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Labour / Le Travail, Issue 72, Fall 2013, pp. 37-73 (Article)

Published by The Canadian Committee on Labour History

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ARTICLE

Dwelling Places and Social Spaces: Revealing the Environments of Urban Workers in Victoria Using Historical GIS

Patrick A. Dunae, Donald J. Lafreniere, Jason A. Gilliland, and John S. Lutz

The Pacific Northwest experienced rapid economic development in the last decades of the 19th century, when the region was linked by railways and steamships to outside capital and buoyant markets in the prairie West, the eastern seaboard of America, and overseas. Cities on both sides of the Canada/US border grew at a remarkable pace.[1] The workforce necessary to sustain the economic growth increased in a proportional way. While Aboriginal labourers and immigrant workers from Asia were important in this urban industrial landscape, white workers who came from outside the region were important, too. Skilled workers from the American Midwest, from the eastern provinces of Canada, and from Europe were essential to the urbanization and industrialization of the Pacific Northwest. As Carlos Schwantes, one of the region's leading historians, has remarked, the "supercharged pace of urban growth placed a premium on the skilled labour of carpenters, masons, plumbers and other craftsmen."[2] It also placed a premium on construction labourers and

1. Urban growth in the region is examined in Carl Abbott's impressive survey, *How Cities Won the West: Four Centuries of Urban Change in Western North America* (Albuquerque 2008), Chapter 3. For general surveys of the region see Jean Barman, *The West Beyond the West: A History of British Columbia*, 3rd ed. (Toronto 2007) and Carlos Arnaldo Schwantes, *The Pacific Northwest: An Interpretative History*, rev. and enlarged ed. (Lincoln, NB 1996).

2. Carlos Arnaldo Schwantes, *Hard Traveling: A Portrait of Work Life in the New Northwest* (Lincoln, NB 1999), 4.

Patrick A. Dunae, Donald J. Lafreniere, Jason A. Gilliland, and John S. Lutz, "Dwelling Places and Social Spaces: Revealing the Environments of Urban Workers in Victoria Using Historical GIS," *Labour/Le Travail,* 72 (Fall 2013), 37–73.

workers in new manufacturing, transportation, and service sector industries. Collectively, to borrow a term from Schwantes, these were the urban wageworkers of the Pacific Northwest.

The largest cohort of urban wageworkers consisted of young, unmarried men. They were ubiquitous in cities like Seattle, Tacoma, Vancouver, and Victoria. We see them everywhere. We can document their activities in the workplace and union hall, and record their presence in civic protests and holiday parades. And yet, historically, they are elusive and nondescript. They were part of the social mainstream because of their race and ethnicity, but they dwelled on the margins of conventional society in cabins, tenements, and residential hotels. Very few of these men wrote personal accounts of their domiciles, and most of the habitations have disappeared from urban landscapes today. How, then, can we reconstruct the social and domestic spaces of urban wageworkers in the Pacific Northwest during this boom-time era?

Schwantes suggested a research framework using census records and contemporary newspapers for examining the social conditions of unmarried men who were drawn to the wageworkers' frontier. [3] We have built on that framework in this paper, but look to other sources of information and new methodologies in order to reconstruct the domestic social and spatial environments of urban wageworkers. In this case study, we utilized a geographical information system (GIS) to identify wageworkers and take steps to understand how they experienced life in Victoria, British Columbia, in the early 1890s.

A geographical information system (GIS) allows researchers to methodically and efficiently organize and analyze spatially referenced data, and to identify and visualize spatial patterns and processes. A relatively new tool for social historians, it offers a novel way of exploring and understanding historical activities and the environments in which they took place. The field of historical GIS, sometimes called spatial history, has been championed by historical geographers such as Anne Kelly Knowles and Ian Gregory.[4] Historical geographer Sherry Olson is a leader in the field in Canada.[5] The growing stature

3. Carlos A. Schwantes, "The Concept of the Wageworkers' Frontier: A Framework for Future Research," *Western Historical Quarterly,* 18 (January 1987): 39–55.

4. See Anne Kelly Knowles, ed., *Past Time, Past Place: GIS for History* (Redlands, CA, 2002) and Kelly Knowles, *Placing History: How Maps, Spatial Data, and GIS Are Changing Historical Scholarship* (Redlands, CA 2008); Ian N. Gregory and Paul S. Ell, *Historical GIS: Technologies, Methodologies and Scholarship* (Cambridge, UK 2007); Ian N. Gregory and Richard Healy, "Historical GIS: Structuring, Mapping, and Analyzing Geographies of the Past," *Progress in Human Geography,* 31 (2007): 638–53. See also Donald A. Debats and Ian Gregory, eds., "Historical GIS and the Study of Urban History," special issue, *Social Science History,* 35, no. 4 (Winter 2011).

5. See Jason Gilliland, "Modelling Residential Mobility in Montréal, 1860–1900," *Historical Methods,* 31 (January 1998): 27–42; Jason Gilliland and Sherry Olson, "Residential Segregation in the Industrializing City: A Closer Look," *Urban Geography,* 33 (January 2010): 29–58; Sherry Olson, Kevin Henry, Michele Jomphe, Paul Brassard, and Kevin Schwartzman, "Tracking Tuberculosis in the Past: The Use of Genealogical Evidence," *Journal of Historical Geography,*

of historical GIS in Canada was recently considered in a collection of essays edited by Jennifer Bonnell and Marcel Fortin, an environmental historian and map librarian, respectively.[6] As historian Richard White says, HGIS "allows the orientation and coordination of dissimilar things – an aerial photograph and a map, for example – in terms of a single location;"[7] David Bodenhamer, another historian in the vanguard of this scholarly field, observes that a GIS can integrate an extensive array of data from different formats, including artifacts, "all by virtue of their shared geography."[8] HGIS is thus a powerful research tool that can "layer divergent source materials and tie them to specific locations in space."[9] But GIS is more than a means of handling diverse spatially referenced material. It is a way of thinking, "an epistemology that places spatial relationships as key components in understanding historical activities and environments."[10] A primary objective of this essay is to demonstrate how GIS can be used as a research tool and new epistemology in the field of labour history.

Building an historical GIS, as Gregory has commented, is a "middling to long-term process with long lag times before the full rewards of the initial instrument are realized."[11] We started building our historical GIS several years ago. Detailed descriptions of the methods and components we used to develop it are provided in the pages that follow. We began by acquiring spatial data from archival maps and plans, and attribute data from nominal census records, directory listings, and tax assessment rolls for the city of Victoria.[12] Our GIS was developed initially with the intention of examining racialized space in 19th-century Victoria, but was built to be adaptable to many other

36, no. 3 (2010): 327–41; Jason Gilliland, Sherry Olson, and Danielle Gauvreau,"Did Segregation Increase as the City Expanded? The case of Montréal, 1881–1901," *Social Science History,* 35, no. 4 (Winter 2011): 465–503; Sherry Olson and Patricia Thornton, *Peopling the North American City: Montréal 1840–1900 (*Montréal 2011).

6. Jennifer Bonnell and Marcel Fortin, eds., *Historical GIS in Canada* (Calgary 2013).

7. Richard White, "What is Spatial History?" quoted in *Historical GIS in Canada*, ed. Bonnell and Fortin, 3.

8. David J. Bodenhamer, "Beyond GIS: Geospatial Technologies and the Future of History," in *History and GIS: Epistemologies, Considerations and Reflections*, ed. Alexander von Lünen and Charles Travis (London 2012), 4.

