Business Leadership in the Movement to Regulate Industrial Air Pollution in Late Nineteenth and Early Twentieth Century America

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Grassroots movements to regulate industrial air pollution took place in many industrial cities from the end of the Civil War to the early twentieth century America. They proceeded in two phases. In the first phase, which peaked during the 1870s, the proponents of regulation focused on forcing the owners of slaughterhouses, packing plants, rendering plants, and livestock yards to abate their disgusting stench. In the second phase, which started in the 1880s and 1890s and continued into the twentieth century, popular concern turned to a new kind of air pollution problem: the coal smoke pouring out of downtown chimneys and factory smokestacks.

Both movements were popular movements that usually involved a variety of interest groups, including business organizations, working in collaboration with each other. Both were partially successful, with activists achieving important victories in many cities without, however, eliminating the air pollution problems they hoped to solve. Those who fought against the stench problem in the 1860s and 1870s sought to protect the people from the property damage as well as the discomfort and disease that came from living near the pools of putrefying blood and the piles of decaying animal matter and manure around urban slaughterhouses, rendering establishments and livestock yards. The anti-smoke movement’s goal was to eliminate the dark pall of thick, black, greasy coal smoke that covered urban skies and made its ways into homes and offices as a result of the burning of vast quantities of soft bituminous coal for power and heat.

The smoke choked the people living and doing business in many U.S. cities, putting a film of soot on buildings, clothing, personal belongings, and commercial goods, as well as peoples’ lungs.

This article addresses an important but currently still poorly understood aspect of how these movements were mobilized and carried forward: the leadership role that businessmen played in them. For the most part, the task of writing the history of the movements to regulate air pollution in this period has fallen to historians who have been predisposed to play up the leadership of other groups of reformers and downplay the leadership of businessmen and their organizations. With a few notable exceptions, the history of slaughterhouse stench regulation, for example, has been written by public health and legal historians for whom this kind of regulation is a small part of the larger drama of nineteenth century sanitary reformers’ long and heroic struggle to protect public health in the nation’s terribly unsanitary cities. Though these historians sometimes note, where relevant, the help that some business reformers provided the sanitary organizations who led the health reform movement, they frame their narratives of these anti-stench movements as battles between the forces of good, the sanitarians, and the forces of evil, which include (especially for public health historians) public apathy and ignorance of “sanitary science,” as well as the enemies of stench regulation, the butchers and owners of packing houses, rendering house owners, and other miscreant industries who viewed such regulation as a threat to their livelihoods and were determined to fight it to the bitter end, and their allies, the corrupt politicians who treated sanitation as lucrative extensions of their patronage machines.

The urban and environmental historians who have taken up the history of the fight against smoke have done something very similar. They, too, have cast the grassroots struggle for smoke regulation as battles of good versus evil, with the villain role played by the entrenched business interests that sought to thwart regulation to protect their profits at the expense of a broader public interest. For Robert Dale Grinde, the first historian to study nineteenth century smoke regulation in any depth, and more recently, Harold Platt, Angela Gugliotta, and David Stradling, the heroes of the war against smoke are the groups of mostly upper class women who did battle with the business interests who opposed regulation. These historians credit public health reformers, civic improvement groups, and mechanical and boiler engineers with playing a valuable supporting role, helping the women prepare ordinances and mobilize public support for regulation and, in the case of engineering societies, developing smoke abatement technologies. They also acknowledge, at least in passing, that business-led reform organizations also took part in these movements. However, they characterize the leadership role played by men (the engineers as well as business leaders) as conservative and limiting compared to the women's—and sometimes even hostile to the goal of smoke abatement. They emphasize that the men often sought to enact regulations that were less strict (and so more easily complied with) than what the women reformers often demanded. They are also critical of the male leaders because they were more interested than the women in providing technical assistance to the owners of smoke boilers and furnaces to help them come into compliance with the requirements of smoke regulation and so were less prosecutorial in their approach to enforcement. Platt and Stradling are particularly hard on the business leaders who got involved in these movements, rarely identifying business-led organizations as such, except when criticizing their impact.


Metropolitan Board is important in the history of pollution regulation because its leaders used their unprecedented regulatory powers to impose tough zoning regulation and innovative technology-based pollution abatement regulation on the hundreds of butchers, packing houses, fat renderers, soap manufacturers, bone boilers and other animal waste processing businesses in New York City, as well as to pressure the city’s manufactured gas companies into installing technologies to abate their stench nuisances.

