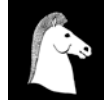




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Book Review

Ein Recht auf saubere Luft? Umweltkonflikte am Beginn des Industriezeitalters

Michael Stolberg

Fischer, Erlangen, 1994

Air pollution is a serious problem that confronts modern industrial societies. The controversy about handling the consequences of such pollution has ensured its place on the political agenda. Bearing this in mind Stolberg examines the history of air pollution as a scientific, social and political issue from 1800 to 1860. His method pays: in history, patterns of perception and approaches to the problem are developed in conjunction with the manner of social and political confrontation.

In *Ein Recht auf saubere Luft?* Stolberg addresses two main questions: (1) How was air pollution perceived against the background of contemporary understanding of human nature and the natural world? How was pollution tackled by scientific research, social conflict, and technical and political solutions? (2) In what ways did the different approaches to dealing with air pollution and the conflicts it brought about express cultural, economic and social processes in the affected societies, Germany, Italy, France, Belgium, and Britain?

Michael Stolberg is a university lecturer in the history of medicine and medical sociology at the Technische Universität München. The book under review here was approved by the Ludwig-Maximilians-Universität München as his doctoral thesis in history in July 1994. As such, the dissertation combines both macro- and microperspectives: chapters that offer a general survey of the discourse about air and its pollution (air and its perception, legal regulations, technical solutions) alternate with deep inquiries into the three conflicts sparked by air-polluting factories in Bamberg (Germany), Prato (Italy) and Floreffe (Belgium). The well-rounded chapters are arranged in a loosely chronological order with the final part of the book focusing on the role of the experts involved in the theoretical and practical development of cases for and against air pollution.

Chapter 1 covers the early history of air pollution and perception before 1800, based on medical encyclopaedias of the time and modern literature, including Stolberg's own published research material. Air, one of the four basic elements, was seen in ambivalent terms: it played a fundamental role as a prerequisite of all life, but at the same time was a constant source of danger. Not only did 19th century society fear the smoke generated by heating and burning and early industries, as we might assume from today's viewpoint, but also judged the ill-smelling miasma coming from decomposition of organic material to be responsible for nearly all illnesses. This conception – incorrect as it is – was deeply rooted in Hippocratic views. A constant factor of 19th century middle-class culture, the miasma theory was practically relevant and determined the individual's perception (understandably enough; the organic smell in the cities at the time must have been dreadful and overpowering). Yet at the time explanations based on empirical knowledge and the early understanding of air chemistry existed. Stolberg, by presenting this early history of his topic, makes clear that air pollution was not a new phenomenon in the 19th century. Nonetheless, air pollution was different then: industry as a polluter became a major culprit; emissions could not only be smelt, but also seen; its effects on not only human health but vegetation were clearly visible.

Chapter 2 investigates the hardcoal heated glassworks in Bamberg, Franconia, in 1802/3, and the conflict surrounding the project. The arguments the opponents of the glassworks put forward centred on three aspects: the health and well-being of the city's

population would be in peril; the surrounding natural scenic beauty would be destroyed; and economic disadvantages were to be expected because the value of the area would be diminished. Further motives, unrelated to environmental questions, intensified the struggle. In a note sent to the Bavarian king, 108 Bambergers (mainly master craftsmen) demonstrated their collective protest: the urban society defended its common, traditional craftsman's values against modern types of economic activity and new rising social groups. The entrepreneurs and project planners emphasized that the glassworks would have created new jobs, but had to learn that public opinion against the project urged the Generalkommissariat not to allow the establishing of the glassworks (although its members supported the plans).

The conflict over the glassworks is well documented in the Bamberg archives, newspapers and pamphlets, as well as in *Hygiea*, a contemporary scientific periodical. And this is where Stolberg's book becomes invaluable and authoritative. Although Wiesing has already dealt with the matter in his 1987 book, as he did not research such archives, his examination lacks profound knowledge and leads to erroneous conclusions.

In Chapter 3, Stolberg examines 19th century European legislation and administration concerning air pollution, analysing individual countries' laws and regulations and consulting contemporary and modern literature. Belgian and Bavarian legislation is dealt with for the first time in any book in the literature. It was Francois Emmanuel Fodéré who first formulated a legal claim on clean air, in about 1800. The function and legitimacy of public concern changed with this claim: no longer did health policy primarily serve the governmental powers, but the individual. Stolberg develops three models of how European countries rose to the challenge. (1) Air polluting industries were supervised by local police authorities, deciding in each case individually whether the annoyance was unacceptable. (2) In 1810, France categorized all existing trades in a nation-wide law. As they then had to be licensed to conduct their particular trades, the introduction of technical stipulations was possible. Later, Austria, Prussia, Saxony and Bavaria followed France's example. (3) Britain avoided restricting industry in its choice of sites, aiming instead at reducing the emissions by orders or legislation.