9. Bonnell and Fortin, eds., *Historical GIS in Canada*, 3.

10. Paul Norman, *Constructing a Socio-Demographic Data Time Series: Computational Issues and Solutions* (Manchester 2004), 4.

11. Ian Gregory, *A Place in History: A Guide to Using GIS in Historical Research* (Oxford 2003), 15.

12. These and many other spatially referenced records are freely available on the *viHistory* website. This digital archive of Vancouver Island historical records is edited by Patrick Dunae and hosted by the Humanities Media and Computing Centre at the University of Victoria, accessed 25 April 2013, http//www.vihistory.ca.

Figure 1: 1891 Victoria HGIS with wageworker cabins and residential hotels highlighted.

historical enquiries, including this examination of urban wageworkers. We were alerted to these workers when we reassessed the dynamics of race and socially constructed space in Victoria's Chinatown.[13] We were struck by the large number of wageworker cabins and tenements on the northern perimeter of the Chinese quarter. When we looked closely at contemporary maps, photographs, and directories, we could see similar vernacular structures in other parts of the city (see figure 1). When we compared municipal and Dominion census records, it was apparent that wageworkers comprised a significant portion of the city's population.

Before commencing our study, some general remarks are in order. Schwantes referred to places like Victoria as "urban-industrial islands" on the wageworkers' frontier of the Pacific Northwest.[14] Wageworkers who toiled on this frontier were undeniably components in the "desiring machine of capitalism" that eminent geographer Cole Harris described in his essays on the resettlement of British Columbia.[15] But it was a complex machine that affected workers differently, depending on where it was operating. Accordingly, the living conditions of wageworkers in remote logging or mining camps – which have received considerable attention from labour historians – should not be conflated with the living conditions of urban wageworkers in Victoria.[16] Even

13. Our historical GIS revealed trends and phenomena that we had not expected from the existing literature. By mapping the location of Chinese and other residents, we discovered that Victoria's Chinatown was not a "forbidden city," but a porous, multi-ethnic community, and that about one-quarter of Victoria's Chinese population resided outside of Chinatown. Our initial research is discussed in Patrick A. Dunae, John S. Lutz, Donald J. Lafreniere, and Jason A. Gilliland, "Race and Space in Victoria's Chinatown, 1891," *BC Studies,* 169 (Spring 2009): 51–80, reprinted in *Home Truths: Highlights from BC History*, ed. Richard Mackie and Graeme Wynn (Madeira Park, BC 2012). Further research and theoretical concepts are discussed in Lutz, Dunae, Lafreniere, Gilliland, and Megan Harvey, "Turning Space Inside Out – Spatial History and Race in Victorian Victoria," in *Historical GIS in Canada,* ed. Bonnell and Fortin, 123–56.

14. Schwantes, "The Concept of the Wageworkers' Frontier," 41.

15. Cole Harris, "The Struggle with Distance," in *The Resettlement of British Columbia. Essays on Colonialism and Geographical Change*, ed. Cole Harris (Vancouver 1997), 185. We recognize, of course, that wageworkers were also part of a larger process of settler colonialism, whereby Indigenous peoples were displaced and Aboriginal lands were appropriated by imperially minded newcomers from Europe and eastern North America, but we are not concerned with the colonial project or its repercussions in this essay. The larger process is well described and closely analyzed in several books, including Adele Perry, *On the Edge of Empire: Gender, Race, and the Making of British Columbia, 1849–1871* (Vancouver 1997); Penelope Edmonds, *Urbanizing Frontiers: Indigenous Peoples in 19th Century Pacific Rim Cities* (Vancouver 2010); Renisa Mawani, *Colonial Proximities: Crossracial Encounters and Juridical Truths in British Columbia, 1871–1921* (Vancouver 2009).

16. The deplorable conditions of worker camps were described in A. Ross McCormack, *Reformers, Rebels, and Revolutionaries* (Toronto 1977) and Carlos Schwantes, *Radical Heritage: Labor, Socialism, and Reform in Washington and British Columbia, 1888–1917* (Boise, ID 1994). Living conditions were better in larger resource-industry towns like Rossland, BC. They are

on Vancouver Island, living conditions varied from place to place and from sector to sector. In the coal mining community of Wellington, for example, company housing was prevalent, while in nearby Nanaimo, a larger colliery town, workers were encouraged to purchase suburban five-acre lots.[17] Those arrangements were unknown in Victoria.

Victoria had more in common with Seattle, where wageworkers lived in high-density rental units close to the downtown core and near the harbour. Living conditions were similar in Vancouver. But we should not confuse wageworkers' abodes with the neatly fenced cottage homes that have been associated with working-class people in Vancouver by some historical geographers. Wageworkers in Vancouver, Victoria, and neighbouring cities may have *aspired* to elegant wood-frame cottages "surrounded by a garden and a fence," with "rabbit hutches and chicken coops" in the yard.[18] But initially, the men who are the focus of this study lived in much more crowded abodes, and those places have not been examined by urban geographers and historians. Rather, the scholarly literature on working-class households in Canada has focused on family units and households of married couples and widows.[19] In this essay, we are engaging with households and exploring urban spaces that have not been considered before and are using a Historical GIS as our way of seeing and analyzing these environments.

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described in Jeremy Mouat, *Roaring Days: Rossland's Mines and the History of British Columbia* (Vancouver 1995) in a chapter entitled "Social Relations in Fin de Siècle Rossland," 109–29.

17. Company housing arrangements for mine workers in the Vancouver Island settlements of Wellington and Extension, and in the successor town of Ladysmith (1898), are described in John H. Hinde, *When Coal Was King: Ladysmith and Coal-Mining on Vancouver Island* (Vancouver 2003). John Douglas Belshaw discusses housing conditions for miners in Nanaimo in his book, *Colonization and Community. The Vancouver Island Coalfield and the Making of the British Columbia Working Class* (Montréal 2002).

18. Deryck W. Holdsworth, "Cottages and Castles for Vancouver Home-Seekers," in "Vancouver Past: Essays in Social History," ed. Robert A. J. McDonald and Jean Barman, Vancouver Centennial Issue, *BC Studies* (Vancouver 1986), 15, reprinted in Mackie and Wynn, *Home Truths*; Gillian Wade, "Modest Comforts," in The Working Lives Collective, *Working Lives: Vancouver 1886–1986* (Vancouver 1985), 109.

19. Usually, studies relating to working-class housing in 19th century Canada focus on family households. Such studies include Michael J. Doucet, "Working-class Housing in a Small 19th-Century City: Hamilton, Ontario, 1852–1881," in *Essays in Canadian Working Class History*, ed. Gregory S. Kealey and Peter Warrian (Toronto 1976), 83-105; Michael Doucet and John Weaver, *Housing the North American City* (Montréal 1991); Peter Ennals and Deryck Holdsworth, *Homeplace: The Making of the Canadian Dwelling Over Three Centuries* (Toronto 1998); and Bettina Bradbury, *Working Families: Age, Gender and Daily Survival in Industrializing Montréa*l (Toronto 2007). Working-class family households in British Columbia are featured in Peter Baskerville and Eric W. Sager, *Unwilling Idlers. The Urban Unemployed and Their Families in Late Victorian Canada* (Toronto 1998).