The movement to establish this powerful new health board began in the late 1850s. It was spearheaded by public health reformers concerned about the role stenches and nuisances played in the city’s skyrocketing death toll from epidemic disease. The physicians who led the movement agitated unsuccessfully for years for the establishment of a government health agency with enough power to deal with New York City’s mounting sanitary problems and skyrocketing death rates. They finally turned their losing battle around in the late 1850s by reaching out beyond the boundaries of the medical profession and joining forces with influential business and professional reformers who were fighting the corruption and machine politics of Tammany Hall. This alliance led to the formation, in 1859, of the short-lived New York Sanitary Association, the first public health organization in U.S. history in which lay people constituted the majority of members and office holders. It led to the formation of a new group, the Citizens’ Association of New York, in 1863.  

The decision to work with the city’s business leaders proved to be an incredibly politically astute move on the public health reformers’ part. Some of the most talented, politically and legally savvy members of the city’s business and professional elite used their connections to those in power in state government to lobby for the legislation that led to the formation of the Metropolitan Board. They helped the public health reformers prepare increasingly well-crafted bills to advance their cause, as well as sophisticated legal arguments to support enacting the new board with strong regulatory powers. Perhaps most importantly, they supported elaborate sanitary survey of the city conducted by a committee of the Citizens’ Association physicians. Modeled on sanitary surveys being conducted in England to document the city’s many public health problems, this ambitious project not only produced the detailed information the reform leaders used in testimony before the state legislature to advance their cause, it also provided the fodder for a well-orchestrated publicity campaign to publicize the survey’s findings and whip up public support for the legislation that finally led to the passage of the legislation that created the Metropolitan Board.  

In a sign of how intimately involved the business community was in this struggle, the state legislature appointed Jackson Schulitz, a major figure in the city’s leather industry, as the first President of the Metropolitan Board. He led the Board’s effort to impose tough new regulations on the slaughtering and animal waste processing industries. The regulations forced these trades to move uptown above 40th St and as well to install stench abating technologies in their establishments, like running water and asphalt floors and rendering tanks equipped with seals and condensers and other mechanisms for abating stenches.

The business community’s role in the regulatory process was hardly a love fest. Many butchers, fat melting, soap makers and the like fought bitterly to avoid having to comply with the Board’s stench regulations. Angry tradesmen sued to stop the Board from enforcing its regulations, embroiling the Metropolitan Board in litigation that dragged on for years. The regulations reduced stench pollution in New York City, but did not come close to eliminating it. Even the most advanced model sanitary abattoir built in the city in response to the Metropolitan Board’s efforts was less than perfectly stench proof and many lacked facilities for on-site waste processing, a feature particularly prized by sanitary reformers. Nonetheless, what is interesting is that business reformers did so much, at their own expense, to help public health reformers get the state to create the Metropolitan Board and further its efforts to reduce the stench nuisance. A leather merchant, a member of the animal waste processing trades, led Board’s regulatory initiatives during its crucially important first year. Some in the meat and related industries did more than comply with the Board’s regulation. They went beyond compliance and established sanitary abattoirs with facilities for stench abatement that, while less than perfect, went far beyond the Board’s regulatory requirements.

A similarly complex picture emerges in the history of air pollution regulation in Chicago, where business reformers also had a powerful impact. Even more than the New York Citizens’ Association, which seems to have been active for only a few years, the Chicago Citizens’ Association epitomized the business-led, environmental reform groups that are the focus of the survey result in the publication of a 17 volume report as well as Citizens’ Association of New York, Sanitary Condition, a 360 page volume that summarized the survey’s results and made the case for public health reform.

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This article discusses the Chicago Citizens' Association and its role in advocating for the regulation of industrial air pollution. During the late 19th and early 20th centuries, Chicago faced severe air pollution issues due to industrial and commercial activities. The Chicago Citizens' Association played a significant role in raising public awareness and pressuring the municipal government to enact regulations to control air pollution.

The Association was led by Gianni Rosan and Mary Hackman, who were influential in organizing public support for stricter regulations. They led a campaign to address the problem of smoke pollution, particularly from the numerous factories and industrial establishments in Chicago. Their efforts included legal action, public speeches, and media campaigns to educate the public and pressure elected officials to take action.

In the 1890s, the Association worked to secure legislation that mandated the installation of smokestacks and the requirement of smoke abatement devices. They also lobbied for other measures to reduce industrial pollution, such as the establishment of a smoke control board and the enforcement of smoke regulations.

The Association's activism led to significant changes in the city's environmental regulations. The establishment of the Chicago Board of Health and the adoption of smoke regulations were key outcomes of their efforts. These regulations aimed to reduce the amount of smoke discharged into the atmosphere, thereby improving air quality and public health.

