Urban History Review
Revue d'histoire urbaine

URBAN HISTORY REVIEW
REVUE D'HISTOIRE URBAINE

Protesting Smoke: A Social and Political History of Vancouver Air Pollution in the 1950s and 1960s

Lee Thiessen

Volume 46, numéro 1, fall 2017

URI : https://id.erudit.org/iderudit/1059114ar
DOI : https://doi.org/10.7202/1059114ar

Aller au sommaire du numéro

Éditeur(s)

Urban History Review / Revue d'histoire urbaine

ISSN

0703-0428 (imprimé)
1918-5138 (numérique)

Découvrir la revue

Citer cet article

Thiessen, L. (2017). Protesting Smoke: A Social and Political History of Vancouver Air Pollution in the 1950s and 1960s. *Urban History Review / Revue d'histoire urbaine*, *46*(1), 57–70. https://doi.org/10.7202/1059114ar

Résumé de l'article

Le milieu entrepreneurial et la ville de Vancouver se sont sérieusement penchés sur le problème de la pollution de l'air de la ville, à la fin des années 1940 et au début des années 1950. Malgré l'amélioration générale des mesures de particules atmosphériques suite au changement de carburant, à des relocalisations industrielles, et à une gestion municipale stable et continue de ce dossier, le rassemblement des militants pour la qualité de l'air n'a pas obtenu un soutien des gouvernements régionaux ou provincial plus large avant la fin des années 1960. Il a plutôt fallu que des interventions publiques amènent le gouvernement à reconnaître la pollution atmosphérique comme un enjeux, et à mettre en place un plan d'action concret. Cet article rend compte de la pollution atmosphérique dans la ville de Vancouver et en Colombie-Britannique dans les années 1950 et 1960, et met en lumière le rôle dans ce dossier des regroupements sociaux et économiques et leurs négociations avec les structures politiques.

Protesting Smoke: A Social and Political History of Vancouver Air Pollution in the 1950s and 1960s

Lee Thiessen

Growth-oriented local businesses and the city of Vancouver initiated efforts in the late 1940s and early 1950s to address the city's air pollution problem. Despite generally improving dustfall measurements due to changing fuel use, industrial relocation, and steady city management of the issue, the coalition of air-quality reformers did not obtain broader regional or provincial government support until the late 1960s. Rather, public interventions prompted the provincial government to acknowledge air pollution as a formal political issue, and finally to take action. This article provides an account of air pollution in Vancouver and British Columbia in the 1950s and 1960s, highlighting the roles of social and economic groups and their interactions with political structures.

Le milieu entrepreneurial et la ville de Vancouver se sont sérieusement penchés sur le problème de la pollution de l'air de la ville, à la fin des années 1940 et au début des années 1950. Malgré l'amélioration générale des mesures de particules atmosphériques suite au changement de carburant, à des relocalisations industrielles, et à une gestion municipale stable et continue de ce dossier, le rassemblement des militants pour la qualité de l'air n'a pas obtenu un soutien des gouvernements régionaux ou provincial plus large avant la fin des années 1960. Il a plutôt fallu que des interventions publiques amènent le gouvernement à reconnaître la pollution atmosphérique comme un enjeux, et à mettre en place un plan d'action concret. Cet article rend compte de la pollution atmosphérique dans la ville de Vancouver et en Colombie-Britannique dans les années 1950 et 1960, et met en lumière le rôle dans ce dossier des regroupements sociaux et économiques et leurs négociations avec les structures politiques.

Introduction

On a mild day in late May 1969, dozens of journalists piled into a chartered DC-8 to fly over Howe Sound, the southeast coast of Vancouver Island, and Greater Vancouver. They were looking for signs of pollution and environmental degradation. It was not hard to find. *Vancouver Province* columnist Lorne Parton described scarred hills from clear-cut logging, miles of "yellow crud" in the coastal waters, "plumes of acrid effluent pouring up and over green valleys from the stacks of pulp mills," and, approaching Vancouver from the southwest, "the city swathed in a brown, frightening halo of smog."[1]

The journalists were not alone in observing pollution and the deterioration of nature all about. The late 1960s saw the beginning of the modern environmental movement across most Western countries. In Vancouver, the media were filled with reporting, opinions, and images reflecting local and global pollution, its consequences and possible solutions. It was not unusual for residents to demonstrate during these years against bad air quality associated with such emission sources as bulk shiploading facilities and oil refineries. Many residents spoke at local government council meetings, a few even bringing buckets of coal or mucky water in theatrical show-and-tell displays. Some attended anti-pollution meetings organized by newly formed environmental groups or older ones that expanded their focus to include the more current clean air and water concerns. One new organization was the Society for Pollution and Environmental Control, or SPEC. Its membership spread rapidly across all regions of British Columbia only months after its formation. In the fervour of the time, British Columbia's Premier W.A.C. Bennett declared the environment and pollution control to be the top priority of the election that he called for the autumn of 1969. A few days after the election call, Natural Resources Minister Ray Williston announced the province's first credible air pollution policy.

The wave of heightened environmental sensibility and activism of the late 1960s, however, was also the culmination of growing public, organizational, and governmental concern, dating, in Vancouver at least, from the early 1950s. The Vancouver Air Pollution Control Society (APCS), formed in 1952, established a reputation across North America by producing and distributing two popular documentary films on the topic.[2] In the 1950s, major newspapers regularly covered air pollution stories, while residents voiced complaints and sometimes picketed offending industrial plants. The annual British Columbia Natural Resources

Conference organized an expert panel discussion on air pollution in 1954. The city of Vancouver had a very limited by-law covering air pollution dating from the 1920s, which it replaced with a more detailed regulation in 1955. Public significance of air pollution started to crest as a major theme of the modern environmental wave at the end of the 1960s. But the roots of the air pollution issue in the two preceding decades in Vancouver bear further exploration.

This article examines how air pollution transformed from a tolerated background nuisance in people's lives to an important public and political problem from the late 1940s through the late 1960s.[3] The geographical focus is on the city of Vancouver, with some other municipalities and the government of British Columbia playing important roles as well. The public, however, proved to be a major player affecting the timing and the stringency of air-pollution policies in Vancouver and British Columbia. This article explores how the owners and operators of industrial firms and businesses and the public at large interacted with state structures in attempting to resolve, or at least manage, this social problem. Both the neglect and the management of social problems by the state tell us something about its nature in capitalist society.

The conceptual starting point of this article is that the state in Western societies is constrained by its capitalist and democratic structures. I describe a historical example of the state's management of environmental conflict, responding to the demands for support of the interests of a narrow cohort of corporation and business owners while seeking popular legitimation. As described below, there are complexities, including differences of interests within the industrial and business community and between how municipal and provincial governments sought to manage the conflicts and congruences between the capitalist and democratic imperatives. As well, the story of the management of air pollution in British Columbia can be understood only by introducing the influences of bureaucratic, academic, and other professional elites. As such, this article attempts to illustrate a central thesis of Robert Alford and Roger Friedland that an "adequate theory of the state" must incorporate three levels of analysis: the class perspective of society, the pluralist perspective of individuals and groups, and the managerial perspective of organizational elites.[4]

The specific content of this article falls into the environmental literature of urban nuisances, specifically that associated with the analyses of George Gonzalez for the United States and Owen Temby for Canada.[5] This research shows that locally oriented economic elites have most frequently initiated the politicization of local air or nuisance problems. Vancouver too follows this model, but in combination with the city of Vancouver staff and politicians. The interests of locally oriented economic and professional elites, the city of Vancouver, and the public were aligned on air pollution, leading to vigorous local activism and substantive policy implementation. However, Vancouver's example also shows that the salience of air quality as a public issue increased during this study, regardless of these local efforts, partly because of provincial failure to act. This article thus illustrates a complex instance of Temby's four-scenario classification of urban political contestations and policy outcomes: a strong local response to air pollution was combined with provincial inaction to produce a de facto "failed compromise" over several decades.[6]

There must be an early distinction between public and political issues in that certain public issues are not formally taken up politically. Although a public issue may be political because it is openly discussed in society, sometimes the state ignores subsets of these issues. Such issues are reflected in the agenda-setting authority of the state in Lukes's analysis of the "two-dimensional level" of power:[7] the "un-politics" of air pollution in Crenson's analysis.[8] This distinction is necessary in a history of air pollution policies in Vancouver and British Columbia, since the provincial government did not begin to address the issue, albeit ineffectively, until the early 1960s, despite Vancouver's much earlier air pollution policy and pollution-monitoring and anti-smoke staff dating from the late 1940s. Also the APCS, newspapers, and the public debated and demonstrated against air pollution from the early 1950s. Through the 1950s and 1960s there was a growing public call for air pollution to be dealt with by political entities with more scope than individual municipalities, whether regional groupings of local governments or the provincial government. Therefore, while in Vancouver the public and formal political sides of the issue largely overlapped, air pollution emerged as an acknowledged political issue in the province years later. Not until 1966 did the province issue a policy statement, although it was not effectively implemented. The policy that was ultimately put into place was announced only in 1969. A central question explored in this article is why provincial and city of Vancouver responses to air pollution were so different.