I

Victoria was founded by the Hudson's Bay Company as a trading post in 1843. Following the Oregon Treaty, Victoria became the capital of a new British colony, Vancouver Island, in 1849.[20] It was an entrepôt for gold miners in the late 1850s and early 1860s and was incorporated as a city in 1862. It retained its status as a capital city when the colony of Vancouver Island was annexed by the mainland colony of British Columbia in 1866. When British Columbia joined the Dominion of Canada in 1871, it became the capital city of Canada's Pacific province. Despite its status as an administrative centre, it grew slowly until the mid-1880s. Its economic development was then facilitated by the completion of the transcontinental Canadian Pacific Railway (1886) on the lower mainland of British Columbia and the regional Esquimalt & Nanaimo Railway in 1887.[21]

Victoria also benefited from the expansion of the maritime trade and coastwise shipping between other burgeoning cities, notably Portland, Tacoma, Seattle, and Vancouver, but did not grow as rapidly as they did.[22] Even so, in the late 1880s and early 1890s, Victoria was experiencing a golden moment. It was still the metropolis of the province and was undergoing significant growth, demographically and economically. Job opportunities abounded for wage-workers drawn to the city at this time. Moreover, because Victoria enjoyed

20. The treaty was concluded in 1846 and resolved a long-standing dispute between Great Britain and the United States regarding sovereignty in the Oregon Territory. It is officially known as the Treaty of Washington, 1846, but popularly called the Oregon Treaty. It established the 49th parallel west from the Rocky Mountains to the Pacific Ocean as the international boundary. The Hudson's Bay Company, which represented British interests in the region and operated a major post at Fort Vancouver near the mouth of the Columbia River, far south of the new boundary line, relocated its operations to Vancouver Island. In 1872, the international boundary line between mainland British Columbia and Washington State and the archipelago of islands between the continent and Vancouver Island was clarified.

21. On the economic development of Victoria, see J.M.S. Careless, "The Business Community in the Early Development of Victoria, British Columbia," in *Historical Essays on British Columbia*, ed. J. Friesen and H.K. Ralston (Toronto 1976), 177-200; Charles N. Forward, "The Evolution of Victoria's Functional Character," in *Town and City: Aspects of Western Canadian Urban Development*, ed. Alan F.J. Artibise (Regina 1981), 347-70; and Peter A. Baskerville, *Beyond the Island. An Illustrated History of Victoria* (Burlington, ON 1986).

22. In addition to Abbott, *How Cities Won the West*, see Matthew Klingle, *Emerald City: An Environmental History of Seattle* (New Haven, CT 2007); E.K. MacColl, *The Growth of a City: Power and Politics in Portland, Oregon, 1885–1915* (Portland, OR 1979); Norbert MacDonald, *Distant Neighbors: A Comparative History of Seattle and Vancouver* (Lincoln, NB 1987); Robert A.J. McDonald, *Making Vancouver: Class, Status, and Social Boundaries, 1863–1913* (Vancouver 1996); and Murray Morgan, *Puget's Sound: A Narrative of Early Tacoma and the Southern Sound* (Seattle 1979). Immigration and urbanization in late 19th century British Columbia are described and analyzed by John Douglas Belshaw in *Becoming British Columbian: A Population History* (Vancouver 2009), 41–50.

a mild climate, workers on building construction projects could expect year-round employment.

In 1891, a visiting clergyman from Toronto commented on the buoyant spirit of Victoria and the many building construction sites in the city. "Splendid business blocks are being built on the principal business streets and in the residential parts of the city new buildings meet you almost everywhere." He was impressed by the handsome churches recently erected by the Presbyterian and Methodist congregations and the nearly completed Roman Catholic cathedral. He noted the new hospital and courthouse and the modern street railway system. "I am not sufficiently familiar with the features of a boom," he said, "but it struck me that there was a boom in Victoria."[23]

The new structures provided tangible evidence of the city's robust economy, and so were celebrated by civic boosters. Promotional publications were packed with statistical tables related to manufacturing output, postal services, real estate valuations, and import duties, offering further evidence of economic growth.[24] But of all statistical measures, population growth was most important, not only for New World prominence as a growing industrial centre but also because parliamentary representation and federal grants to the provinces were based on population figures.[25] Civic leaders eagerly anticipated the results of the third decennial census of Canada.

The census was taken in April 1891 by enumerators appointed by the Dominion government. Business promoters, local politicians, and one of the city's principal newspapers, the *Victoria Daily Colonist,* confidently predicted that Victoria's population would be over 23,000 when the official returns were published. They were profoundly dismayed when the Dominion Census Office announced in July 1891 that Victoria's population was only 16,841. "We must confess that we are surprised to find the population of Victoria to be less than 17, 000," the *Daily Colonist* declared in an editorial. "We considered that at

23. *Victoria Daily Times*, 2 October 1891. Victoria's streetcar line, opened in February 1890, was the second electric street railway implemented in Canada after one in Windsor, Ontario in 1886.

24. See the statistical data and enthusiastic commentary in a promotional booklet entitled *Victoria Illustrated: Containing a General Description of British Columbia, and a Review of the Resources, Terminal Advantages, General Industries, and Climate of Victoria, The "Queen City," and its Tributary Country* (Victoria, BC 1891). Promotional publications like *Victoria Illustrated* were produced in towns and cities throughout western North America. The publications reveal the booster spirit and inter-city rivalries that characterized urban development in this period. Abbott, *How Cities Won the West*, 3–8, 34, and *passim.*

25. For historical studies on the significance of the census in Canada see Bruce Curtis, *The Politics of Population: State Formation, Statistics, and the Census of Canada, 1840–1875* (Toronto 2001) and Eric W. Sager and Peter Baskerville, eds., *Household Counts: Canadian Households and Families in 1901* (Toronto 2007).

the very lowest calculation the enumerators would find that it has twenty thousand inhabitants. We cannot help thinking that there must be a mistake."[26]

In response to growing public indignation over the official census returns, Victoria City Council commissioned a follow-up census. The municipal census, known as a check census, was carried out under the direction of R.T. Williams, a printer and publisher of one of the Victoria city directories in the last week of September.[27] After a careful tabulation, Williams postulated that Victoria's population was 22,981 – a figure much more gratifying to civic, political, and business leaders than that of the Dominion census. The check census was proof, the *Victoria Daily Times* declared, that "huge mistakes" had been made by federal officials in determining the city's population.[28] An alphabetical list of all persons enumerated in the check census was posted in City Hall and residents were invited to inspect the list in order to ensure its veracity. When that exercise in civic validation was completed, the list was sent to Ottawa, with a request that official census returns be revised in accordance with the check census figures. The request was denied and the check census was filed and forgotten. We retrieved, transcribed, and geo-referenced it as part of our larger historical GIS project. Having record-matched the federal and municipal data and considered it in context with other contemporary records such as the city directory, we believe that Victoria was indeed undercounted by Dominion enumerators. The city's population was likely closer to 23,000, as proponents of the check census claimed.[29] Within that population, we have identified a cohort of nearly 2,000 unmarried white working men. With the aid of our HGIS, we can place these wageworkers in their habitations and explore their urban environment for the first time.

As noted earlier, GIS is a method of managing, modelling, displaying, and analyzing spatially referenced data. Described simply, HGIS allows us to link attribute data to the locations on earth in which it resided or took place. The attribute data for this study includes nominal census records generated during the official census of 1891, and records from the municipal check census. The datasets are complementary. The nominal schedule in the official census of 1891 consisted of two dozen questions dealing with age, nativity, ethnic origin, civil condition, religion, and occupation. It was designed so that one person

26. *Victoria Daily Colonist*, 29 July 1891.

