

Choosing to Pollute

By Gwenaëlle Le Goullon

In an unprecedented global history, François Jarrige and Thomas Le Roux explore the political and scientific origins of pollution, and show that its globalization during the industrial age was in no way inevitable.

Reviewed: François Jarrige and Thomas Le Roux, *La contamination du monde. Une histoire des pollutions à l'âge industriel* (The Contamination of the World: A History of Pollution during the Industrial Age) Le Seuil, L'Univers historique, octobre 2017, 475 p.

François Jarrige and Thomas Le Roux's book on "the contamination of the world" provides an unprecedented synthetic history of global pollution. The study primarily covers the period from the eighteenth century until the 1970s. It appears at a time when there is still no university textbook dedicated to environmental history and the literature on this topic is vast and not easily available to non-specialists.

François Jarrige is an associate professor at the University of Bourgogne and Thomas Le Roux a research fellow at the CNRS. Both have participated in environmental history's recent takeoff in France.¹ This historical field explores in its various aspects the "history of the relationship between human societies and the rest of nature on which they depended."² Jarrige has mainly approached environmental issues through contemporary social history; Le Roux has worked on industrial damage and risk at the beginning of the first industrial revolution, at

¹ See Grégory Quenet, *Qu'est-ce que l'histoire environnementale ?* Seyssel, Champ Vallon, 2014.

² J. R. McNeill, "The State of the Field of Environmental History," *Annual Review of Environment and Resources* 35:1 (2010): 374. McNeill is one of the major figures of the second generation of American environmental history.

the cusp of the early modern and modern periods.³ Their new book devoted to "the contamination of the world" makes the instructive point that the globalization of pollution in the industrial age was a process that was by no means inevitable.

Wagering on a global history of pollution

Their new book is a synthesis of lectures delivered over several years at the École des Hautes Études en Sciences Sociales (EHESS), the University of Bourgogne, and Oxford. It also includes the results of their research, notably relating to the location and organization of polluting establishments in Paris at the dawn of the first industrial revolution and the reactions of working communities and labor movement activists to the technological innovations of the nineteenth century.

The book does not, however, confine itself to the case of France. It is a truly global history of pollution and pollution regulation, exploring every continent. The choice to operate at this scale aligns it with the "global history" movement and with "world histories" of various kinds.⁴ These global or world histories seek to resituate the objects of historical study from a planetary perspective, whether by studying phenomena at a global level, such as global warming or economic globalization, or by showing the connections between historical dynamics occurring at the global level and localized historical phenomena.

Both approaches can be found in this "history of pollution in the industrial age." It shows the transition from problems that were local and circumscribed, but which even then might span hundreds of kilometers (see chapters 1 and 2), to a generalized "contamination" of the globe over the nineteenth and twentieth centuries. On the one hand, the sources of pollution have multiplied to the point that they now cover the entire planet; on the other, their impact is no longer only confined to local or regional environments, but extends to the global environment as well: climate, the quality of air and water resources, species extinctions, and issues of public health. The presentation of this history of contemporary pollution at the global level is instructive and illuminating for citizens as well as for scholars. Similarly, the chronological narrative, which is consistent with the work's larger framework, makes it easier to follow an argument that is, at times, technical and difficult.

The book's format (473 pages in total), however, does not give it room to explore local case studies in detail. The numerous and wide-ranging examples found throughout the book

³ See, notably, François Jarrige, *Technocritiques. Du refus des machines à la contestation des technosciences*, Paris, La Découverte, 2014, and Thomas Le Roux, *Les Paris de l'industrie. Paris au risque de l'industrie (1750-1820)*, Paris, Créaphis, 2013.

⁴ See, notably, Patrick Boucheron, ed., *Histoire du monde au XVe siècle*, Paris, Fayard, 2009; Sylvain Venayre and Pierre Singarvelou, *Histoire du monde au XIXe siècle*, Paris, Fayard, 2017.

are always mentioned very briefly. There are few definitions or maps to help readers grasp the book's often specialized arguments. Similarly, the decision to present an almost exhaustive list of different kinds of pollution since the industrial age makes it difficult to show their specificities. Pollution arising from new energy systems is different from the kind that results from the growth and development of transportation, the agricultural revolution, and the new materials found in mass consumer products. But the book's goal is precisely to encourage readers to explore environmental history – to make this historiographical field as popular as fields that are much older and better known, such as political, military, and religious history.

This is why Jarrige and Le Roux's book lies somewhere between a textbook aimed at university students and a high-quality work of popularization directed at the broader reading public. The book offers attractive and varied illustrations, notably graphic documents that are grouped together in a central section. Yet their purpose is more illustrative than explanatory. In a similar spirit, the book has no bibliography. The authors' impressive bibliographical references can, however, be found in the footnotes, which are grouped together at the end of the book, where they take up nearly a hundred pages.

The new environmental regime

The work is divided into three chronologically arranged parts. The first is devoted to the medieval and, most importantly, early modern period. It allows one to understand the shift from the “old polluting regime” (p. 27) to the “new polluting alchemy” (p. 51). The change in the scale of pollution, as well as in the technologies that caused it, was accompanied by a new economic, political, and legal regime. Disputes between neighbors and conflicts over usage engendered by polluting activities were still adjudicated in terms of the general interest. The latter, however, was now redefined. The protection of health and the right to enjoy all the fruits of one's property were subordinated to the pursuit of national enrichment and respect for the property of major industrialists. The 1810 decree, which was nothing less than a “law for protecting polluters” (p. 93), was entirely emblematic of this shift. It allowed for the creation of dangerous and toxic factories near urban residences, like the gas factory located near Paris in 1817. Scientists, and most importantly chemists, played a preeminent role in this legal and political development, “by redefining health and unhealth and the boundary between the inconvenient and the unhealthy” (p. 102).