The power and rights inherent in private ownership of productive resources in liberal capitalist societies provide an entrance point to understanding how a social ill, emanating largely from relatively few sources, can be disposed onto non-consenting city or town residents. The owners of industrial facilities have profit and competitive interests in avoiding as many production costs as possible, whether in wages or pollution controls. Crenson, for example, describes how the unequal political influence of industries in two Indiana cities determined the timeliness of air quality regulations.[9]

But a capitalist class interest in opposing air pollution policy is not as simple as it might seem. Indeed, early sponsorship of anti–air pollution policies in Vancouver and other North American cities originated in a segment of this very class. Insight into this phenomenon is provided by urban geographers

John Logan and Harvey Molotch, who characterize North American cities as "growth machines."[10] They argue that "place entrepreneurs," often working together, relentlessly promote capital investment in cities to increase property values and associated rents. A key distinction that they draw is between economic interests that are tied to local sales, such as real estate and city newspapers (which depend on the demographic and economic attributes of their locale for financial gain) and corporate concerns whose products are shipped more widely. These latter industrialists have relatively less commitment to economic growth in their own geographic production area. They can also shift, or threaten to shift, production or investment to new areas in response to changing regulatory and market circumstances.

George Gonzalez extends this analysis by arguing that more locally bound economic concerns, including those of professionals and market retailors, have an interest in reducing air pollution. He views poor air quality as a deterrent to population growth, densification, and investment in cities that drive increased rents, sales, and the need for professional services. Some local industries are also directly affected by air pollution, such as tourism, and, if smoke and smog pollution are particularly bad, air transportation.[11] Location-bound businesses and professional service-providers usually produce little air pollution themselves and thus incur minor or no costs in its management. More externally oriented industrial firms, however, are usually opposed to the costs that can result from air management.[12] Gonzalez notes many examples in the United States, where local interests have made air pollution a public concern. Temby applies such analysis to Toronto, Sudbury, and Montreal in the early and mid-twentieth century.[13]

However, Gonzalez makes the "local growth coalition" the driving force of air quality initiatives in American cities and does not agree that public concerns have significant influence in the development of air pollution abatement policies. In Vancouver, although such a coalition played a leading and highly visible role, it was crucially supplemented by other players. For example, the city of Vancouver, including local medical health officers, helped constitute and advise the APCS. These combined forces drove Vancouver's air pollution policies, but at the provincial level, they proved largely ineffectual. Departing from the analysis of Gonzalez, this history argues that the public's interventions at crucial points carried air pollution onto the provincial political agenda and prompted key policy responses.

At a more general level of analysis, critical systems theories provide other useful insights into pollution (and other social) problems. This type of theory describes interdependent, but partially autonomous, relationships of political, economic, and social subsystems. These theories emphasize the role of and constraints on the state within capitalist-democratic societies. As indicated above, economic power is concentrated in the hands of private owners who can externalize or socialize costs of production, such as pollution. One key imperative for the state is to protect accumulative private profit, which provides vital taxation revenue streams to the state. But the state is also embedded in democratic society. The state requires public legitimation, and governments specifically require electoral support from the public. Mitigating social costs, such as pollution, that are externalized by the privately controlled economic system is a key legitimation function. Some systems theorists such as Claus Offe emphasize the inherent contradictions in the dual roles of accumulation support and public legitimation.[14] These conflicting processes, in his analysis, cannot be fundamentally resolved, but only managed in fragmentary ways. Increased production, for example, increases air pollution, which is a social cost to the public, but brings in tax revenue to the state. The financial costs of air pollution control undermine the accumulative process and state revenues, but this remediation is necessary for social harmony.

At least three potential state responses are identified in systems literature to these unresolvable problems: issue displacement to other organizations; development of uncoordinated and contradictory reactions within the political subsystem; and insistence that problems are technical rather than political.[15] Each of these responses is represented in this history as described below. However, as insightful as systems theories are, they have been criticized for underplaying or lacking explanations for change, contingency, and agency in history, while emphasizing the importance of long-lasting societal structures.[16] Vancouver's air pollution history demonstrates that public interventions proved to be crucial in shaping specific points of political and policy change, particularly at the provincial governmental level.

Making Vancouver's Air Pollution a Public Issue

In 1960 the *Vancouver Province* described a landscape a decade previously where the "sun was lost behind a blanket of black smoke" blasting out of industrial stacks from sawmills ringing False Creek and from coal-fired locomotives shunting cars at the Canadian Pacific marshalling yards.[17] Grime and dust were evident on windows, patios, and laundry hung out to dry. The chair of the Vancouver Metropolitan Community Planning Association told Vancouver's Electric Club in 1953, perhaps with some exaggeration, "Without air currents to scatter the tons of smoke, ash and gases produced weekly by the average industrial plant, people would gasp for breath and die within five to ten hours."[18] Oil refineries and metal foundries added their effluent to the mix. Pollutants came from cars, trucks, buses, ships, and trains, from house chimneys in the winter and backyard rubbish fires, and from commercial incinerators and municipal garbage burning. In the fall, haze often covered Vancouver from the burning of wood slash in forestry operations on the North Shore mountains and around Howe Sound.

Throughout the first half of the twentieth century, air pollution was typically regarded as a nuisance in North American cities.

David Stradling describes early efforts to improve air quality in mid-western and eastern American cities that were initially motivated by concerns about health, beauty, and cleanliness, and then by increasing focus on efficiency and economic losses.[19] But these efforts had limited success. By the end of the Second World War it was well recognized that acutely bad air could kill, as was regularly referenced in Vancouver newspapers, in places such as Donora, Pennsylvania, in 1948, and London in 1952.[20] But the typical smoky conditions in big cities and large industrial towns were most often treated as unfortunate but tolerable impairment to the enjoyment of life. Vancouver had a nuisance by-law dating from 1923 that restricted the density of smoke from industrial chimneys, but only for eleven minutes of any fifteen-minute period. A more general by-law in Richmond made the "fouling or contaminating the atmosphere" with "smoke, dust, effluvia, cinders, soot, charred sawdust or fumes" a municipal offence.[21] A consultants' report in 1945 recommended stronger smoke regulations to improve the "character and tone" of downtown Vancouver.[22] By 1948 Vancouver had a few smoke inspection, engineering, and medical health staff to administer its early by-law. In 1949 Vancouver City staff began measuring dust and soot falling to the ground. But, despite these early efforts, nuisance by-laws were too general help much in combating air pollution. Who could really tell if a factory was fouling the atmosphere, or if it was simply the inevitable emissions of a city that wanted to reap the employment and revenue benefits of industrialization?

A public issue requires a collective response. Whether an issue remains private or public is a matter of institutions, values, and history—it is a socially contingent question, not a natural one. Air pollution became a public issue in Vancouver and British Columbia in the 1950s despite arguments for it to remain a private one. Some in the business community and in local government said that pollution was inevitable in modern industrial-consumerist society.[23] An inescapable naturalized condition is not a likely candidate to become a publicly political issue. In 1967 British Columbia Attorney General Robert Bonner argued for air pollution to remain a private issue because, in his view, the best remedial action was a lawsuit launched by an injured party against the source of the pollution.[24] This decentralized, common law approach was predicated on clearly defined procedures and rights between theoretically equal parties able to reach individual case solutions in front of a referee judge. The ineffectiveness of pre-1950 by-laws in Vancouver and other municipalities lent themselves to this common law approach, which was used with some success. However, most judged that essentially private remedies for the harms of air pollution as much too limiting.

One of the earliest organized responses to air pollution in Vancouver that can be found in the public record was the formation of the Air Pollution Control Society, or APCS, in 1952.[25] The APCS was an outgrowth of a public affairs committee of the Kiwanis Club in Vancouver, which in the 1940s had undertaken discussion and studies of the city's air quality.[26] Kiwanis, like other service clubs, appealed to local businessmen and professionals who wished to increase their commercial contacts and promote local community infrastructure and services. These clubs are ideologically associated with promoting the growth of cities and towns, or "boosting" the local economy. It is interesting to note that in 1950 the Vancouver Kiwanis Club could not maintain the interest of another advisory committee on air pollution to the city of Vancouver. This direct forerunner of the APCS, largely composed of representatives of large, heavily polluting industries, rarely met and was quickly disbanded. The chief directors of the succeeding advisory committee, the APCS, spoke for a different category of business. They came from the professional service industries, such as engineering, insurance, and accounting. These were professions that had direct economic interests in the market opportunities of a growing city population and economy. A key thing to note is that the APCS was not a public grassroots organization, but the creation of local business interests, who played little if any role in emitting pollutants, and the city of Vancouver.