27. *Victoria Daily Colonist*, 14 October 1891.

28. *Victoria Daily Times*, 21 October 1891.

29. Records from the official 1891 census were transcribed and are available at the *viHistory* website. We transcribed the municipal check census from a copy held in the British Columbia Archives, MS 1908, microfilm reel A1356. It, too, is available at the *viHistory* website. We presented a comprehensive geo-demographic study of the two 1891 enumerations of Victoria to the 36th annual meeting of the Social Science History Association in Boston, MA, in November 2011. The paper was entitled "Missing and Marginalized Victorians: A GIS of the 1891 Check Census of Victoria, British Columbia."

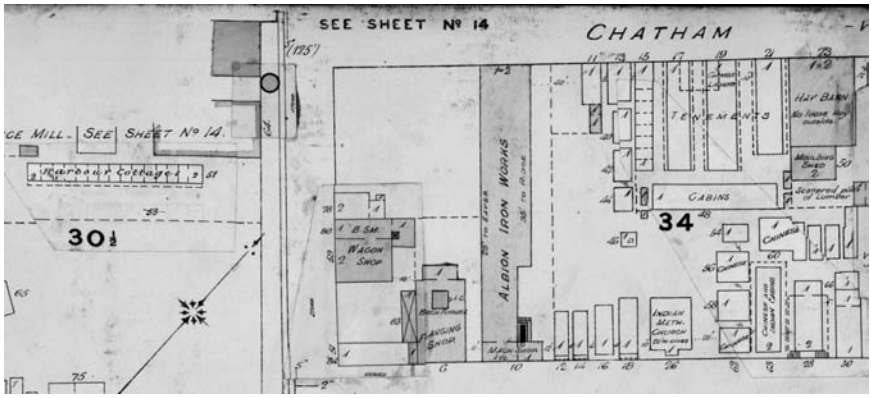

Figure 2: Detail of a fire insurance plan showing cabins and tenements.
Source: Goad, *Insurance Plan of Victoria, British Columbia* (1891, sheet no. 10).

was identified as the head of the household with other residents being assigned relative positions, such as such as wife of head, son of head, lodger, and so forth. In the official census, enumerators also recorded the number of rooms and floors in each household, and indicated if abodes were constructed of wood, brick, or stone. The municipal check census did not provide the same level of personal or structural detail; it simply recorded the names, occupations, and workplaces of heads of census households, plus the number of people who belonged to each household. But while the municipal check census was less detailed than the official census, it provided key information not recorded by Dominion enumerators – specifically, the civic addresses of census households. By record-matching the municipal check census to the official census and spatially referencing the datasets to cartographic records of buildings and land uses, we created the historical GIS used in this study.

We utilized a number of cartographic records in building our HGIS, including archival maps that show surveyed lots in Victoria and the legal descriptions of city properties in the 1890s. By digitally scanning and geo-referencing the maps to a modern cadastral of the city, we were able to delineate precisely the boundary lines of these properties. Crucially, we also scanned and geo-rectified contemporary fire insurance plans. Fire insurance plans were created for cities throughout Canada, the United States, and Great Britain during this period. They were produced by underwriting firms to assist in assessing fire risk. Drawn to a scale of 1 inch to 50 feet (2.5 cm to 15.2 metres), the plans are extraordinarily detailed. They include a wealth of information for every building and street in the city (e.g., footprint, construction materials, number of storeys, land uses, and street numbers) and, conveniently for us, they also often indicate occupancy.[30] Reflecting some of the racial prejudices

30. For more on fire insurance plans, see Diane L. Oswald, *Fire Insurance Maps: Their*

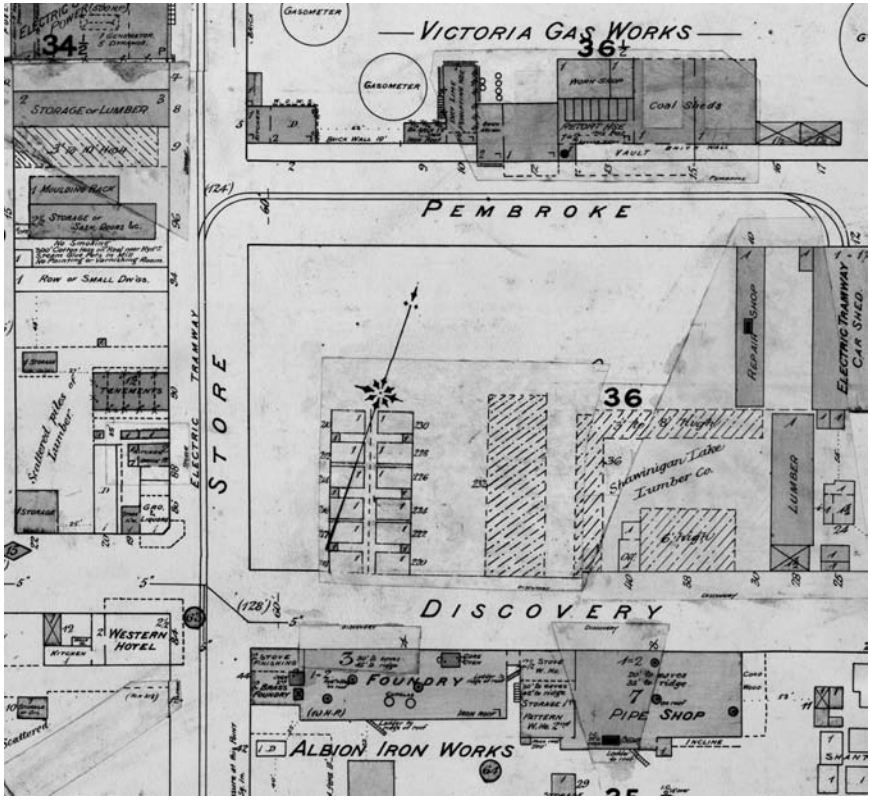

Figure 3: 1891 fire insurance plan showing wageworker cabins near the southwest corner of Store Street and Discovery Street, opposite the Albion Iron Works foundry. These cabins can be seen in the background of Figure 6.
Source: Goad, *Insurance Plan of Victoria, British Columbia* (1891, sheet no. 14).

and discriminatory attitudes of the era, fire insurance plans produced by the firm of Goad & Company pointedly indicated buildings that were occupied by Chinese and Aboriginal people. Hence we see structures identified as "Chinese dwellings" or "Indian shanties" on fire insurance plans of Victoria in 1891. Structures not identified as Chinese or Native Indian were, it was understood, occupied by white residents (see figure 2).

We begin our survey of urban wageworkers by looking at the industrialized heart of Victoria. This sector was situated on the north side of the downtown business district, between Fisgard Street in Chinatown and Rock Bay, adjacent

History and Applications (College Station, TX 1997); and Jason Gilliland and Matthew Novak, "Positioning the Past with the Present: On Integrating Fire Insurance Plans and GIS for Urban Environmental History," *Environmental History,* 11 (January 2006): 136–39.