The Chicago Citizens' Association's work was a precursor to modern environmental activism. Their initiatives laid the groundwork for future efforts to address pollution and advocate for a cleaner environment. The Association's legacy continues to inspire contemporary environmental groups and activists in Chicago and beyond.
reformers supported business initiated regulatory initiatives by staging events that publicized the harm done by smoke and the need for reform. In St. Louis, for example, the most important impetus for smoke regulation occurred in 1891, when the leaders in the city’s business community and government, including the Mayor, convened a large meeting of “prominent citizens, representing fifteen city clubs and commercial bodies” to discuss the smoke problem and find a solution to it. This group appointed the committee of engineers who developed the smoke ordinances passed in 1893, the first enacted in St. Louis, which required businesses to abate their emission of “dense black and thick gray smoke,” while creating the city’s first smoke regulation agency (the St. Louis Smoke Commission). The members of the Wednesday Club, an elite women’s club, helped get the ordinances enacted by helping the men mobilize public support and lobby city council members. After the ordinances were enacted, Wednesday Club members also helped officials in the newly created Smoke Abatement Department enforce their provisions by deploying members to serve as observers who reported on violators. According to historians Joel Tarr and Carl Zimring, the “ordinances appear to have been relatively successful in reducing some of the worst smoke nuisances” – until 1897, when the state Supreme Court invalidated them.  

In other instances, the women initiated anti-smoke crusades. Typically, however, they quickly realized they could not succeed on their own and moved to enlist male business leaders in their cause. Like the public health reformers who persuaded the New York State legislature to create the New York Metropolitan Board of Health, they reached out to business-led reform organizations and professional organizations, as well as individual business leaders for help for strategic reasons, well aware that they needed their political clout – and their technical expertise – to achieve their goals. And time and time again, in city after city, the men and their organizations rallied to the anti-smoke cause, constructively working with the women – not always instantly, but in sufficient numbers and passion to make a difference.

For example, in Cincinnati, in 1904, after years of desultory, unproductive discussion and complaint within the business community, fed up leaders of the city’s Woman’s Club and local health reformers began a crusade to force the city to enforce its almost 25-year-old, but long dead letter, smoke ordinance. They soon realized that they needed to bring powerful business leaders into the fold if they were to be effective, and so two years later, in 1906, they formed the gender neutral Smoke Abatement League. The League counted the presidents of Proctor and Gamble, Stearns and Foster, as well as companies like the American Smelting & Refining Co. and the Cincinnati Milling Company, and other important manufacturing firms as members and financial backers, as well as Charles P. Taft, the editor of the Cincinnati Times-Star. These members’ political clout gave the League the power to play an important role in strengthening smoke regulation in the city into the 1930s. Early on, it hired a superintendent to investigate smoke problems and make citizens’ arrests of offenders. After the city acceded to its demands and appointed this man as its Chief Smoke Inspector, it deployed members to watch towers to identify and document violations for nearly fifteen years.

15 Tarr/Zimring, Struggle for Smoke Control, pp. 202-204
16 Stradling, Smokestacks and Progressives, pp. 52-55, 211 (n. 40). See the lists of “Subscribers and Donors” in the League’s annual reports for names of individual and corporate members. For a first person description of how League members helped the city Smoke Inspector enforce the law see M. Nelson, Smoke Abatement in Cincinnati, in: American City 2, January 1910, pp. 8-10.
17 Other problems resulted from the technical flaws and limitations of available smoke abatement technologies, the administrative difficulty and cost of regulatory enforcement, the vicissitudes in politics, and the exclusion of residential coal furnaces and boilers from the regulations.
There was no rest for the weary, however. The new ordinance immediately sparked an intense backlash from the members of Pittsburgh's business community who were not in the anti-smoke fold. The resulting litigation led to a state court decision that declared the 1906 ordinance an illegal abuse of the city's police power, forcing the city to revert to the much weaker 1892 ordinance. Undeterred, the men and women in the anti-smoke camp regrouped and waged a new campaign to persuade the state legislature to pass a bill that officially authorized Pittsburgh to regulate smoke. This law was passed in 1911. The city then passed a new ordinance that provided for professional inspectors and other much needed enforcement mechanisms. This ordinance was much stronger and more enforceable than the 1892 ordinance and did a great deal to help clean up the smoke emanating from commercial buildings. But it was weaker than the 1906 regulation, because despite significant support from the business community, the anti-smoke forces were not able to replicate that earlier, very hard won success. Caving in to the pressure of angry manufacturers, the city council exempted most of Pittsburgh's factories from its strictures, setting the stage for many more years of struggle to extend and further strengthen smoke regulation. 

II. The Challenge of Constructing a New Interpretive Frame

It would appear at least at first glance, to be a relatively easy, straightforward thing to articulate a new interpretive frame for the history of air pollution regulation in late nineteenth and early twentieth century America that addresses the concerns outlined here: simply add reform-minded businessmen and their professional and civic organizations to the roster of people and groups that spearheaded the movements to regulate smoke and packing and rendering house stench. Complicate the story a little by showing how these early environmental movements divided the business community and by probing the creative way in which the desire to control some kinds of industrial air pollution led some businessmen to develop productive political collaborations and partnerships with reform-minded members of their city's medical communities and, later, upper middle class women reformers.