The APCS provided speakers to other civil society association meetings, wrote brochures, and produced documentary films, such as *Airborne Garbage* and *The First Mile Up*, that were widely requested for viewing by groups around the Lower Mainland and cities around North America. The organization's early activities involved providing information on pollution and encouraging mitigation by local governments, civil groups, and individuals at venues such as the Pacific National Exhibition. Through the 1950s and early 1960s the APCS attempted to bring Lower Mainland regional municipalities together for joint air quality management and to lobby the provincial government.

The interests of industries and businesses highly dependent on local economic conditions and those with a broader market diverged on air pollution. George Gonzales has provided compelling evidence from a variety of American cities that the geographically constrained businesses and professionals were instrumental in initiating demands for air quality regulations.[27] Less attached industrial firms, however, are usually opposed to the significant costs that can result from air management.[28] This urban pattern is consistent with the evidence of who tangibly supported anti–air pollution efforts in Vancouver. The origins of Kiwanis and the local business-oriented membership of the APCS fit into a North American pattern of initial and continuing support for reducing air pollution that seems largely motivated by location-based economic interests.

Vancouver's two major daily newspapers—the *Province* and the *Sun*—also played large roles in making air pollution an important public issue. A 1950 article in the *Province* indicated that Vancouver, like Los Angeles, had a smog problem. Accompanied by a picture of black smoke from a factory

stack and indicating that not all industrial sites had complied with Vancouver's by-law, the article focused mainly on how to improve coal-burning efficiency in home heating appliances.[29] In March 1955 the *Province* ran a four-part series whose key message was that "one of the most vital problems facing Vancouver today, from health, economic and aesthetic standpoints, is the pall of smoke which constantly hangs over the city."[30] The *Province* editorials often used emotive language, such as describing air pollution as an "active killer," "nauseating," a "deadly witches' broth," a danger "worse than atomic bomb radiation," and a "poison."[31] A regular editorial theme in the *Province*'s coverage was dismay at public apathy on the issue.[32] The *Vancouver Sun* was slower to cover and editorialize about air pollution, but by the mid-1950s it too began regular coverage. Arnie Myers, a *Sun* medical writer, wrote a highly praised week-long series in 1965 covering the sources, impacts, and controls available for water and air pollution. High demand for reprints prompted the *Sun* to republish the articles in a booklet.

While the newspapers' coverage of air pollution was sincere and publicly beneficial in the fight for cleaner air, this engagement also demonstrated that location-based business owners played a large role in initiating and sustaining air pollution as a public issue in Vancouver. The revenues of privately owned newspapers depended heavily on copy and advertising sales. Growth in these revenue sources were driven in turn by increases in population and the income and competition generated by the local business economy. To the extent that air pollution threatened this growth, it was also a direct threat to this business. Newspapers in other heavily polluted cities, such as Los Angeles, St. Louis, and Toronto, also played significant roles in their battles with air pollution.[33]

Other industries closely tied to their specific location in Vancouver also entered the air pollution fight. For some of them, air pollution entailed direct costs and risks to their operations, apart from constraints it might impose on general market growth. For example, cleaning grime from downtown Vancouver buildings was estimated in 1955 to cost up to $750,000 annually.[34] Representatives of the air transportation industry in Vancouver were early complainants about the impact of air pollution on visibility. The BC Aviation Council Air Pollution Committee—a mix of municipal and aviation industry representatives—was formed in the 1960s to publicize both the risks involved and the cost of delays in take-offs and landings at the Vancouver International Airport due to smoke-influenced hazy conditions.[35] The importance of the tourism industry to Vancouver and British Columbia grew over the 1950s and 1960s, as did its interventions on the effects of air pollution. As well, the Associated Boards of Trade of the Fraser Valley and the Lower Mainland, representing mainly locally marketing businesses, called on municipalities in 1959 to tighten air pollution by-laws and considered lobbying the provincial government for action.[36] This support is consistent with that reported in a survey from the 1960s of fifty-one American cities, which found that local Chambers of Commerce, newspapers, and local government administrators and agencies were disproportionately in favour of air pollution control.[37]

The City of Vancouver and Public Health Officials Fight Pollution

However, the support of location-bound business for air pollution policies was supplemented by public health staff, who also played a significant role in Vancouver's air quality. These professionals, working closely with Greater Vancouver cities, but reporting within the hierarchy of the provincial Ministry of Health, also had a stake in making air pollution a public issue in the 1950s and 1960s. The BC Health Act provided general authority to the province, allowing it to take steps to prevent or abate the health impacts of pollution. But the act was used mainly to control the introduction of sewage into rivers and lakes. Municipal by-laws were the main vehicle used by public health staff to improve air quality. The medical health officer of Vancouver became an ex-officio member of the APCS advisory board in 1952, while health and other Vancouver professionals provided guidance over the next decade. Public health staff, including medical researchers at the University of British Columbia, carried out early air pollution health impact studies, worked closely with regional governments in monitoring and reporting air pollution, and were a loud voice for control measures throughout the postwar decades. Other Vancouver officials also provided key support in writing the constitution of the APCS. Until the late 1960s Vancouver politicians continued to provide annual operating grants that were critical to its survival.[38] The involvement of all these professionals, whose motivating interest was public health and community well-being, complicates any attempt to make location-bound economic interests the sole source of the early anti-pollution efforts.

The city of Vancouver replaced its general smoke by-law in late 1955 with a more specific air pollution control regulation, but it was still focused on visible smoke. Earlier, city officials had complained that backyard burning of garbage and garden clippings were not covered under the old by-law.[39] In late 1953 Vancouver's chief medical officer visited Pittsburgh to study its anti-smoke efforts, and he was highly impressed with the public and industry support it received for its strong anti-smoke by-law.[40] Next year, Vancouver hired a consultants' group from Chicago to advise on air pollution measures. The 1955 by-law required a permit to install and operate of any large fuel-burning appliances and associated pollution control equipment. The smoke from any chimney or open fire could not be thicker than the second level of opacity of a Ringelmann chart for more than six minutes of any hour. Developed in the late nineteenth century, the Ringelmann chart provided an observer with six ink-modelled levels of smoke density, ranging from perfectly clear to completely black, to judge smoke densities. Vancouver also applied a

more rigorous weight- and volume-based prohibition on particle emissions, but it depended on equipment that was not usually in use to measure "dust, fume, solid or liquid particles."[41]

The Canadian Manufacturers Association (CMA), representing mainly larger industrial interests, opposed the 1955 Vancouver by-law.[42] A BC representative, Robert McDonell, claimed that the by-law would drive some metal foundries out of business by imposing average control costs of $10,000 to $15,000 per firm.[43] In response Vancouver gave the foundries an extra eighteen months to comply, and later exempted them completely. However, still feuding at a public conference in early 1958, McDonell, in a revealing choice of words, said that the air pollution controls imposed a "damaging amount of money" on business, which he now estimated generally at $40,000 per firm. He added a common corporate complaint that home heating and cars were exempt under the by-law. Another speaker at the conference added that the by-law increased business capital costs but provided no financial return.[44] Two points emerge from the brief newspaper reporting on this conference. First, the CMA did not oppose the by-law completely—McDonell said that it was "adequate" as far as it went. Even corporate interests that were hurt by regulation recognized limits to public and political acceptance of pollution impacts and acceded to some mitigation. The strategy appeared to involve exerting corporate influence on the stringency of pollution control and the associated financial costs, while still being able to point out that pollution was being managed. Emphasizing that the singular interest of business was profit, speakers tried to shift the focus of pollution harms to that of pollution control costs and away from pollution's physical impacts. Virtually all reports of pollution control in the business pages of Vancouver's newspapers in the 1950s and 1960s trumpeted the financial costs of pollution control—large in absolute dollars, but relatively small when scaled by total capital or operating costs. The message was not fundamental opposition to pollution controls, but rather that corporations were good "citizens," as measured by their narrow yardsticks of money spent. The second point was that Vancouver's metal foundries were mainly smaller businesses tied to the local market, not the Canadian or export market. The idea that locally marketing businesses tended to support air pollution control is well supported but needs to be tempered by instances of opposition from industries that were themselves significant sources of pollution.