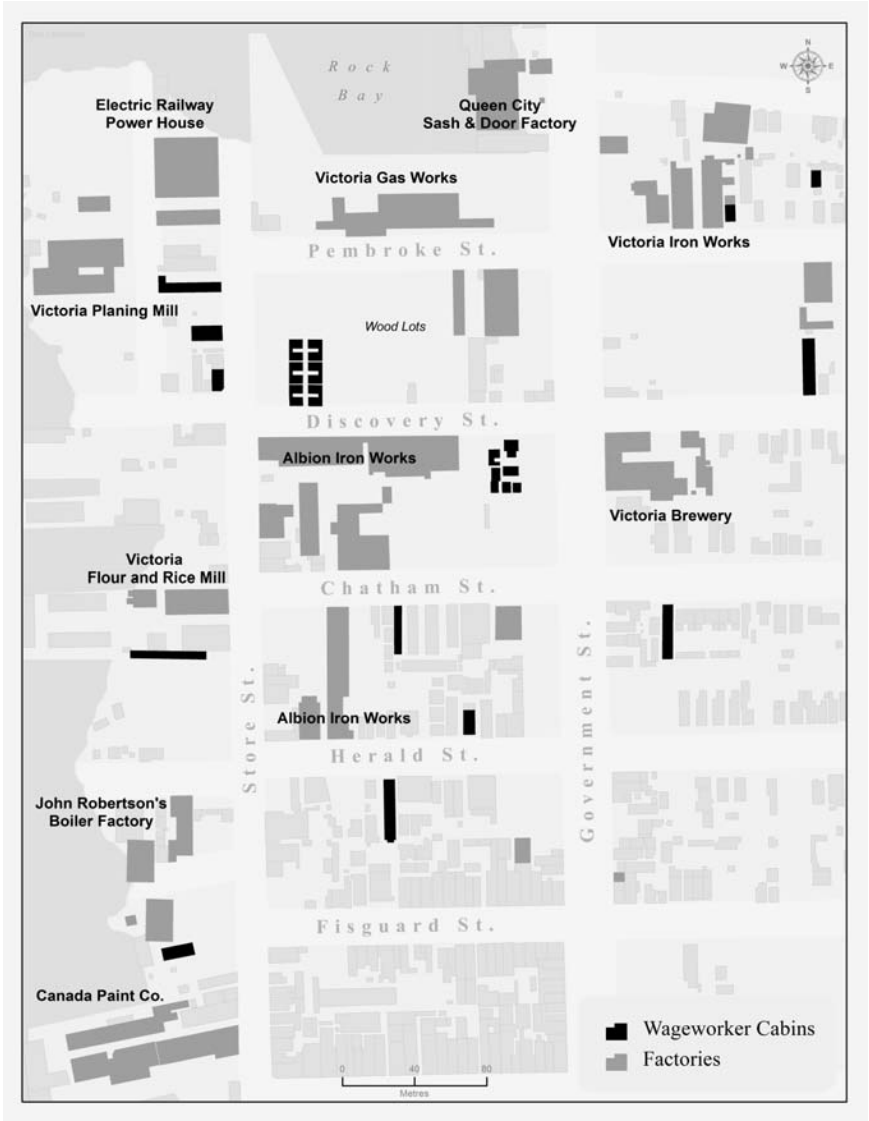

Figure 4: Proximity of wageworker cabins to factories.

to the industrial harbour. Several large lumber mills and iron foundries were located here, along with dozens of manufacturing firms that produced carriages, cornices, and cooking stoves, among other products. The waterfront was lined with warehouses and fuel bunkers, and wharves were crowded with steamships and sealing schooners. However, as we can see on fire insurance plans (see figure 3), cabins and tenements were also part of this industrial landscape.[31]

Many of these small dwellings were constructed in the mid-1880s in response to a severe shortage of housing for working men. As Victoria's economy gathered momentum and demand for workers increased, the demand for basic housing became acute. The cabins and tenements were built as investments by Victoria's merchant class in response to the sudden housing boom. They were tucked behind factories and industrial sites in otherwise undesirable city lots. Their locations were ideal for investors, since the lots were among the least expensive in the city, and suitable for workers, as they provided easy access to work sites (see figure 4).

One of the first of these structures was erected in 1884 by Alfred Stronach on Herald Street near the Albion Iron Works, then the largest iron foundry north of San Francisco and the largest employer in Victoria. Stronach had come to British Columbia from Nova Scotia during the Cariboo Gold Rush of 1862. He invested his earnings from the goldfields into real estate in Victoria. The rental unit at 28 Herald Street, known locally as Stronachville, provided him with a steady income. The unit consisted of a two-storey wood-frame building, with dimensions of 21 x 50 feet (6 x 15 metres). The building contained sixteen rooms, with eight rooms on each level. An exterior staircase and balcony provided access to the top floor rooms.[32] A similar unit was erected by Andrew Gray, a prosperous stair-builder, at 15 Herald Street in 1885. It consisted of a two-storey frame building with sixteen units on each floor. The units were described as "comfortable cabins" by the *Daily Colonist* newspaper. The cabins were 12 x 15 feet (3.6 x 4.5 metres) in size and each was fitted with a cookstove, cot, table, stool, and three shelves. "The rent charged is $3.50 per month, and

31. On the 1890s fire insurance plans of Victoria, the term "cabin" usually indicated a relatively small, detached structure; however, a terrace of attached small abodes might also be labelled "cabins." The term "tenement" generally indicated a two- or three-storey wood-frame building containing a dozen or more separate abodes. In Victoria at this time, "tenement" was a neutral and relatively benign term denoting a multiple-occupancy dwelling. It did not denote squalid, slum housing, nor did it have the pathetic connotations of the dwellings described by Jacob Riis in his famous exposé, *How the Other Half Lives: Studies among the Tenements of New York* (New York 1890).

32. *Victoria Daily Colonist*, 16 January 1884. Stronach enlarged this rental unit in 1891. He retired to his native Nova Scotia and died there in 1892. *Victoria Daily Colonist,* 18 February 1892.

while they are a boon to many single young men they return a good rental to their owner," the newspaper reported.[33]

A few years later, the *Daily Colonist* published an item about "model tenements" being constructed on Chatham Street, one block north of Herald. The tenements were owned by a property developer in Seattle and were "an indication of the growing value of real estate in Victoria," the newspaper said. "The rapidly growing value of Victoria real estate is every day becoming more and more appreciated, and the economy of space is in consequence beginning to interest property owners."[34] Understandably, local investors were eager to capitalize on the burgeoning market for inexpensive rental dwellings. The investors included Frank Campbell, a Victoria tobacconist and news agent, who erected a two-storey block of cabins at 33 Chatham Street in 1889. The next year, a slew of cabins and tenements were erected on nearby Store Street on lots owned by a grocer, a butcher, and a marine engineer. The firm of Hall, Ross & Co., which operated a large rice mill near the harbour, and Messrs. Muirhead and Mann, proprietors of the massive Victoria Planing Mills, also erected cabins on Store Street at this time. Some of the units, notably a row of cabins erected for saloon owner George Collins, were made of brick. However, most of the cabins were built of lumber and erected using a process known as balloon-frame construction. Simple and efficient, the balloon-frame method of construction was standard in the Pacific Northwest, where rough-milled lumber was readily available. Instead of using traditional mortise-and-tenon joints to connect heavy timber frames, builders used machine-cut lumber studs that were fastened by lap joints and secured by mass-produced wire nails. Because the studs were lightweight, "even large buildings could be built by a handful of men in a short amount of time using only a few basic hand tools – hammer, saw, square, and nails – with perhaps only a plan book as a guide to the finished product."[35] As housing historian Martin Daunton has remarked, the process of balloon-frame construction "required nailing rather than complicated carpentry." Components such as doors and pine-sash windows were prefabricated and inexpensive, while new techniques of applying plaster to interior walls and shingles to exterior surfaces made it easy to construct these simple dwellings.[36] Finished structures were covered with tarpaper and clad in shiplap siding.

