climate and Capital : On Conjoined Histories », *Critical Inquiry*, 41/1, 2014, 1-23.

climates? Is the earth heading for inevitable cooling? What place does climate have in the history of ancient empires? These are just some of the questions that stirred the modern age, without contemporaries being able to settle these debates definitively. In all these modern-day controversies, it is striking to note that Christianity is not incompatible with the idea of human-induced climate change, blessed by Providence and thus sanctifying European expansion.

In *Les révoltes du ciel*, the authors give a central place—almost two thirds of the book—to the period from the French Revolution to the last third of the 19th century. They pay particular attention to the controversies surrounding the climatic role of forests. They describe the fear of the consequences of forest clearance. At a time when a bad summer could trigger subsistence crises, and when food shortages had not completely disappeared from the horizon of contemporaries, these debates were lively and intense, and left many traces in the archives.

From this perspective, Jean-Baptiste Fressoz and Fabien Locher also argue that France occupies a special place in the global history of climate change over the long term: they consider that, over long periods, more debates and more concerns were fostered there than elsewhere. With the French Revolution, climate warnings emerged from naturalist circles as part of an “early and radical politicization of the climate” (p. 79). Revolutionaries were concerned with how to regenerate the soil and the nation degraded by feudalism, and how to govern the rural masses by instilling in them a respect for trees—central to theories of climate—and for property. In this respect, the authors emphasize that the idea that representative systems were constituted by externalizing environmental issues to focus on the regulation of human relations is not in line with the historical processes that can be observed from the Revolution onwards.

The 19th century saw a shift from the optimism of colonization, which tended to consider climate change desirable for European expansion, to the anxiety of environmental collapse. Thus, in 1821, a major nationwide survey was launched in France on the question of climate change and man’s responsibility in the process. Conducted on a departmental scale, its results were disappointing, however, due to the weakness of empirical data. In the same period, French foresters gained influence by invoking the role of forests in climate regulation, following the creation of the *École Royale Forestière* in Nancy in 1824. The issue is all the more political in that it intersects with that of private property. Indeed, for the authors, the idea of climatic collapse served as a tool to govern popular uses of nature (particularly access to forests and

their resources) in France and in colonial areas, against the backdrop of the rise of liberal capitalism and the imperial revival of the 19th century.

A break at the end of the 19th century?

The book's focus on the revolutionary period and on the 19th century means that the authors do not deal with later periods—to which other works have already been devoted³—where the central question is that of scientific evidence of the role of industrial societies in global warming due to the massive release of greenhouse gases. Readers should not expect to find extensive coverage of the twentieth century.

In addition to enabling the authors to focus on lesser-known periods, this choice also highlights discontinuities and discordances within the industrial period. The book's thesis thus breaks with an implicit chronology according to which there is a fundamental unity in the period from industrialization to the 1970s, with the latter decade being the only real break in the way societies think of their environment. For the authors, the last third of the nineteenth century was a turning point, during which the issue of climate change became depoliticized and was no longer (for a time at least) the subject of controversy. As technical systems expanded and improved, and national and international communications became faster and easier, the fear of climate change causing famine faded from the minds of contemporaries. The impossibility of reaching a scientific consensus on the reality of climate change also played an important part in this process.

Jean-Baptiste Fressoz and Fabien Locher take a wide-ranging, well-documented look at the history of social climate action and its political, economic and cultural dimensions. The numerous and sometimes heated debates in European societies on the possibility and scope of anthropogenic climate change in the modern era reinforce the idea that the thesis of a grand division strictly distinguishing between nature and society needs to be reviewed in the light of new sources: by drawing upon administrative and scientific archives, alongside more philosophical texts, it is possible to deliver a different analysis of the environmental reflexivity of societies.

³ Stefan C. Aykut, Amy Dahan, *Gouverner le climat ? 20 ans de négociations internationales*, Paris, Presses de Sciences Po, 2015 ; Spencer R. Weart, *The Discovery of Global Warming*, Harvard University Press, 2008.

Although undeniably interesting, the avenues suggested by the two authors could be explored further, in particular through a more comparative approach. The interest of the sources used—the 1821 survey, in particular, comes to mind—leads the authors to concentrate much of their analysis on the French case, perhaps at the risk of postulating a French specificity that deserves to be put to the test. Likewise, new research devoted to non-European spaces would be welcome, to examine the way in which colonial societies may have perceived these phenomena. Such an approach would make it possible to avoid implicitly limiting environmental reflexivity to Western European countries, which is still too often the case in environmental studies. Finally, the break with the past at the end of the 19th century identified by the authors undoubtedly needs to be tested by more precise studies, in order to understand the—necessarily multiple—phenomena and forces that have led European societies to push climatic action to the background: do technical and agronomic advances indeed play the primary role the authors attribute to them? Are they sufficient to explain the disappearance of political debates that were very lively a few decades earlier? These are just some of the questions that arise on reading this book, which is also very wide-ranging in terms of the issues it raises: there is no doubt that it will inspire other researchers to come up with new answers.

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