There seem to be incongruities in Vancouver's early air pollution advocacy and regulation. First, Vancouver had the legislative tools to deal with pollution, as it showed in 1955 and earlier. It was advocating for pollution control via the APCS, while simultaneously acting on its own regulatory capacity to deal with the issue. But government action was constrained by social and economic groups opposed to some policies, as indicated in the case of the CMA. Building a broader social support base for controversial action helps explain Vancouver's fostering of an advocacy organization such as the APCS. Another reason for the advocacy support was that Vancouver needed help from other municipalities and the provincial government. Vancouver could not produce its own clean air while smoke and smells continued to blow in from surrounding areas. In addition, politicians were afraid that a patchwork of local government air pollution approaches would allow companies to move facilities to areas with the lowest control costs. Beyond striving for the cooperation of surrounding local governments, the APCS and newspapers also advocated for comprehensive provincial legislation. Such legislation would not only cover all British Columbia, incorporated or not, but also bring stronger government financial resources to bear on the problem.

A second incongruity in Vancouver's support for advocacy was that the APCS—like the newspapers—consistently urged greater public outrage over air pollution. It expressed frustration at residents' seeming passive acceptance of air quality. A superficial reading might see inconsistency in the government representing public interests, but then trying to stimulate those latent interests when they do not seem to be strongly expressed. A strictly pluralist understanding of government would have difficulty with Vancouver's stance. A way out of this inconsistency is to recognize again Vancouver's own property tax revenue interests, which depended on the financial vibrancy of local businesses and economic growth in general. To the extent that cleaner air benefitted this growth, there was also a direct municipal financial interest in it. A fundamental insight into public "issueness" is offered by E.E. Schattschneider, who argues that the weaker parties in a conflict often try to increase their strength by socializing the problem that lies behind the clash.[45] By striving to increase the number of people willing to act on pollution, the city of Vancouver, the APCS, and location-bound businesses were attempting to build support for potentially controversial actions against powerful industrialists and an indifferent provincial government.

But the city of Vancouver was motivated not only by a perceived threat to its property tax revenues in engaging in a fight against air pollution. Just as medical health professionals were interested in improving the conditions of public health, Vancouver staff and politicians had the same non-mediated public interest, in addition to their more indirect, perhaps less obvious, financial motivations. As outlined in the introduction, this article assumes the state in Western capitalist societies has two fundamental functions. The first is to support capital accumulation in the private market, such as by subsidizing physical infrastructure and resource costs and by providing regulatory constraints on unbridled competition in the market. The second is to seek legitimacy for the political and economic order by mitigating some negative effects associated with private ownership and markets, such as pollution (and unemployment, income, social and gender inequalities, and so on). The work of the city and its public health professionals in the 1950s and 1960s reflected this second function, as much as

it reflected its own taxation interests and the profit focus of the location-bound business community. Unless one takes an inflexible instrumentalist view of the state as controlled essentially by capitalist interests, it is possible to see independence in the role of city staff, politicians, and public health professionals. Crucially, as indicated above, the business community was divided on air pollution control. The extent to which the city of Vancouver succeeded in rebalancing the financial and physical costs of air pollution must be seen in an empirical historical light, as informed by theories of the state and the economy. Not only did Vancouver adjudicate the split interests of location and non-location-bound business interests, but also those between the public, bearing the impacts of pollution, and industry and other sources of pollution, bearing some of the financial cost of air pollution control. Certainly more than only a specific business interest in Vancouver raised air pollution as a public issue.

However, the campaign for a Greater Vancouver regional pollution authority, extending beyond the bounds of the city of Vancouver, was not successful in the 1950s, nor through most of the 1960s. Other large, dirty cities, such as Los Angeles and Toronto, had taken a metropolitan approach to drifting air pollutants that obviously did not respect political boundaries. The Chicago consultants had recommended just this step to Vancouver in 1954.[46] But exploratory meetings between Lower Mainland municipalities in 1955 and 1957 on joint action on air pollution led nowhere. The APCS hosted two further such meetings in 1963 attempting again to foster a regional air pollution authority. Although generally supportive, representatives of the local governments decided to lobby the British Columbia government for a provincial approach. In December of that year the Union of BC Municipalities approached Victoria to include air emissions in the BC Pollution Control Act, but the Bennett administration did nothing.[47]

The Public Response

As indicated above, public apathy on air quality and pollution was the subject of much editorializing in newspapers and by health professionals. But there were many instances of public protest. For example, in 1953 a local ratepayers' association and a veterans' group that had been provided with housing in north Richmond near the Vancouver Rendering Company, organized street demonstrations and pickets against the meat plant. Despite efforts of the BC Research Council to reduce the smells and pollutants, these protests helped to close the facility.[48] While the record of letters of complaint, telephone logs, and political or administrative discussion of public reactions is patchy, clues suggest that the public was not as quiescent as elite opinion would have it. Complaints were regularly made to the city of Vancouver. In 1956, the one year for which I have found a number, 360 air quality complaints were submitted to the city.[49] Vancouver relied on these complaints, in part, to help determine priorities for an overbooked staff. An eye-stinging smog event starting after business hours in January 1957 resulted in complaints and questions pouring into BC Electric and newspaper phone lines. A reporter described it as an "oily, onion-and-rubber-like smell" that resulted in "smarting eyes, headaches and nausea," even as the Burnaby health officer said there was little health risk in bad odours.[50] If the professional air quality community tended to focus on averages, trends and overall comparisons of air quality in Vancouver to other cities, the broader public revealed itself more in reaction to individual sources or episodes of pollution that had an immediate impact on quality of life.

There were also more organized public reactions that involved greater planning and effort. Evidence indicates that much of this activism involved pollution sources in Vancouver suburbs and other communities in British Columbia that had weak, poorly enforced, or no municipal air pollution by-laws. For example, in November 1958 a permanent injunction—ultimately unsuccessful—was sought by a couple from Duncan against the BC Forest Products pulp mill in Crofton that was producing offensive smells.[51] Paul Arens, owner of a popular restaurant and motel in Victoria, launched a more successful suit against a nearby BC Forest Products mill in 1965.[52] As well, home-owners initiated challenges against property assessments that did not account, it was argued, for market-based devaluations of financial worth due to pollution impacts.[53] Ratepayer associations sometimes sponsored pollution-based challenges to property tax assessments on behalf of all homeowners in an area. Residents claimed victory when even token reductions in assessed values were awarded, indicating the importance of protests in political, not individual financial, terms. A sufficient number of residents protested the effects of bad air quality during the 1950s to reflect general dissatisfaction with air quality situation and willingness to act in certain situations. The charge of indifference to the situation cannot be maintained.

However, early responses did tend to be individualistic. An individual complaint to authorities can be understood as a natural response when a negative public event is interpreted as episodic. But when problematic impacts are ongoing, they form general conditions whose attributes are anticipated and to which more coordinated responses can be structured. Individual complaints are largely invisible to others who experience the same issue and may be reacting in the same way. More collective public responses to air pollution included challenges by the ratepayer association, signed petitions, municipal council appearances by groups, protest meetings, and street demonstrations. These tools of protest were used in Vancouver and other parts of British Columbia throughout my study period, but with increased frequency, starting from the 1960s. They showed greater group planning and effort, compared to individual complaints, lawsuits, or challenges to specific house tax assessments. The coordination in response allowed individuals to opt into a group effort at a much higher level of social and political effectiveness than that of an individual complaint. Instead of the

individual's plea for redress or information, group action allowed for a stronger, more widespread voice that demanded a policy response to the ongoing characteristics of air quality.

Particularly important examples of these collective responses were the south Vancouver/Richmond and Port Alberni protests of early to mid-1960s. In 1961 residents in South Vancouver met with the Richmond city council to protest the heavy fallout of soot from beehive burners on Mitchell Island. Residents described quality-of-life impacts that included decreased enjoyment of walks and backyard barbeques, damage to house roofs and paint, and soiled carpets, drapes, and laundry.[54] Richmond officials and politicians agreed that their by-law was being broken by two sawmills, but that the expense for the companies to correct the situation was large, and employment at the mills needed to be considered.[55] In the face of a continuing problem and political inaction, the south Vancouver residents formed an air pollution control committee, which in 1963 raised $800 in small donations from hundreds of households to support a filing for a permanent injunction in the BC Supreme Court. Both mills settled out of court, agreeing to shut down their beehive burners and send their waste wood to nearby pulp mills for processing.[56]

The most sustained public protests over air pollution during the early and mid-1960s took place on Vancouver Island in the twin valley communities of Port Alberni and Alberni. These protests are significant for Vancouver, since they were well covered by the city's newspapers, showed the efficacy of organized public protest, and put intense political pressure on the provincial government to act. The location of the towns on a narrow inlet between two mountain ranges led to stagnant air conditions—air inversions—that trapped heavy smoke and soot emissions from the Macmillan Bloedel Powell pulp complex. A *Vancouver Sun* editorial noted the physical effects of the Port Alberni air pollution on washed clothes, house paint, and cars—the company provided a three-stall car wash facility free for residents of the town—but the greater concern was potential cancer and bronchitis.[57] At a protest meeting in January 1966 a worker said he had nothing against the company—his job and wages were good—but he noted sarcastically, "I like to breathe too."[58] A poignant, silent march was held in early February to protest air emissions. Photographs of some of the hundreds walking quietly, wearing soiled clothes, and carrying pollution-damaged household goods appeared in major newspapers. Also indicative of the level of the concern was a petition to the provincial government demanding action on air pollution. The final signatures totalled in the thousands—a significant portion of the small twin-town population. The local pulp complex provided most of the employment in the community. The marchers and the petition signatories showed courage in opposing company financial interests.