When we take this more complex narrative as our frame, we can begin to interrogate these early anti-pollution movements in new ways. Historians have looked quite closely at some of the women who led the urban smoke crusades. What about the business leaders who worked so hard to empower government authorities to regulate industrial stench and smoke? Who were they? What distinguished them from the far more numerous members of their communities who actively opposed regulation or who refused to take sides in the battles to clear the air? What motivated the activist businessmen to take on such a controversial problem? Were most driven primarily by their own economic interests? By their wives? Or were they primarily motivated by a more altruistic and economically self-sacrificing desire to solve serious urban problems? How hard was it for them to take on their fellow businessmen in these battles?

It is beyond the scope of this article to offer a definitive analysis of these issues. What I will say, however, is that the answers will be complex and ambiguous. It will not be possible, for example, to drop the businessmen who supported smoke regulation into clear cut, one-off categories based on whether they were merchants or manufacturers, big businessmen or

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20 Rowan, Businessmen Against Pollution, p. 358.
22 Ibid., pp. 240-244; O'Connor Jr., History of the Smoke Nuisance, p. 354.
Business Leadership in the Movement to Regulate Industrial Air Pollution

for manufacturers and commercial building owners to embrace the idea that it would be a good thought to enact regulations that would have required them to choose an abatement technology and install it. Nevertheless, some manufacturers and real estate operators played important roles in early urban smoke crusades. Why?

To answer these questions, historians must look beyond the logic of economic theory and probe more deeply the personal economic situations, social relationships, and life experiences of the individuals whose activism they want to explain, as well as the kinds of business they owned or managed, their professional backgrounds and the availability of abatement technologies suitable for use on their properties. The factors behind the business community's leadership and co-leadership of movements to regulate slaughterhouse stenches were as varied as the individuals involved and the cities and the times in which these movements took place. Thus, for example, while the businessmen of the Chicago Citizens' Association were driven into their fight to force the city's rendering and packing houses to comply with Chicago's sanitary ordinance by outrage at their disgusting odors and fear that these smells represented a serious threat to public health, the businessmen who helped New York City's public health reformers found the New York Citizens' Association and lobby for the establishment of the Metropolitan Board of Health were reacting (at least in part) to the Civil War draft riots. They believed that sanitary problems were contributing to social unrest in the city and hoped that by improving living conditions, they could make the city a less volatile as well as healthier place for the populace to live. In contrast, the businessmen who most determinedly helped New Orleans' public health reformers win passage of that city's slaughterhouse regulation were the capitalists who were competing with one another to obtain the franchise to build the abattoir that that regulation was going to force all of the city's butchers to work in. They sought to profit from a monopoly on the city's meat trade, while taking advantage of the money making efficiencies of large scale, assembly line production, proximity to a large integrated livestock yard, and on site facilities for utilizing slaughterhouse wastes.

The reasons businessmen got involved in smoke regulation were equally varied. Take, for example, the men who founded Chicago's Smoke Prevention Society. All but one (Brian Lathrop, President) were Directors of the World's Columbian Exposition. These men had not only created a joint stock company to raise the funding to pay the cost of the exposition, they had also invested their own money in the stock. With value of the stock, as well as their reputations and egos on the line, they were desperate to ensure that a black pall of smoke not rain on the fairground's beautiful "White City." This was not, however, the only reason they took leadership on the smoke problem. They were civic leaders, not just business leaders. Like many Chicago businessmen, they were members of groups like the Citizens' Association, the

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24 Rosen, Businessmen Against Pollution, pp. 352-354. Uekötter, Divergent Responses, pp. 657-658. One reason economists give for business interests to refrain from supporting regulation, despite the benefits of smoke abatement, has to do with the free rider problem. Each boiler owner could enjoy cleaner air at no cost to him or herself, simply by letting all the other owners of smoking boilers do the cleaning up. In other words, each could "free ride" on the abatement activities of the others. See Rosen, Businessmen Against Pollution, pp. 361-362. Uekötter provides additional insight, pointing out how relatively small a part of a businessman's operating expenses coal costs usually were, how disinterested most businessmen were in what happened in their boiler rooms, and ignorance about the economics benefits of more efficient coal combustion. Uekötter, Divergent Responses, pp. 645-646.

25 Davis/North, Institutional Change, pp. 15-17; Rosen, Businessmen Against Pollution, pp. 361-362.

26 Uekötter, Divergent Responses. For an example of the research that supported this claim see J. O'Connor Jr., The Economic Cost of the Smoke Nuisance to Pittsburgh. Smoke Investigation Bulletin No. 4 of the Mellon Institute of Industrial Research and School of Specific Industries, Pittsburgh 1913.