The 1844-51 struggle surrounding the copperworks in LaBriglia near Prato, Tuscany, is the focus of Chapter 4. Stolberg reveals the debate and hostilities, unknown till now, between the townspeople of Prato on the one hand and the industrial entrepreneurs on the other, by his access to excellently preserved and authoritative sources: publications of the entrepreneurs, counter-representations and manuscripts, and records from the private archives of the Mayor of Prato, including a chronology of the proceedings and corrections in the edition of the supporters. The expert opinion procured by the great landowners in the valley of Bisenzio (who opposed the copperworks) said man and nature were endangered. Nevertheless, the site was officially approved by the government who relied on medical opinion which excluded the possibility of any damage. A few months after the work's opening, a private association was founded under the leadership of the Mayor of Prato. Its aim was to achieve through legal means the closing of the copperworks. One hundred and twenty inhabitants of the valley of Bisenzio supported the association's intention because of damages to their crops. Many other expert opinions, among them one procured by the government, were delivered in court, but could not help decide the case scientifically, in spite of (or because of?) the gathering of masses of material and presenting results of chemical research. By reconstructing the environmental effects of the copperworks using present-day knowledge, Stolberg concludes that the works did probably cause damage (thus explaining the vociferous protests that culminated in

shootings at the site). Once again motives of support and opposition to industrial progress can be found in the background: the works symbolised both the hopes for accrued benefits and fears of future social instability in the process of industrialisation; the localism and pride of a traditional centre of manufacturing ('campanilismo') was strained by foreign speculators; and most importantly, there were the considerable social and political tensions within Prato around 1848 which kindled the resistance of the educated and aristocratic citizens.

In scientific debates, a certain bias towards one view or other can be stated; the experts could have been given to interpreting scientific findings in favour of their clients. Yet it is impossible to prove a parallelism of political alliances and partiality of the scientists in the Prato conflict. They found themselves in a fundamental predicament: conclusions concerning the connection between (a) cause and effect and (b) exposition to toxic agent and typical vegetable changes are (always) merely statements with a certain degree of probability. In the end, it is all a matter of definition. Which group tried to monopolise the power to define the acceptable standards of pollution and thereby cut common sense down to size? Stolberg does not leave a doubt: the experts.

The scientific efforts to explain pollution damage and to prevent pollution by technical facilities is documented in Chapter 5. Stolberg's sources are contemporary scientific literature and, in some instances, parliamentary papers. Doctors were joined by chemists and pharmacists in their research; practitioners also contributed important solutions. During the 19th century, knowledge about the effects of smoke increased. Scientists distinguished between parasitic damage to vegetation and that resulting from exposure to sulphuric acid. In Tharandt, Saxony, the agricultural and forest scientists were concerned with research on the ecological consequences of deforestation. The two main technical measures taken to keep the air clean were construction of higher chimneys and the development of condensation techniques. Nonetheless, the technical 'solutions' could lead to unforeseen and yet more serious consequences.

Chapter 6 describes the 1849–56 conflict encompassing the soda works at Floreffe, Belgium, based mainly on documents from the archive in Namur and certain contemporary publications. From this material Stolberg offers new insights into a case that is today sometimes mentioned in works on environmental history. On one side were the 54 objections raised during the legally prescribed public inquiry; on the other were 30 members of the middle-class who supported the project for its benefits to the working class. The regional administration permitted the establishment of the factory, though insisting on up-to-date condensation techniques. As the protests did not cease, engineers were sent to examine the site. Following their recommendations, the Ministry of the Interior tightened their stipulations for soda production. However, the protests, now also directed against three other chemical plants, developed into a nation-wide movement: to the protestors, the extensive crop damage (potato rot) was related to the chemical plants' emissions. A detailed, expert commission in 1856, which included the results of a chemical and botanical subcommission, conceded (unanimously) that the emission of acid was causing damage to the surrounding areas, though it mainly recommended technical improvements which did not jeopardize the economic success of the Floreffe site.

The strategies pursued by both sides during this conflict were quite similar to those we know today: the parties were well prepared for the opposing lines of arguments; Floreffe was judged as a precedent for the enmity between investors, striving for liberty in their economic enterprise, and legitimate public interests.

The final chapter of *Ein Recht auf saubere Luft?* illustrates the professional interests and political functions of the scientific experts. Stolberg does not interpret his results as evidence for a totalitarian rule by experts in a particular field of scientific study. Their results were too contradictory to invalidate each other. But the decision-makers used scientific arguments selectively. Taking this into consideration, it was decisive for the true influence of the experts on public debates to what extent their judgement concurred with the already established opinion of either side. Stolberg wonders how the supporters of this model of industrialisation managed to make the public accept the pollution of air and water as an inevitable and necessary consequence of progress, wealth and employment. Applying the ideas of Antonio Gramsci, Stolberg shows that certain social groups gain power not only by access to official positions, but by obtaining 'cultural hegemony'. The 'intellectuals' play an important role in this process of achieving invisible government: they are experts in legitimising and specialists in formulating and spreading plausible worldviews; their work is to organise consent. Scientific expertise, Stolberg points out, served two purposes: first, the experts were involved in developing legal and institutional frameworks to channel public resistance. In the end it becomes ineffectual. Regulators and institutions mainly promoted entrepreneurial interests by safeguarding investment activities. Stolberg demonstrates that they only pretended to secure public interests and refutes Mieck's positive judgement. Second, by shifting debates from the level of opposing fundamental values and political convictions to the level of different scientific and technical problems, the struggles were depoliticised. Once the scientific monopoly to read the signs of environmental change became accepted, laymen were disqualified. This reinterpretation has been influential ever since, because it reduces possible solutions: the option to fundamentally redesign economic policy can hardly be imagined.

In *Ein Recht auf saubere Luft?* Stolberg presents an excellent study. It is easy to understand, the choice and arrangement of topics are nigh on ideal, and it is fascinating reading. His investigation is thorough and analytically fruitful. Open to a variety of explanations, all based on careful archival research, Stolberg again and again interconnects the chapters before finally presenting his interpretations. They are well reasoned, but nevertheless debatable. Notwithstanding this, Stolberg's most valuable contribution is that he adds three well-documented environmental conflicts to the very few we know already. Any future researcher of environmental issues will ignore this masterpiece of European environmental history at his peril.

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