The Port Alberni protesters also illustrate a consistent public struggle over the meaning of bad air quality. This was a two-sided argument about how to interpret or situate air pollution in public thinking and discourse. One tendency was that of many provincial politicians, industry spokesmen, and even a few health professionals emphasizing the aesthetic and nuisance aspect of bad air: bad smells, spoiled laundry efforts, and minor economic costs, but few serious health effects. The other interpretive tendency of most health officers, many, although not all, city officials, and the major newspapers was to play up just these potential heart, lung, and psychological impacts of air pollution. However, these elite interpretations did not affect the public at large, at least not in the way intended by the proponents of the different meanings of the pollution. The Port Alberni and Vancouver protesters indicated that it was all the above: the nuisance and economic effects and the frightening, if not specific potential health impacts, were not carefully separated, but all tended to produce an intolerable quality of life.[59]

Community organizers from Port Alberni met in the spring of 1966 with Cabinet members in Victoria, receiving a promise of provincial legislation. Although they would have to wait some years for a workable policy response, the provincial government did start to engage by putting out policy statements from the time of the South Vancouver and Port Alberni protests, although none were implemented. The APCS, newspapers, local governments, and health professionals had been advocating for a provincial response for years, without success. Although it is impossible to definitively attribute the adoption of air pollution as a formal provincial government political issue to such public demonstrations, they surely played a significant role. Early efforts to support air-quality initiatives by the local business elite and health professionals do support theories of the local economic and government-centred interests, but growing involvement of residents in Vancouver and other urban areas in the 1950s through the 1960s and the timing of the provincial government response show that more was involved.

The Delayed Action of the Provincial Government

Speaking on the topic of air pollution at a Union of British Columbia Municipalities conference in September 1960, Social Credit municipal affairs minister Wesley Black indicated to the delegates that relying on the honour system to counter the "careless and indifferent habits of certain persons and groups" did not work.[60] Pollution was a "highly technical subject," he said, and the province was now studying approaches to air pollution control across Canada. Minister Black's remarks are significant, because they are an early instance (the earliest I have found) of a Social Credit politician speaking publicly about air pollution. The topic had expanded from being an issue important to the public and some local municipalities, to now also being a provincial political issue in the 1960s.

Unfortunately for those local government representatives in the audience for Black's remarks who hoped for timely provincial policy proposals, the municipal affairs ministry continued to indicate in 1963, and then again in 1964, that the government was still

studying the issue.[61] As indicated above, through the mid- to later 1960s the Social Credit administration in Victoria made policy proposals about air pollution management, but failed, or perhaps did not fully intend, to carry any of them through to implementation.[62] Perhaps the most significant of these failed provincial initiatives was that of Health Minister Ralph Loffmark, who released a set of emission and ambient air standards in early 1969. Although originally intended to be enforceable, province-wide regulations, the standards ultimately became simply guidelines to be adopted, or not, by municipalities into their own individual by-laws. Powerful Natural Resources Minister Ray Williston, responsible for economic development and implementation of British Columbia's Pollution Control Act, leaned heavily towards the development portion of his mandate. He ensured that Loffmark's initiative remained voluntary, and thus ineffective, by challenging the legal basis for mandatory standards under the Health Act. Few municipalities, with the clear exception only of the city of Vancouver, had the resources or the experience to manage an effective air pollution program. The pro-development Social Credit government showed a strong tendency to leave the contradictory challenges of air pollution management at the local government level and to issue uncoordinated and confusing policy statements at their own governmental level.

Measured air emissions continued to decline in Vancouver in the 1960s. Vancouver's regulatory efforts were surely significant, but the market shifts from solid fuels, such as coal and wood, to liquid fuels, and of the wood industry from False Creek to Fraser River locations, most likely had a larger effect.[63] However, even with these air-quality improvements pockets of visible pollution kept springing up. The eye-watering and throat-irritating effects of ground-level ozone—not measured at the time—were likely increasing as well, since car traffic continued to rise.[64] The APCS and the major Vancouver newspapers kept up a drumbeat of reporting and advocacy on air pollution. But as of the late 1960s there was still no clear provincial policy direction to local governments on air pollution control. Vancouver had its 1955 by-law controlling air emissions from most sources, while Richmond, Port Moody, Burnaby, New Westminster, and North Vancouver City and District also had by-laws, but limited or no enforcement staff.[65]

For those municipalities in the Lower Mainland in the latter 1960s that were implementing air pollution by-laws, smoke from slash-burning operations in surrounding forestry lands on the North Shore mountains, around Howe Sound and in the Fraser Valley, was particularly galling. Efforts to control smoke from small sources, including a backyard residential burning ban in Vancouver dating from 1965, were overwhelmed by forestry smoke when the wind was blowing towards urban areas. Even a forest-industry-association spokesman termed the slash-burning as an annual "festival of autumn madness."[66]

Bulk-product-loading industries associated with the Port of Vancouver also caused major problems for the municipalities and residents around Burrard Inlet. Although dustfall continued to decrease on average in the Lower Mainland through the 1960s as the use of coal and beehive burners diminished to negligible levels, bulk commodity loading dust countered these trends to some extent. Canada's major wheat exports to China, beginning in 1962, ensured increasing quantities of grain transported out of Vancouver's port. The area around the Alberta Wheat Pool terminal in Vancouver was particularly subject to repeated complaints from residents. Park commissioners complained of dust sitting like a cloud above the neighbouring New Brighton Park.[67] North Vancouver was the scene of major public protests and city council interventions against a proposed expansion of the bulk products Neptune Terminals. In the end, technical anti-pollution controls satisfied the BC Research Council, newspaper editorialists, and enough council members that loading dust could be controlled in surrounding areas of North Vancouver.[68]

The Loffmark–Williston organizational authority struggle and the air quality events particularly associated with bulk loading and forestry burns around the Lower Mainland coincided with the rise of the modern environmental movement in British Columbia. Concern about natural resource use, water quality, and, as this history has shown, air quality, had preceded this new movement by decades. However, different in the late 1960s was the dramatic increase in the intensity and scope of environmental concerns. Doubts became worries, especially regarding new or newly discovered dangers to ecosystems and human health, the deteriorating interconnections between natural and human systems, and the existential meanings attached to these dangers.

Stories and editorials about air quality in Vancouver newspapers multiplied in the late 1960s.[69] Expert discussion continued about the impacts of monitored pollutants such as smoke, particulates, dustfall, and sulphur dioxide, but there were now apprehensions about pollutants released in significant amounts by motor vehicles, such as carbon monoxide, nitrogen oxides, and hydrocarbons. Smog took on the more precise definition that scientists in California had given it as resulting mainly from these vehicle emissions.[70] Starting from 1968, public references to pollutants expanded to frequently include relatively new toxic substances and dangers such as asbestos, lead, DDT, nuclear radiation, and the global warming effects of carbon dioxide. None of these substances, except potentially lead, which the federal government started to phase out of gasoline in the 1970s, involved widespread or immediate exposure dangers for people in the Lower Mainland. Although air pollution experts in Vancouver had visited, invited speakers, and drawn lessons from other jurisdictions for decades, now local environmental concerns were more generally cross-referenced with distant and broader problems. Newspapers published emotionally charged images such as the biotic death of Lake Erie, children wearing gas masks in Tokyo, and scary estimates for rising sea levels as the result of carbon-induced global warming.