27 These problems are some of the reasons engineers were so insistent that government regulators provide technical assistance to polluters to help them come into compliance with smoke abatement ordinances. Rosen, Businessmen Against Pollution, pp. 359-360, 365-366, 371-373, 379; Straffing, Smokestacks and Progressives, pp. 91-107. Uekötter, Divergent Responses, pp. 645-646, 663-670. For more on the research that led to the development of effective smoke abatement technologies, see Straffing, Smokestacks and Progressives, pp. 85-107.


30 Lohbi/Lurie, Slaughterhouse Cases, pp. 54-65, 84-88.
University Club, and the Union League that encouraged members to raise their sights beyond the everyday grind of making a profit in business by reading great books, supporting symphonies and art, and engaging in political reform and city beautification. At least two of SPS leaders had been actively involved in smoke abatement for years before the formation of the Society. Brian Lathrop, the SPS President, was a zealot for the smoke reform cause who had served on the Citizens’ Association’s Smoke Committee during the 1880s and would continue to take a leading role in smoke reform for years after the SPS disappeared from the scene. These men believed that cleaning the air would not only help ensure a successful exposition, but also enhance the image of Chicago as a good place to do business and thus provide long-term economic benefits in the form of new opportunities for the city’s entire business community.

Similarly, while it is undoubtedly the case that some of the businessmen who supported Pittsburgh’s women-led anti-smoke crusade were strongly encouraged to do so by their activist wives, they were also inspired by Andrew Carnegie. In his pivotal 1899 peroration in favor of smoke regulation, Carnegie declared that he had come to believe that Pittsburgh’s ability to continue to advance to the ranks of a great city depended as much on eliminating the smoke nuisance as on the continuing construction of “magnificent parks and coming boulevards, the zoo, the golf links, the conservatory, halls and hotels, picture galleries, libraries and orchestra” and other things “not material.” Calling for a savior – “a Westinghouse or [Professor] Brashear” – to work the miracle of our salvation from this nuisance,” Carnegie laid out a path to redemption whose seeming practicality captured the imagination of his listeners. With the supplies of natural gas that had cleared the city’s air for several years in the late 1880s and early 1890s exhausted, Carnegie argued that the solution to the smoke nuisance was manufactured gas “produced from our coal at the mines and supplied to homes in Pittsburgh in place of natural gas for all purposes.” He envisioned the establishment of a commission of “Pittsburgh’s able, well known citizens” who, after consulting the experts, would “purchase a vast field of coal on the river” and construct a model plant and the pipelines that would bring the invisible gas from the coal field to Pittsburgh and distribute it throughout the city. The speech was so inspiring that members of Pittsburgh’s Chamber of Commerce immediately established a special smoke committee. It joined forces with anti-smoke activists in the Civic Club to lobby for the passage of a new, more comprehensive and enforceable smoke ordinance. This collaboration led to the passage of the city’s ambitious 1906 smoke ordinance and, after the courts overturned that law, years of mostly business-led agitation for stronger smoke regulations.31

As a smoke reformer, Carnegie embodies the ambiguities and contradictions of business involvement in the smoke regulation movement that this article seeks to highlight. Carnegie was, of course, the owner of many of the iron foundries, blast furnaces, steel mills, and coke ovens that were blackening the skies around Pittsburgh. As Angela Gugliotta points out in her dissertation on the history of smoke and smoke regulation in Pittsburgh, Carnegie began experimenting with manufactured gas in his mills in 1891. Although he made a large investment in a manufactured gas powered mill in Bellefont, Pennsylvania, in 1892, however, he does not appear to have converted any of his existing plants from smoky bituminous coal to the fuel. The cost was too high. Nonetheless, he was not faking his conversion to the smoke abatement cause. While expressing confidence in his 1899 speech that inventive Pittsburghers would eventually be able to find a way to make the price manufactured gas competitive with cheap coal, he urged his listeners to persuade the city fathers to subsidize the new manufactured gas plant with public funds, until the costs came down enough for the plant to sell its power profitably without the subsidy. A notorious penny-pincher, Carnegie simply wasn’t prepared to convert his own operations to manufactured gas without subsidies, at least until the price came down, and not interested in other, more piecemeal forms of smoke abatement. And yet some manufacturers in Chicago, men who lacked Carnegie’s financial resources, were willing to invest in costly smoke abatement at their own factories and did so with great determination and enthusiasm, even when not required by city officials to do so, despite the cost and the technical difficulties.32

To explain the role of business reformers in late nineteenth and early twentieth century movements to regulate air pollution as fully as possible, historians will have to find a way to fit these paradoxes into an interpretive narrative that coherently addresses the sometimes ironic nature of their leadership. To further complicate things, it will also be necessary to relate some horror stories that call into question the very idea that businessmen could serve as authentic leaders of the anti-smoke movement. The most vivid example of such a debacle is the episode in Chicago’s history of smoke reform that Stradling and Platt both present as the truly iconic moment in the war against smoke: the women-led movement to force that city’s railroads to substitute electricity for soft coal as their source of fuel within the city limits by electrifying their terminals and tracks. Platt treats their ultimately unsuccessful movement as the defining moment in the history of smoke reform in Chicago. For Stradling it is the defining episode in the whole history of smoke reform in the U.S. It is an appalling story of betrayal as well as regulatory failure. I will briefly recapitulate it here, because it illustrates the compelling nature of the mainstream frame that demonizes business’s leadership role in smoke reform, as well as the challenges that historians face trying to responsibly evaluate and frame the role business leaders played as leaders of these anti-pollution movements.