33. *Victoria Daily Colonist*, 16 June 1885.

34. *Victoria Daily Colonist*, 21 November 1889.

35. Daniel Turbeville, "Cities of Kindling: Geographical Implications of the Urban Fire Hazard on the Pacific Northwest Coast Frontier, 1851–1920." PhD thesis, Simon Fraser University, 1985, 37.

36. M.J. Daunton, "American Cities," in *Housing the Workers, 1850–1914: A Comparative Perspective*, ed. M.J. Daunton (London 1990), 262.

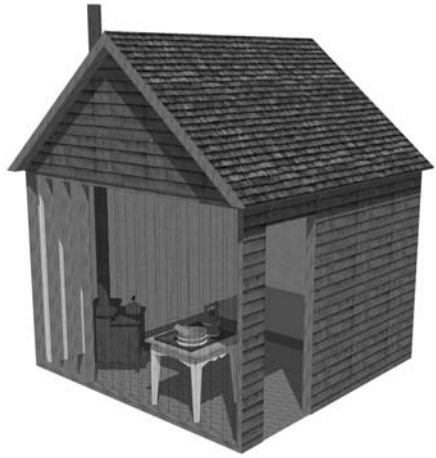

Figure 5: A rendering of a 13-square-metre wageworker cabin (10.5-square-metre living space) with typical furnishings.

The model in Figure 5 illustrates a furnished cabin of the period; it is drawn to a scale that represents the average living space available to the urban wageworker.[37]

In the 1890s, the rental costs for furnished cabins hovered around three or four dollars a month.[38] The newly erected cabins were undoubtedly better than some of the dwellings from an earlier era. On an 1885 fire insurance map of Victoria, a huddle of small buildings on Telegraph Street near the harbour is identified as "small worthless shanties – white occupants." On the 1891 fire insurance map, the shanties are gone, replaced by a neat row of small cabins. Even so, the newer habitations were austere. They were hemmed in by a large steam-powered generator, a boiler manufacturing factory, and coal bunkers. Cabins on Store Street, a short distance away, were surrounded by piles of lumber some fifteen feet (4.6 metres) high. Cabins on Herald Street, Chatham Street, and Discovery Street were dominated by the hulk of the Albion Iron Works; dwellings on Pembroke Street were dwarfed by the gasometers of the Victoria Gas Works and powerhouse dynamos of the British Columbia Electric

37. Our deepest appreciation is extended to Eli Paddle, PhD Candidate, Department of Geography, University of Western Ontario, for his assistance in drawing this wageworker cabin with Google *SketchUp*.

38. Rents are gleaned from rent books and correspondence from one of the major property owners, John Medwedrich (d. 1898), whose records were preserved in the probate files of his estate. British Columbia Archives, GR 1304, British Columbia. Supreme Court (Victoria), Probate/estate files, 1859–1941. We are grateful to Victoria historian Chris Hanna for this information.

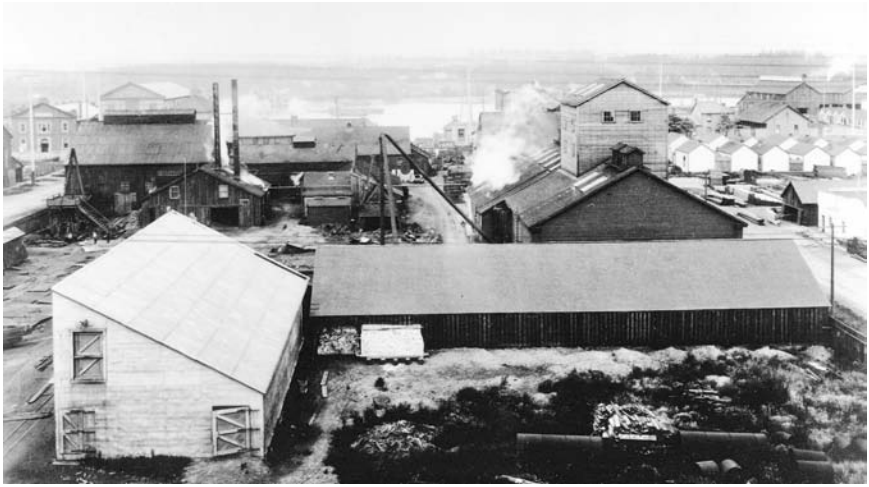

Figure 6: Albion Iron Works and wageworker cabins are visible in the top right of the photograph on Discovery Street, c. 1891.
Image A-06224, courtesy of Royal BC Museum, BC Archives.

Street Railway. As contemporary photographs reveal, the landscape north of Chatham Street is bleak (see figure 6).

Living conditions were more congenial in the centre of the city, on the east side of Douglas Street, one of Victoria's principal thoroughfares. Near the corner of Pandora Avenue and Douglas Street, opposite Victoria's City Hall and the newly opened public market, property owners erected workingmen's cabins. Victoria photographers Hannah and Richard Maynard owned several of these cabins, which were located behind their new (1891) three-storey brick building on Pandora Avenue. Nearby, a single-storey terrace of 24 cabins was erected at 110–112 Johnson Street on lots owned by W.P. Sayward, a lumber magnate. A two-storey wood-frame tenement containing twenty rental units was erected at 132 Johnson Street on property owned by John Coigdarippe, a wholesale liquor merchant (see figure 7). A similar unit was erected at 152 Johnson Street on land owned by Samuel Styles, a building contractor and city alderman. Styles also erected a small cluster of cabins a block east at 171 Johnson Street.

In design, the Johnson Street dwellings were similar to those on Herald Street and Chatham Street on the west side of Douglas Street, and were of about the same vintage. The Johnson Street tenements were, however, better situated than the industrial sector dwellings. In contemporary photographs, the Johnson Street dwellings appear to be well-kept. The cabins that Styles built at 152 Johnson are whitewashed, neatly fenced, and shaded by trees.

Figure 7: Tenement block at 132 Johnson Street, c. 1891.
Detail of Image A-03384, courtesy of Royal BC Museum, BC Archives.

They are surrounded by pleasant residential homes and respectable boarding houses, not scattered piles of lumber. They are dwarfed not by the smoke stacks of an iron foundry, but by the gables of the new (1890) Metropolitan Methodist Church.[39]

Additional tenements for working men were located on Humboldt Street, east of Douglas Street, and on McClure Street toward Church Hill, south of the downtown core. Several two- and three-storey wood-frame buildings were erected in the years 1889–92. Like workers' dwellings elsewhere in the city, they were designed to maximize a large number of rental units on a relatively small piece of land and to facilitate speedy construction. In March 1891, building contractor George Maidment erected two buildings, each containing twenty cabins in short order for Andrew Lawson, a publican who owned property on Humboldt Street. Around the corner on McClure Street, contractor

39. The Johnson Street cabins and surrounding commercial and residential buildings can be seen in panoramic photographs of Victoria, c. 1891. These are available online at *Virtual Victoria 1891 – View from the Steeple.* Specifically, see BC Archives image A-03387 in the section, "Close-ups & Hot spots," accessed 25 April 2013, http://www.cliomedia.ca/steeple/index.htm.