The nature of the discussion about pollutants also changed. Although the debate about the aesthetic versus health impacts of air pollution continued, now public discourse on pollution increasingly included concerns about global population increase, food shortages, natural resource depletion, and nuclear holocaust.[71] And the content was often vivid, excitable, and apocalyptic. For example, Michael Shaw, dean of agriculture at the University of British Columbia, told the Vancouver Institute in November 1968 that human activity was threatening photosynthesis. With "mankind running out of space and time," he said, "our future is in the hands of botanists and ecologists."[72] A *Province* editorial put it that "mankind was busily destroying [the planet] with all of the mindless complacency of an idiot child let loose in the Louvre with a pair of scissors."[73] RobIn Hargen of the University of British Columbia warned of irreversible pollution potentially crossing life system thresholds, creating a "game over" scenario.[74] Vancouver radio station CKNW ran a newspaper ad that appealed for the pubic to write to Premier Bennett with the preface: "Pollution's a grave problem. It's killing us all. In the span of our lifetime, if not sooner, the human race will poison and choke itself to death—unless we stop polluting our environment *now*."[75]

The environmental movement in British Columbia also introduced new organizations and revitalized older ones, such as the Sierra Club and the BC Wildlife Federation. The most significant new civic anti-pollution organization was the Society for Pollution and Environmental Control, commonly known as SPEC, formed in January 1969. A predecessor was the Vancouver Air Pollution Control Society, discussed in previous sections. But APCS, composed of local businessmen and upper-income professionals in technical fields, was floundering in the late 1960s as funding declined from the City of Vancouver and perhaps because of its narrow mandate to promote air quality education and a regional approach to air pollution management.[76] SPEC, initiated at Simon Fraser University during a period of intense intellectual and counter-culture fervour, was dominated initially by academics and students. But its geographic and compositional scope expanded rapidly. By November 1969 it covered most of British Columbia with eight regional groups. Derrick Mallard, president of SPEC, noted in mid-1970, using the language of the time, "Surprisingly, housewives are our most active group. They're becoming more militant than the students."[77] SPEC's mandate covered air, water, and land pollution, as well as resource use. SPEC took direct action by organizing rallies against emissions from the Lower Mainland's oil refineries; monitoring air quality in Port Moody and at a lead-emitting metal processing plant in Richmond; taking water quality samples in Burrard Inlet and the lower Fraser River; organizing and participating in public meetings; fighting for access to environmental monitoring data; and submitting evidence to government committees and enquiries.[78] SPEC also aligned with labour groups, many of which supported the environmental movement, particularly its clean water and air components.[79]

The city of Vancouver easily absorbed this greatly increased environmental concern about air quality. But the city had attempted to stimulate greater public response to poor quality since the early 1950s in its hopes for a regional municipal or provincial approach to air pollution. Vancouver officials took pride in developing and running their own air pollution program. A fundamental source of satisfaction continued to be the improvement in air quality, at least as measured by city monitoring stations, through the 1960s. Average dustfall in 1968 of 8.3 tons per square mile per month had fallen steadily from a level of 12.2 tons in 1963. The soiling index, measuring smoke and particulates in the air, showed an even greater improvement: in 1968 there were only 188 hours of bad air quality by this measure, compared to 956 hours in 1963.[80] The staff of four, supported by other city personnel, also provided analytical and inspection services to the surrounding municipalities that had air pollution by-laws but had no air pollution staff.

But despite the measured improvement in air quality and the confidence of Vancouver's smoke inspectors and politicians in their dealings with industry, they fielded a steady stream of complaints from residents and the press about air quality. The 1955 air pollution control by-law did not apply to metal foundries or to commercial garbage incineration. It lacked appropriate language to deal with grain elevators. Asked by council to address these and other shortcomings with a revised by-law, Vancouver air pollution staff consulted with air pollution authorities from other Canadian and US cities and the provincial and federal governments.[81] The new draft was passed into law in May 1969 after extensive industry and business consultation. The only major concession made by Vancouver to industry requests was to delay compliance to new requirements on grain elevators and foundries until 1 June 1971 and the requirement for cleaner multi-chamber burners for apartment and commercial business incinerators until 1 June 1970.[82]

However, the newly formed regional municipal government, the Greater Vancouver Regional District, was not ready to take on air pollution control. At a November 1968 meeting its board of directors agreed to undertake governmental functions that involved regional cooperation or joint administration, such as parks, water, sewerage and draining, and planning, but hedged about whether air pollution management should be "regional, provincial or even federal." More information was sought, particularly, it seemed, to find out if the province would take on the responsibility.[83] The consistent municipal preference throughout this history was for province-wide pollution control standards.

The environmental movement in British Columbia in the late 1960s presented a serious challenge to the province's management of pollution. Likely the overwhelming and sudden increase in public and expert anxieties about air pollution and

the environment, merging into generalized fears of decline and death, seriously alarmed the Social Credit government. Previous limits in the debate about air quality and environmental well-being had been breached. Many now questioned the fundamental economic rationale and modernization drive that underpinned the government ideology. Social Credit politicians expressed their own anxieties and lack of depth in the new terms of the debate, making frequent accusations of emotionalism and hysteria about air pollution and the environment.[84] Perhaps the clearest indication of the governing fears was Bennett's assertion that the first priority in the campaign for the August 1969 provincial election would be "environmental or pollution control."[85] This was a surprising change in direction for a government devoted to exploiting natural resources, which had failed to act on air pollution for decades, and supported the laissez-faire approach to environmental controversies. The choice of priority, even if not fully reflected in later campaign rhetoric, can be explained as a legitimation response by a government frightened by the heightened environmental activism of the late 1960s.

In late August 1969, to prepare the ground for this election priority and fill a policy hole, Resource Minister Williston announced the first province-wide policy on air pollution: new and existing industrial operations would require air emission permits from the Pollution Control Branch by 1 January 1971 and 1972 respectively.[86] However, after the Social Credit party won the election, Williston soon lowered expectations for his air pollution program. He told a construction association meeting that high costs and lack of capital and technology made "perfect" pollution control difficult. Williston also suggested to his audience that there would be a trade-off between pollution and social expenditures, giving his view that the health impacts of air pollution were difficult to prove.[87]

Public hearings to set air and water emission standards for different industrial sectors began in 1970. The Provincial Pollution Control Branch tightly scripted these meetings to prioritize the input of industry, government, and engineering experts on pollution technology. By mid-1972, numerical emission levels had been finalized for the forestry sector. These objectives were to act as guidelines to the director in issuing operating permits, but they were couched in very general terms. For example, to achieve the highest objectives, "Ultimately, it is recommended that, where feasible within the limits of available technology, all existing discharges be upgraded by means of planned stage improvement to Level A."[88] Although industrial groups complained that unproductive costs could be added to their operations, most commentators noted that the guidelines were weak.[89]

In late October 1969, a few days after Williston's construction association speech that lowered expectations for the province's environmental approach, the Greater Vancouver Regional District announced that it would take on air pollution control as a regional responsibility. It noted that the provincial government had little funding, few staff, and inadequate policies on air pollution control.[90] Vancouver's 1969 by-law provided the template for a GVRD draft by-law, and Vancouver's air quality personnel formed the core of the new GVRD staffing. Once a costing study was complete, the GVRD formally asked for letters patent from the provincial government in early 1971 to exercise this regional function, which was granted for all air pollution sources in the district, including industry, in March 1972.[91] This inconsistency in the province's management of air pollution likely resulted from fears that the highly motivated federal minister in charge of the environment, Jack Davis, would intervene in British Columbia with federal rules if it took no action. With the GVRD taking over Vancouver's responsibility for air management, the province could now counter federal threats to intervene.

Conclusion

This article has taken a critical theory approach that posits the state as being embedded in contradictory capitalist/revenue and democratic/legitimation relationships. In the early social history of air pollution in Vancouver, a segment of capitalist interests—location-constrained businesses with low air emissions—promoted air quality against the resistance of large industrial corporations exporting beyond the bounds of Vancouver. But the city of Vancouver and associated public health professionals were also instrumental in implementing air pollution by-laws and seeking public support for wider regional and provincial control of air pollution. This work was made easier with business interests divided, a market shift to cleaner fuels, industrial production diminishing in importance relative to the service sector, and growing public support. However, the provincial government, closer in outlook to large resource-based industry than to its counterparts that were bound to the local market, did not put air pollution on its policy agenda until the 1960s. When it did become a formal political issue, the development of air pollution policy was initially uncoordinated, and authority for legal control was kept at the local government level, where it proved to be almost completely ineffectual, with the key exception of Vancouver.

The city of Vancouver had financial motives behind its aggressive stance on combatting local air pollution, but it was also concerned with the well-being of the public. Meanwhile city residents, citizen organizations, and environmental groups legitimized the stimulus to action. This collective activism best explains the timing of provincial initiatives on air pollution. The emergence of air pollution as an political issue at the provincial level in the early 1960s and the introduction of the first significant province-wide regulations in the early 1970s were the result of major public protests. It is hard to make the case, as Gonzalez does for American subnational jurisdictions, that the advocacy of location-bound industries in Vancouver was the prime driver for achieving wider geographic control

over pollution. The story of mid-century air pollution control in Vancouver involves complex interactions among divided capitalist interests, differing priorities at the municipal and provincial levels, and finally, demonstrations of a unified public interest in clean air.