The episode began in 1908 when a group of South Side women declared war on the Illinois Central’s filthy smoke pollution with attention getting parades, petitions, and threats that they would stop cleaning their homes and washing their children if the city did not use its power to solve the problem.33 Platt calls the South Siders’ movement the “revolt of the housewives” in Shock Cities. Like female smoke reformers elsewhere, the South Side women quickly reached out to Chicago’s male business community for help. They formed the Anti-Smoke League and quickly enlisted endorsements from what Platt calls a “diverse coalition of women’s clubs, neighborhood improvement associations, and professional groups” (i.e. business organizations). The women and their anti-smoke business allies also developed a good working relationship with Mayor Fred Busse, a former coal dealer, and his Chief Smoke Inspector, Paul Bird, and his inspectors, who had been installed in city government as a result of the previous business-led movements to regulate the smoke nuisance. Bird ordered a

32 Gugliotta, ‘Hell with the Lid Taken Off,” pp. 240-244, 247.
33 Ibid., pp. 241-243; Rosen, Businessmen Against Pollution, pp. 365-366.
crackdown on smoke ordinance violators. As the movement gained steam, the city council met to consider legislation to force the Illinois Central (IC) to abate its smoke. The IC responded by agreeing to burn cleaner burning, but very expensive, hard coal.

This victory in hand, the city council began debating a proposal to force all the railroads to abate their smoke. The high cost of hard coal, coupled with the success of railroad electrification in New York City led the council to replace the hard coal mandate with a more open ended ordinance that would also allow the railroads to eliminate their smoke through the electrification of their trains and their passenger and freight terminals. The huge up-front costs of electrification made this alternative to hard coal extremely expensive and even more controversial than the original plan, but it appealed to reformers who saw it as a way to modernize the city’s train system, while solving its smoke problem much more completely than a switch to burning hard coal ever could.¹

In 1909, the Chicago Association of Commerce (CAC), a business-led reform group that supported the smoke regulation movement, stepped into the fray. The CAC offered to undertake a study of the smoke problem to help the supporters of smoke reform make the positive case for electrification with documentary evidence of its benefits and technical feasibility. Such studies, like the Sanitary Survey undertaken by the New York Citizens’ Association and the reports the Chicago Citizens’ Association made on the terrible condition of the Chicago River in the 1880s, were often undertaken by reform organizations to document the need for regulation and other government initiatives. The CAC’s report, completed in 1910, concluded that electrification was both practical and economically feasible and recommended that it begin immediately.²

So far, the story aligns well with the new interpretive frame outlined above. An anti-smoke coalition that included both women and business leaders successfully pushed a city council to enact an unprecedentedly strong smoke ordinance. And – but this is a big but – before the CAC made this report public, its leaders double crossed the women and their anti-smoke allies. They decided to run the report by a number of railroad officials. Chicago was a major railroad hub, filled with the tracks and terminal facilities of all the nation’s many railroad companies. Taken aback at the cost of having to electrify their systems and seeing little or no economic or managerial advantage to doing so for their companies, simply to reduce smoke, and concerned that the U.S. Senate was beginning to look into the feasibility of electrifying the railroads entering Washington D.C., the leaders of the industry persuaded the leaders of the CAC to quash the report and begin a second, more “scientific” study, one that the railroads would generously fund. While keeping the original report secret, the CAC leaders and their railroad company allies persuaded the city council to postpone its vote on the regulation to force the railroads to abate their smoke until the study was completed so they could make their decision on the basis of new committee’s well-researched evidence of the costs and benefits of electrification.


The new committee studied the issue for four years – two more than originally planned. The women leaders of the Anti-Smoke League and their allies continued to press for electrification, but as the years dragged on and the city council waited for the Association’s report, their movement lost momentum, while the railroads, through their intermediary the Association of Commerce, gained the control over how the smoke problem and its possible solution would be defined. For them it was a question of economics, not public health or civic beauty.