Part two specifically examines the role that scientists played over the course of the nineteenth century (1830-1914). Having claimed for themselves the role of experts, they produced research that resulted in the “naturalization of pollution” (p. 106). The tendency of this work was to see pollution as inherent in industrialization, which itself was presented as “progress” and thus obviously desirable and beneficial, even as it met with increasingly vigorous challenges and debate. This was true, for instance, of white lead, a lead carbonate

used in many industrial sectors and which underwent an exponential production increase during the nineteenth century in Western Europe and North America. The dangers of this product were perfectly well known, as can be seen in the warnings regularly issued by Parisian hospitals. The doctors of the Paris Health Council avoided the question of its danger and did little more than emphasize the importance of keeping science on its forward march, protecting French industry in a competitive environment, and allowing the resultant enrichment of the public treasury (p. 137-141). Many scientists and economists also sought to find technical solutions to limiting pollution and its harmfulness. Synthetic soda ash, which began being produced in France in the 1800s, dumped large quantities of hydrochloric acid into the atmosphere. These acidic vapors destroyed harvests over several kilometers surrounding Paris and Marseilles. The development in 1830 of a process for condensing this acid brought this pollution to an end. This condensed acid was not lost, but used in other industries, which demonstrated that industrial progress could be a virtuous circle. Nation-states and local authorities drew on these studies to bolster their support for polluting industries, even as they tried to limit their harmful effects. This was exactly the line followed by the French Health Councils, which were charged with monitoring, improving, and defending industrial establishments deemed dangerous for workers and residents (p. 139). The same ambivalence also pervaded civil society. These ambiguities explain in part why legislation and the legal system remained ineffective and were largely circumvented by industrialists.

The intensification of pollutions and regulation in the twentieth century

Part three shows that the twentieth century was both marked by legislation inherited from the previous century and by an exponential increase in pollution “due to wars, globalization, and the growth of industry” (p. 202). It began with the First World War, which considerably accelerated industrialization and the contamination of the world, and concluded in 1973, with the end of the *Trente Glorieuses* (the “thirty glorious years” of postwar growth). This period of strong growth was recently dubbed the *Trente Pollueuses* (the “thirty polluting years”⁵) by environmental historians, due to the contamination it generated across the globe. War and fossil fuels have also played a prominent role in globalization and the ever greater ravages inflicted by industry during the twentieth century.

Despite the emergence of regulation at the international and even global level, regulation aimed at limiting pollution has proved somewhat ineffective. Civil society has not remained passive in the face of these phenomena; resistance to pesticide, the omnipresent

⁵ Christophe Bonneuil, Céline Pessis, Sezin Topçu, eds., *Une autre histoire des “Trente Glorieuses.” Modernisation, contestations et pollutions dans la France d’après-guerre*, Paris, La Découverte, 2013.

automobile, and consumer society increased during the “1968 period” (p. 319).⁶ Yet it was in decline by the decade’s end. Perhaps this shift justifies the authors’ decision to stop in 1973, though they conclude by noting the persistence of a dynamic of generalized contamination beyond this date. The authors also explain this chronological choice by referencing the sheer amount of pollution released over the past forty years (p. 328) and the possibility that a new economic cycle--“the third industrial revolution” or “post-industrial society”⁷--has begun.

After finishing this narrative covering nearly three centuries of pollution’s history, the merits of a global perspective become evident. The presentation of a variety of conditions proves that all the continents follow the same chronological sequence and historical dynamic. And yet these phenomena also have their own distinct chronologies, forms, and effects. Consequently, focusing on a single territory, such as France or even Western Europe, cannot account for the complexity of these processes. The diversity of environmental configurations reminds us that there always exists a diversity of historical “possibilities.”

This diversity is consistent with the theme that the authors explore in the book: that the “contamination of the world”—that is, the globalization of pollution in the industrial age—was not an inevitable process. As a political and social fact, it cannot be viewed as the result of material determinism, but must, to the contrary, be seen as the result of power relations and collective decisions. Like any historical process, things could have been otherwise. Throughout the book, moreover, the authors emphasize resistance to the “contamination of the world” and the non-linear character of its history, which consists of oscillations, conflicts, and doubt. They show that this process was, in some times and places, slowed down, obstructed, and even eliminated. It is from this standpoint that the authors’ argument is not purely factual and scientific. Indeed, this historiographical demonstration suggests that even now, as we confront the colossal environmental challenges looming over us, we still have choices. While some damage may be irreversible, we can still break with the economic, political, and cultural choices that produced it.

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⁶ Geneviève Dreyfus-Armand, Franck Robert, Marie-Françoise Levy, eds., *Années 1968: le temps de la contestation*, Brussels, Complexe, 2008.

⁷ See, notably, Daniel Cohen, *Trois leçons sur la société post-industrielle*, Paris, Seuil, 2016, and Jeremy Rifkin, *La Troisième Révolution Industrielle. Comment le pouvoir latéral va transformer l'énergie, l'économie et le monde*, Paris, Les Liens qui libèrent, 2012.