Notes

1 Lorne Parton, *Vancouver Province*, 24 May 1969, reel 639, University of Victoria Microforms Centre (hereafter UVMC).

2 A short history is provided in Chas. T. Hamilton, *A Synoptic History of the Air Pollution Control Society*, Vancouver, BC (n.d.), folder 2, box 146-A-4, Air Pollution Control Society, City of Vancouver Archives (hereafter CVA). The APCS was known as the Kleneair Society for its first few years.

3 A telling comparison made by 1920s Mayor C.E. Tisdall is noted in Eric Nicol's history of Vancouver. Tisdall is paraphrased as saying that air quality was worse in Vancouver than in his boyhood home in "Black Country" England. Nevertheless, Nicol characterizes that situation as "merely a continuing nuisance" to Vancouver. Eric Nicol, *Vancouver* (Toronto: Doubleday Canada, 1970), 151.

4 Robert R. Alford and Roger Friedland, *Powers of Theory: Capitalism, the State, and Democracy* (London: Cambridge University Press), 6.

5 George A. Gonzalez, *The Politics of Air Pollution: Urban Growth, Ecological Modernizations, and Symbolic Inclusion* (Albany: State University of New York Press, 2005); Owen Temby, "Environmental Nuisances and Political Contestation in Canadian Cities: Research on the Regulation of Urban Growth's Unwanted Outcomes," *Urban History Review* 44, no. 1–2 (Spring 2016): 5–9.

6 Temby, "Environmental Nuisances," 7.

7 Steven Lukes, *Power: A Radical View*, 2nd ed. (New York: Basingstoke, Hants, 1995), 15–16.

8 Matthew A. Crenson, *The Un-Politics of Air Pollution: A Study of Non-Decisionmaking in the Cities* (Baltimore: Johns Hopkins University Press, 1971).

9 Crenson, *Un-Politics.*

10 John R. Logan and Harvey L. Molotch, *Urban Fortunes: The Political Economy of Place* (Berkeley: University of California Press, 1987), 32–7.

11 On tourism, Logan and Molotch, *Urban Fortunes*, 209–11.

12 Gonzalez, *Politics of Air Pollution*, 1–18.

13 Owen Temby, "Trouble in Smogville: The Politics of Toronto's Air Pollution Politics in the 1950s," *Journal of Urban History* 39, no. 4 (2012): 669–89; Don Munton and Owen Temby, "Smelter Fumes, Local Interests, and Political Contestation in Sudbury, Ontario, during the 1910s," *Urban History Review* 44, no. 1 2 (Spring 2016): 24–36; Owen Temby and Joshua MacFadyen, "Urban Elites, Energy, and Smoke Policy in Montreal in the Interwar Years," *Urban History Review* 45, no. 1 (Fall 2016): 36–49.

14 Claus Offe, *Contradictions of the Welfare State*, ed. John Keane (London: Hutchinson, 1984).

15 Robin Eckersley, *The Green State: Rethinking Democracy and Sovereignty* (Cambridge, MA: MIT Press, 2004), 60; Clyde W. Barrow, *Critical Theories of the State: Marxist, Neo-Marxist, Post-Marxist* (Madison: University of Wisconsin Press, 1993), 107–9; and Albert Weale, *The New Politics of Pollution* (Manchester: Manchester University Press, 1992), 50.

16 Ekersley, Green State, 60–4.

17 "City Winning Old Battle to Get Rid of Smoke Pall," *Vancouver Province*, 22 October 1960, reel 535, UVMC.

[17] This article makes full use of thousands of articles on air pollution in the *Vancouver Province, Vancouver Sun*, and Victoria Colonist in the 1950s and especially the 1960s. The continuous coverage and editorializing about this issue are important both as a historical record and as an indication of the public significance of the concerns. This record is also crucial, since I could find very little provincial archival documentation of air pollution management, the British Columbia Ministry of Natural Resources management of the Pollution Control Board, and its key minister throughout my study period, Ray Williston.

18 "Smog Could Kill Citizens within Five to Ten Hours," Vancouver Sun, 26 October 1953, reel 395, UVMC.

19 David Stradling, *Smokestacks and Progressives: Environmentalists, Engineers, and Air Quality in America, 1881–1951* (Baltimore: Johns Hopkins University Press, 1999). Also see Joel A. Tarr, *The Search for the Ultimate Sink: Urban Pollution in Historical Perspective* (Akron: University of Akron Press, 1996).

20 For example, see Michael Blags, "Filthy Air Flows On," *Vancouver Province*, 12 March 1955, reel 412, UVMC.

21 "Smoke Nuisance By-law," 1923, folder 7, box 14-B-2, City Clerk's Office, City of Vancouver Archives (hereafter CVA),

22 Harland, Bartholomew and Associates, "Business District," quoted by Rhodri Winston Liscombe, "A Study in Modern(ist) Urbanism: Planning Vancouver, 1945–1965," *Urban History* 38, no. 1 (2011): 128.

23 For example, in 1953 a Vancouver alderman indicated his view that smoke and soot would be permanent conditions in the city if residents wanted to keep their industries: "'Smog Is Here to Stay' Declares Ald. Shawler," *Vancouver Province*, 12 November 1953, reel 396, UVMC. The New Westminster smoke inspector was quoted in 1959: "Whether we like it or not, there's always going to be a certain amount of smoke in New Westminster. There's not much hope of it lessening unless industry starts moving away." "Smoke Nuisance to Remain," *Vancouver Province*, 19 October 1959, reel 514, UVMC.

24 "'Fines Not Answer' to Pollution," Vancouver Sun, 14 February 1967, reel 564, UVMC.

25 A short history is provided in Chas. T. Hamilton, *A Synoptic History of the Air Pollution Control Society*, Vancouver (n.d.), folder 2, box 146-A-4, Air Pollution Control Society, CVA. The APCS was known as the Kleneair Society for its first few years.

26 See Jeffrey A. Charles, *Service Clubs in American Society: Rotary, Kiwanis, and Lions* (Urbana: University of Illinois Press, 1993).

27 Gonzalez, *Politics of Air Pollution.*

28 On industry, see Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955–1985* (Cambridge, MA: Cambridge University Press, 1987), 73–4.

29 A.C. Monahan, "Air Pollution Must Decrease," *Vancouver Province*, 28 October 28 1950, Magazine Section, UVMC.

30 Blags, "Filthy Air Flows On."

31 See "The Cloud under Which We Live," *Vancouver Province*, 15 March 1955, reel 412, UVMC; "Auto Fumes Threaten Public Health," *Vancouver Province*, 12 February 1957, reel 458, UVMC; "A Menace We Can Handle Ourselves," *Vancouver Province*, 7 June 1957, reel 458, UVMC; "Air Poisoning—Not Pollution," *Vancouver Province*, 10 March 1958, reel 476, UVMC.

32 For two examples, see "A Menace We Can Handle Ourselves"; and "But We Can't Stop Breathing," *Vancouver Province*, 15 September 1958, reel 574, UVMC. The editorials frequently quote health professionals on the public's sensitivity to water pollution, but its seeming indifference to air pollution.

33 For Los Angeles, see Chip Jacobs and William J. Kelly, Smogtown: *The Lung-Burning History of Pollution in Los Angeles* (Woodstock, NY: Overlook, 2008), 28–9; for St. Louis, see Tarr, *Search for the Ultimate Sink*, 257: for Toronto, see Temby, "Trouble in Smogville," 679–80.

34 Michael Blags, "Filthy Air Flows On," *Vancouver Province*, 12 March 1955, reel 412, UVMC.

35 Michael Blags, "Annual Dustfall Causes Staggering Damage," *Vancouver Province*, 14 March 1955, reel 412, UVMC.

36 "Tougher By-Laws Sought to Curb Air Pollution," *Vancouver Province*, 2 June 1959, reel 506, UVMC.

37 Crenson, *Un-Politics of Air Pollution*, 89.

38 Iian Davidson to Mayor Tom Campbell, 6 May 1968, folder 2, box 146-A-4, Air Pollution Control Society, CVA.

39 "'Smog Is Here to Stay' Declares Ald. Shawler," *Vancouver Province*, 12 November 1953, reel 396, UVMC.

40 "Pure Food, Pure Water, and Pure Air," *Vancouver Province*, 26 November 1953, reel 396, UVMC.

41 "Air Pollution Control By-law No. 3548," December 1955, PUB PDS 7-38, CVA.

42 For a similar stance taken by the CMA in Toronto, see Owen Temby, "Policy Symbolism and Air Pollution in Toronto and Ontario, 1963–1967," *Planning Perspectives* 30, no. 2 (2015): 271–84.