The new report was finally published in 1915. Weighing in at an impressive 1177 pages and loaded with charts, graphs, and tables that gave it a distinguished air of scientific objectivity, it concluded that electrification was neither economically necessary nor economically feasible. Taking note of the committee’s well-researched conclusions, the Chicago City Council refused to enact an ordinance to regulate the industry’s smoke.³⁹

You can see why Platt and Stradling like this story. The Association’s betrayal of the women (and other) smoke reformers fits their framing of the history of smoke regulation perfectly. Women were good reformers; businessmen reformers were untrustworthy, self-dealing, and male. This framing makes sense in the context of this particular episode. The problem is that both historiographies projected its significance backward, allowing it to shape their interpretation of the earlier stages of Chicago’s anti-smoke movement, when reform-minded business leaders were the instigators of efforts to strengthen smoke regulation policy and enforcement. Platt characterized the Smoke Prevention Society (SPS) as a city beautiful organization, not a business organization, obscuring the fact that it was not only led, but also entirely composed of businessmen. Stradling relegated the work of the SPS to a mention in a footnote and did not discuss the Citizens’ Association’s role in the passage and enforcement of the 1881 smoke ordinance. He also said nothing about the role the business community played in the establishment of the city’s highly regarded Smoke Inspection Department, instead characterizing this improvement in regulatory capability as a power play by trained engineers to “shift power away from non-expert anti-smoke activists” to themselves.³⁹

Was the CAC’s betrayal of the smoke regulation cause emblematic of an historic turning point in the history of American smoke regulation? Did it mark the point at which reform-minded business leaders stopped working with the women and other more authentic anti-smoke leaders and became the enemies of regulation? It is certainly the case that the railroads’ mobilization of ostensibly “objective” scientific expertise, under the auspices of the reformist CAC, to “prove” that railroad electrification was not in Chicago’s interest had parallels in other developments in the response to industrial pollution in the early 1900s. A transition in the field of industrial hygiene began in the 1910s and 1920s when corporations started hiring their own physicians to study occupational disease among their workers.⁴⁰
Mining corporations also began hiring their own physicians and plant scientists around this time in order to conduct research into the impact of smoke on human health and help them make decisions that supported their employers' economic interests. It certainly seems plausible that many of the groups that had previously fought to limit smoke might have joined in efforts to mobilize support for regulation, with new industry coalitions advocating for tougher restrictions. This helped to make the political environment more favorable for the movement to gain traction in the 1930s. 

Regulatory bodies in this period also showed signs of being more effective in their efforts to regulate smoke emissions. The newly created Federal Trade Commission (FTC), for example, a government agency charged with enforcing the nation's antitrust laws, was able to this period to begin investigating and enforcing regulations against corporate cartels and monopolies, including those in the coal industry. This helped to create a more level playing field for competition and, in turn, helped to reduce the amount of waste generated by the industry. 

Finally, the movement to regulate smoke was also helped by the emergence of a new scientific consensus on the dangers of smoke pollution. As more and more research was conducted on the health effects of smoke exposure, the scientific community began to converge on the view that smoke was a serious threat to public health. This helped to create a sense of urgency among policymakers and the public, which in turn helped to spur action on smoke pollution. 

In short, the movement to regulate smoke was a complex and multifaceted one, with contributions from a wide range of actors and forces. But ultimately, it was the combination of these factors that helped to drive the movement forward and make it successful. The result was a significant reduction in smoke pollution, which had a profound and lasting impact on public health and the environment.
The point I want to make here is that business leadership of these movements was nothing new in the early twentieth century. Business’s involvement in grassroots movements to force industry to regulate its air emissions goes back to the movement to regulate slaughterhouse stenches in the late 1860s and 1870s and the early battles over smoke in Chicago. These movements were, for the most part, collaborations between business and non-business activists. The activists, whether businessmen, public health reformers, or women, worked together because they realized they needed each other and could help each other achieve their goals.

III. Conclusion

As the people who attended the 2008 meeting of the Business History Conference in Sacramento, California know, American business historians are struggling to figure out how to raise the visibility of the field in the post-Chandlerian era in a way that connects American business history with mainstream American history. I believe we can use the complex and controversial history of business’s positive as well as its negative role in the history of pollution regulation (and other kinds of environmental reform) to engage the interest of historians who study culture, politics, political economy, and the environment in the study of the history of business. It may also offer us something even more important—a way to engage the interests of non-historians who are looking for historical perspective on the struggles taking place today over climate change and the other increasingly serious environmental problems facing the peoples of the globe as a consequence of industrialization and the role that the so-called green business movement is playing in the development of regulatory and technological solutions to these problems.