Henry Mundy built a block of 32 units for Harold Munn, an alderman and pharmacist.[40]

The design of tenements in Victoria probably derived from similar structures erected in Seattle prior to the devastating fire of 1889.[41] Existing literature on working-class housing and vernacular architecture in urban British Columbia is silent on these structures.[42] Certainly the structures identified here differ from workers' dwellings in central Canadian cities like London, Hamilton, and Toronto, or workers' houses in Montréal.[43] Most obviously they differ in the building materials used in their construction. In central Canada, brick or brick-clad wood "frame" construction was most common for residential structures, while lumber was the norm in Victoria.[44] More importantly, the Victoria cabins differ in their location within the urban environment. In cities

40. *Victoria Daily Colonist*, 29 March 1891.

41. Wood-frame tenements and cabins on the edge of Seattle's industrial harbour are evident on an 1888 fire insurance atlas. *Fire Insurance Map of Seattle, Washington Territory* (New York, 1888), plate 4. We are grateful to staff at the University of Washington Special Collections Library for allowing us to examine original copies of these records. The wooden structures were destroyed in the fire of 6 June 1889 and replaced by brick buildings. See Jeffrey K. Ochsner and Dennis A. Anderson, "Meeting the Danger of Fire: Design and Construction in Seattle after 1889," *Pacific Northwest Quarterly*, 93 (Summer 2002): 115–26.

42. Although he does not describe tenements per se, architectural historian Donald Luxton provides an excellent overview of the urban building boom of the period and an introduction to contemporary building forms in *Building the West: Early Architects of British Columbia* (Vancouver 2003), 100–11. Jill Wade describes tenements in Vancouver circa 1900 in the introduction to her study, *Houses for All: The Struggle for Social Housing in Vancouver, 1919–1950* (Vancouver 1994), 17. Vancouver City Directories and fire insurance plans show that tenements and cabins were part of Vancouver's urban landscape as early as the 1890s.

43. See Doucet, "Working-Class Housing in a Small 19th-Century Canadian City: Hamilton, Ontario, 1852–1881," in Kealey and Warrior, eds., *Essays in Canadian Working Class History*; Jason Gilliland and Sherry Olson, "Claims on Housing Space in Nineteenth Century Montréal," *Shared Spaces/Partage de l'éspace* (Working papers series no. 14, Department of Geography, McGill University, Montréal 1993); Robert Lewis. *Manufacturing Montréal: The Making of an Industrial Landscape* (Baltimore 2000); and Olson and Thornton, *Peopling the North American City.*

44. More specifically, working-class housing in central Canadian cities such as Montréal during this era was constructed in wood and then exteriors were clad with brick due to regulations to combat conflagrations. See Jason Gilliland, "Fire and Urban Form: Destruction and Reconstruction in 19th-century Montréal," in *Flammable Cities: Urban Conflagration and the Making of the Modern World,* ed. G. Bankoff, U. Luebken, and J. Sand (Milwaukee 2012), and François Dufaux, "A New World from Two Old Ones: The Evolution of Montréal's Tenements, 1850–1892," *Urban Morphology,* 4, no. 1 (2000): 9–19. As Harris has noted for Toronto, despite building regulations that demanded brick construction, some working-class residents continued to construct wooden dwellings in the suburbs, beyond the eye of the building inspector. See Richard Harris, *Unplanned Suburbs: Toronto's American Tragedy, 1900 to 1950* (Baltimore 1996). Wood frame construction was also predominant in the Maritime provinces and Newfoundland during this era. See Ennals and Holdsworth, *Homeplace: The Making of the Canadian Dwelling.*

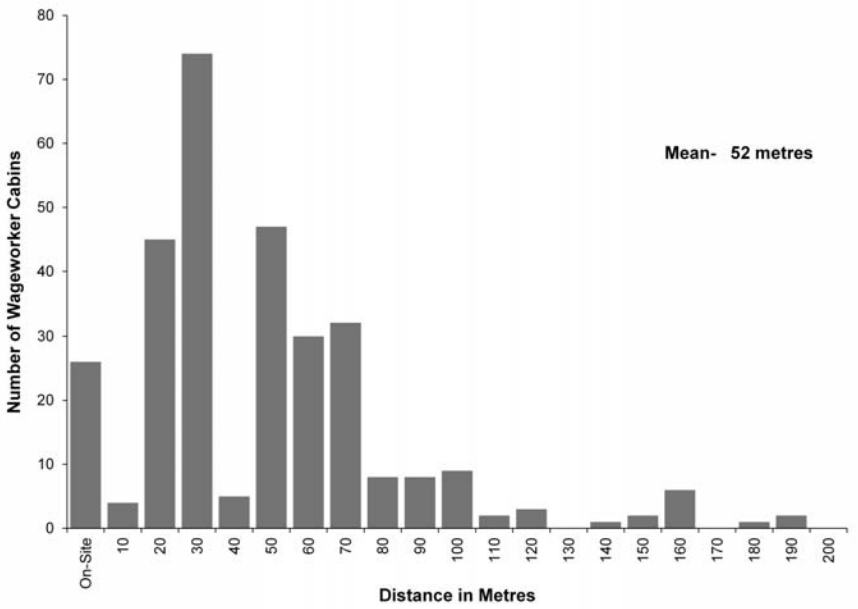

Figure 8: Proximity of wageworker cabins to industrial land uses. These cabins were remarkably close, with an average distance of only 52 metres, or a 30-second walk.

like London, Ontario, workers' dwellings were proximal to industry but not, as in Victoria, placed amid industrial sites (see figure 8).[45]

These inauspicious dwellings accommodated a significant number of Victoria's wageworkers. Using municipal and federal government census records, we identified over 400 working men in cabins and tenements in Victoria in 1891. The overall population of cabin- and tenement-dwellers was probably much larger. Enumerators were instructed not to count temporary or transient residents who, in all likelihood, also occupied these dwellings; and as we have already determined, enumerators overlooked many of these places, especially small dwellings that were not easily accessible from the city's main streets.[46] But our sample count of cabin-dwellers is large enough to suggest

45. The relationship between workplaces and dwellings in London was explored by Donald J. Lafreniere and Jason A. Gilliland, "A Socio-Spatial Analysis of the Nineteenth-Century Journey to Work in London, Ontario" (paper presented to the 35th annual meeting of the Social Science History Association, Chicago, Illinois, November 2010).

46. Although Dominion census officers were instructed in systematic data entry methods and provided with detailed procedural manuals, enumerators were inconsistent and somewhat capricious when recording cabins and tenements. Some enumerators described cabins as "house dwellings" while others described the abodes as "shanties." Some tenement blocks were thoroughly canvassed, and others were overlooked. Municipal check census officers were

a prosopographical profile of these otherwise elusive wageworkers. We have detailed data, derived from federal rather than municipal census records, for about one-third of this population, and with this data can infer demographic trends in the overall cohort of cabin and tenement occupants.[47] Thus, we see a cohort of wageworkers with a median age of 32 years. The overwhelming majority (80 per cent) of the men were unmarried. (Half a dozen old-timers were widowers and two dozen married men, who were unaccompanied by their wives, rounded out the numbers.) One-third of these wageworkers were employed as general labourers, and about one-quarter were employed in the building trades as carpenters, painters, and bricklayers.[48] The next largest occupational groups consisted of seafarers (sailors, steamboat hands, and stokers), teamsters, longshoremen, and sawmill workers. Nearly all of these wageworkers came from outside the province. The majority of the men – over 60 per cent – were from the British Isles (notably England and Scotland); the next largest group (about 20 per cent) was from Canada (mainly from the province of Ontario). Men from continental Europe (France, Germany, Italy, and Belgium) and Scandinavia (Iceland and Norway) comprised just over 10 per cent, while workers born in the US comprised slightly less than 10 per cent of this cohort.