43 "Air Pollution By-law Held Up for Month," *Vancouver Sun*, 9 November 1955, reel 316, UVMC.

44 "Industry Not the Only Air Pollution Threat," *Vancouver Province*, 3 March 1958, reel 476, UVMC.

45 E.E. Schattschneider, *The Semisovereign People: A Realist's View of Democracy in America* (New York: Holt, Rinehart and Winston, 1960), 1–19.

46 "Metropolitan Control of Air Pollution Urged," Vancouver Province, 17 June 1954, reel 403, UVMC.

47 Chas. T. Hamilton, "A Lower Mainland Area Regional Air Pollution Control Board," *Clean Air* 7, no. 1 (March 1964): 2, AM1519-: PAM 1964-152, Pamphlet Collection, CVA.

48 Mr. Bowering, "Report on Inspection of Richmond Rendering Company, Richmond Municipality," 16 July 1953, file 11, box 1, GR-132, Department of Health and Welfare, British Columbia Archives (hereafter BCA).

49 Jim Fairley, "Machine Gulps Smoke," *Vancouver Province*, 26 January 1957, reel 449, UVMC.

50 "Smog Not Dangerous, Doctors Assure Public," *Vancouver Province*, 11 January 1957, reel 448, UVMC.

51 "Pulp Smell Causes Court Suit," *Victoria Colonist*, 20 November 1958, reel 405, UVMC.

52 Jim Hume, "Firm Promises $100,000 Ash Solution," *Victoria Daily Times*, 16 March 1966, reel 428, UVMC.

53 One of the earliest of these assessment challenges is described in "'Rotten Eggs' Fight Going to Victoria," Vancouver Province, 13 February 1957, reel 450, UVMC.

54 "5 Couples Seek Injunction to End Ash, Soot Nuisance," *Vancouver Sun*, 13 January 1964, reel 490, UVMC.

55 "Persuasion Is Keynote to Control of Pollution," *Vancouver Province*, 9 May 1961, reel 639, UVMC.

56 "Smoggy Walk with Dog Launched War on Soot," *Vancouver Sun*, 26 November 1964, reel 511, UVMC.

57 "To the Albernis' Rescue," *Vancouver Sun*, 2 April 1965, reel 520, UVMC.

58 "Valley 'Angry'; Pollution Worse," *Victoria Daily Times*, 22 January 1966, reel 426, UVMC.

59 See Lee Thiessen, "Protesting Smoke: A Social and Political History of Vancouver Air Pollution," MA thesis, University of Victoria, 2017, 51–80, https://dspace.library.uvic.ca/bitstream/handle/1828/8456/Thiessen_Lee_MA_2017.pdf?sequence=2&isAllowed=y0.

60 "Strong Measures against Pollution Needed, Says Black," *Vancouver Province*, 22 September 1960, reel 534, UVMC.

61 "Outsiders Blamed for City Smog," *Vancouver Sun*, 6 August 1963, reel 499, UVMC; "B.C. to Probe Air Pollution," *Vancouver Sun*, 6 May 1964, reel 498, UVMC.

62 For an account of these policy forays, see Thiessen, "Protesting Smoke."

63 The relative contributions to improved air quality of these fuel shifts, industry relocation, and regulatory efforts have not been explored in any literature. For a history of the industrial shift from False Creek, see Jacopo Miro, "Visions of False Creek: Urban Development and Industrial Decline in Vancouver, 1960–1980," MA thesis, University of Victoria, 2011, https://dspace.library.uvic.ca/bitstream/handle/1828/3513/Miro_Jacopo_MA_2011.pdf?sequence=1&isAllowed=y.

64 *Environmental Pollution Studies: Air Quality in British Columbia*, BC Research, Vancouver, 1970, tables VIII-1, VIII-2, VIII-3.

65 *Environmental Pollution Studies*, 17; on staffing, see F.R. Bunnell and D.L. Mackay, "Air Pollution in the Greater Vancouver Area," 2 December 1968, folder 2, box 81-A-1, City Clerk files—Air Pollution, CVA.

66 "Slash Fire Policy Hit by Loggers," *Vancouver Province*, 7 November 1968, reel 633, UVMC.

67 "Residents Back Park Dust Fight," *Vancouver Sun*, 4 May 1967, reel 570, UVMC. An Alberta Wheat Pool representative remarked to a newspaper reporter, "If they put a park where it is surrounded by an asbestos plant, the railroad and grain elevators … they can expect nothing but air pollution problems." "Grain Men Act," *Vancouver Sun*, 26 June 1967, reel 573, UVMC. New Brighton Park, in fact, is the oldest in Vancouver, dating from the 1860s, contemporary with the establishment of the old Hastings sawmill, but predating all other industry. See Walter G. Hardwick, *Vancouver* (Don Mills, ON: Collier-Macmillan Canada, 1974), 8–10.

68 "$16 Million Neptune Plant Lauded by Williston, Others," *Vancouver Province*, 10 September 1970, reel 665, UVMC.

69 One crude measure of this increased coverage is a greater than five-fold increase in the number of articles in the *Sun* and Province combined comparing 1969 to 1964.

70 For a history of California's air pollution and policies, see James E. Krier and Edmund Ursin, *Pollution and Policy: A Case Essay on California and Federal Experience with Motor Vehicle Air Pollution 1940–1975* (Berkeley: University of California Press, 1977).

71 For a description of the aesthetic versus health framing of the air-quality problem in Vancouver and its implications for regulatory stringency, see Thiessen, "Protesting Smoke," 50–78.

72 "Pollution Solution Urged," *Vancouver Province*, 25 November 1968, reel 633, UVMC.

73 "Earth and Air … Fire and Water … We're Polluting Them All," *Vancouver Province*, 12 July 1969, reel 641, UVMC.

74 "Pollution Warning: Danger Point," *Vancouver Province*, 27 August 1969, reel 642, UVMC.

75 "Raise a Stink about Pollution: Write Here! Right Now," *Vancouver Province*, 4 November 1969, full page advertisement, CKNW/98; emphasis in original.

76 Iian Davidson to Mayor Tom Campbell, 6 May1968, folder 2, box 146-A-4, Air Pollution Control Society, CVA.

77 "Housewives Militant in Pollution Protest," *Vancouver Sun*, 13 July 1970, reel 640, UVMC.

78 "Credit Card Boycott Urged to Fight Refinery Pollution," Vancouver Sun, 28 May 1969, reel 619, UVMC; "Pollution Tests Start," *Vancouver Sun*, 3 March 3, 1969, reel 614, UVMC. For the story of lead poisoning around the Metalix facility, see "Plant Stops Smelting," *Vancouver Sun*, 24 July 1970, reel 641, UVMC; and "Worried Residents Air Lead Concerns," *Vancouver Sun*, 28 July 1970, reel 641, UVMC.

79 "Gov't Sluggish on Pollution," Vancouver Sun, 7 November 1969, reel 630, UVMC.

80 H.L. Bryson, Office of Permits and Licences, "Result of Air Pollution Monitoring," memo, 17 February 1968, folder 2, box 81-A-1, City Clerk, CVA.

81 "City Grime 'Fallout' Cut in Half," V*ancouver Su*n, 15 August 1967, reel 574, UVMC.

82 "Tougher Air Law for City," *Vancouver Province*, 21 May 1969, reel 639, UVMC.

83 "Greater Vancouver Regional District," 13 November 1968, folder 3, box 84-D-7, M.E. Linnell files—Air Pollution, CVA.

84 "'NDP Pollution Hysteria' Criticized," *Vancouver Sun*, 15 August 1969, reel 624, UVMC.

85 Iain Hunter, "Bennett Lays His Good Life on the Line," *Vancouver Sun*, 22 July 1969, reel 623, UVMC.

86 BC Water Resources Service, "Pollution Control in British Columbia," Department of Lands, Forests and Water Resources, April 1970.

87 Art McKenzie, "Anti-Pollution Funds Scarce, Says Minister," *Vancouver Province*, 24 October 1969, reel 644, UVMC.

88 BC Water Resources Service, "Pollution Control in British Columbia."

89 See reports on the forestry pollution objectives in Scott Honeyman, "Forest Industry Cleanup Proposed," *Vancouver Sun*, 24 June 1971, reel 662, UVMC; reporting on the proposed mining industry objectives, Ron Rose, "'Stump the Experts' at Pollution Inquiry," Vancouver Sun, 8 March 1972, reel 680, UVMC.

90 "Go-It-Alone Pollution Fight Planned," *Vancouver Province*, 30 October 1969, reel 644, UVMC.

91 "Regional District Seeks 'Air Power,'" *Vancouver Sun*, 3 March 1971, reel 680, UVMC.