Again, the question is how to most insightfully frame and interpret this history, in its complex entirety. The challenge is to find a balance that gives the positive leadership role played by reform-minded businessmen much more attention and credit than historians have yet provided, without creating a new frame that hides the negative role that business opposition played in preventing smoke reformers from achieving their goals—and that some business-led reformist groups played when they pressured the more radical smoke reformers to make politically expedient, but arguably unnecessary compromises and otherwise undermined and even betrayed their more activist, often female allies. Too much cynicism distorts the reality of businesses’ involvement in the anti-smoke movement. Too little cynicism is just as distorting. Finding the right balance will not be an easy task. Characterizing the role business leaders played within the grassroots movement that agitated for the regulation of industrial air pollution problems is difficult not only because their involvement was complex and often contradictory and because the movement’s successes, though real, were at best mixed, but also because the whole subject is so highly politically and emotionally charged today.

The bitter fights that have raged between business interests and environmentalists over pollution regulation since the 1960s not only influence public perception of business’s role in today’s battles over industrial pollution regulation, climate change, green chemicals policy making, natural resource conservation, and all the other environmental issues confronting society in the twenty-first century; they also affect how people, historians included, tend to view past battles. They breed an anger and distrust that can make it difficult to tell the story of business leadership in environmental reform in an even-handed way. They also breed incredulity on the part of audiences. This raises the stakes in the historical enterprise of narrating the business history of pollution regulation. The controversial nature of this topic must not, however, stop us. The whole history of the movement to regulate air pollution in late nineteenth and early twentieth century U.S. cities needs to be told.

Christine Meisner Rosen: Business Leadership in the Movement to Regulate Industrial Air Pollution in Late Nineteenth and Early Twentieth Century America

Abstract

This article concerns an important but currently still poorly understood aspect of the history of environmental reform: the leadership role played by reform minded businessmen in movements to regulate industrial air pollution in American cities between 1860 and 1920. For the most part, the task of writing the history of air pollution regulation in this period has fallen to historians who have been predisposed to play up the leadership of public health and women reformers, while playing down the role of business reformers and casting anti-regulation businessmen and their organizations as the villains against which the public health and women reformers struggled. This article will use an examination of movements to regulate industrial smoke and the stenches of the meatpacking industry in Chicago, New York City, St. Louis, and several other cities to tell a different, much more complex story, one that recognizes the business community’s conflicted role in these movements. It will show that, while it is true that business interests actively opposed regulation, often bringing it to a standstill, they also played crucially important, positive leadership roles in movements whose success often hinged on the ability of environmental reformers to forge broad coalitions. It argues that only by investigating the ambiguities of business’s complex role, including its leadership role, will historians be able to explain the political strategies that led to progress in these early movements to regulate industrial air pollution.

Keywords: Pollution regulation in the U.S. Business leadership in environmental reform

JEL-Codes: N 11, N 12, N 41, N 42, N 51, N 52, N 91, N 92, Q 53, Q 58, B 59

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Inhalt

I. Abhandlungen und Studien

Hartmut Berghoff and Mathias Mutz
Missing Links? Business History and Environmental Change................................. 9

Christine Meisner Rosen
Business Leadership in the Movement to Regulate Industrial Air Pollution
in Late Nineteenth and Early Twentieth Century America........................................ 23

Mathias Mutz
Managing Resources.
Water and Wood in the German Pulp and Paper Industry, 1870s-1930s..................... 45

Tyler Priest and Jason P. Theriot
Who Destroyed the Marsh?
Oil Field Canals, Coastal Ecology, and the Debate over
Louisiana’s Shrinking Wetlands................................................................. 69

Manfred Grieger
Going Round in Circles?
The Disposal of PVC and Plastic at the Volkswagen Plant in Wolfsburg
between Industrial Incineration and Landfilling since 1955........................................ 81

II. Diskussion

Oliver Volckart
Regeln, Willkür und der gute Ruf:
Geldpolitik und Finanzmarkteffizienz in Deutschland,
14. bis 16. Jahrhundert................................................................. 101

Alexander Preisinger
Nomologische Modelle und Theorien als wirtschaftshistorische Emploaments .... 131

Toshiaki Yamai
Industrielle Beziehungen und Arbeitsbewertung unter
dem „Wirtschaftswunder“ in Deutschland und Japan.
Ein Vergleich zweier Gesellschaften.................................................. 147
III. Forschungs- und Literaturberichte

Vergangenheit und Zukunft sozialer Sicherungssysteme am Beispiel der Bundesknappenschaft und ihrer Nachfolger. Ein Forschungsprojekt der Leibniz-Gemeinschaft.................................195

Ralf Banken and Ray Stokes
No steel, no TV, and no burgers: How industrial action in a single company threatened to bring British economy to a standstill.................................................................219

Toni Pierenkemper und Klaus F. Zimmermann
Zum Aufstieg und Niedergang des Normalarbeitsverhältnisses in Deutschland 1800-2010 – ein Forschungsprojekt....................................................231

Rainer Fremdling
German Machine Building: A New Benchmark before World War I............................................243

IV. Kölner Vorträge

Werner Abelshauser
Strukturelle Arbeitslosigkeit: Eine Diagnose aus historischer Perspektive...........................................249