The demographic profile of wageworkers in Victoria is broadly similar to one that Schwantes assembled using data from the US census of 1900. Our data is much more detailed, but it confirms trends that he noticed in Seattle and Tacoma – namely that the majority of the wageworker population of these cities came from out of state and overseas.[49] By harnessing the spatio-analytical functions of an HGIS, we can not only locate this group with fine spatial precision, we can also derive a better understanding of the domestic spaces these men occupied. By harmonizing census data with the spatial data provided by fire insurance plans, we can virtually peer into the dwellings of our Victoria wageworkers. We always assumed that these dwellings were modest, but with HGIS can see how small they were. We calculated the living space per person for every resident of Victoria by first digitizing all of Victoria's buildings as they are depicted on fire insurance plans. This painstaking process,

more thorough in identifying cabin-dwellers, but cursory in recording detailed demographic information. Patrick A. Dunae, "Making the 1891 Census in British Columbia," *Histoire sociale/ Social History,* 31 (November 1998): 234–35.

47. In all, we have 442 records for tenement and cabin dwellers. Of this number, 135 records (30 per cent) were generated by the official Dominion census. Although federal enumerators undercounted the population, they nevertheless visited nearly all of the tenement buildings and cabin clusters in the city. We can, accordingly, extrapolate the data across the larger cohort with a good degree of confidence.

48. Thankfully the check census enumerators did capture the occupation and employer of most residents. This allowed us to test our extrapolation of the sub-sample derived from the official Dominion census as described in the previous note.

49. Schwantes, "Concept of the Wageworkers' Frontier," 48.

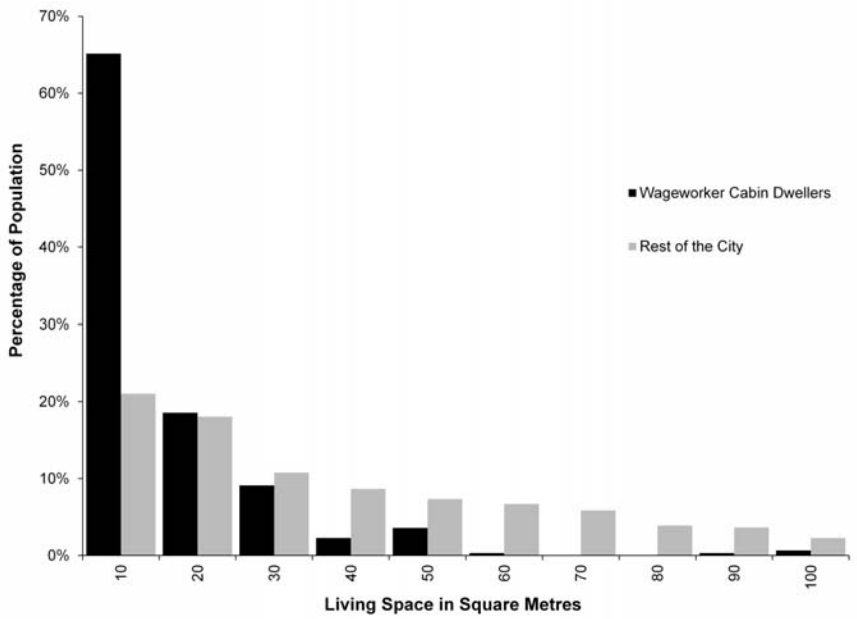

Figure 9: Comparison of the living space per person of wageworker cabin dwellers and residents in the rest of the City of Victoria, c. 1891.

however, allows us to consider not only the size of the dwellings but also the building materials, number of storeys, and building densities of all dwellings and businesses in the city. As Figure 9 indicates, the average wageworker had just 6.8 square metres of living space in which to sleep, repose, prepare meals, and clean up after a ten-hour shift at the Albion Iron Works or Victoria Planing Mills. In comparison, the average non-cabin-dwelling resident in the city of Victoria enjoyed over 33 square metres of living space.[50] Moreover, these places afforded very little privacy for occupants. A multiple-dwelling unit comprising a dozen or so cabins would typically contain only one privy, to be shared by all residents.

The small size of the units and inexpensive cost of construction, coupled with high densities and high demands, made them very attractive for investors and developers. Regrettably, we have no information on how they were perceived by occupants. But while these dwelling units were small and densely packed, they were regarded as adequate for the needs of wageworkers. And although the accommodations may have been spartan, they were not usually

50. The figures reported are medians. The median is more representative of the "typical" dwelling as it removes the effects on the mean from the very large homes of Victoria's wealthiest citizens. The mean size of a wageworker dwelling was 10.5 square metres compared to 54 square metres for the average non-cabin-dwelling resident.

Figure 10: Looking north across James Bay to Humboldt Street in 1891. Note a cluster of cabins on the right of the photo; a three-storey tenement block on the left; a couple of two-storey boarding houses behind the tenement block.
Image A-03408, courtesy of Royal BC Museum, BC Archives.

squalid. Indeed, the tenement blocks erected on McClure Street in March 1891 were model dwellings compared to the decrepit cabins occupied by an earlier generation of workers.

Some of the least desirable dwellings squatted on the south side of Humboldt Street, on the edge of the James Bay mud flats. These decrepit colonial-era cabins were squeezed together between a malodorous vinegar factory and soap works, and the lumber piles of a furniture factory. The assessed values of the dwellings were the lowest in the city.[51] The cabins were not "improved" – that is, they did not have solid foundations, electricity, or running water, and they were not hooked up to the city's sewer system. The rickety outhouses provided for these habitations were built on pilings over the harbour. In 1891, this was Victoria's Skid Row. Cabins in Skid Row were among the worst dwellings available in town. They were not usually occupied by gainfully employed workers, but rather by indigents who, judging from newspaper reports, lived and often died in tragic circumstances.[52]

Some wageworkers resided in boarding houses. A commercial directory for 1891 listed nearly two dozen boarding houses in Victoria; a slightly larger number of "boarding house keepers" are recorded on contemporary

51. The assessed value of some of the cabins on Humboldt Street was only $200; in contrast, the assessed value of newly built tenements on McClure Street was $2,000. Older properties, such as A.V. Stronach's cabins at 28 Herald and Andrew Gray's cabins at 15 Herald were assessed at $2,100 and $2,500, respectively. Porter's cabins at 36 Store Street were assessed at $4,500 in 1891 (figures taken from City of Victoria Archives, Property Tax Assessment Rolls, 1891).

52. The unfortunate residents of Victoria's Skid Row included "Old Jack," a former miner who expired in his shanty in 1890. "He is said to have made a large fortune [in Nevada and California], but like many others he failed to keep it and died with scarcely anything. In appearance, he was a broken down old man, but was not over 48 years old." *Victoria Daily Colonist*, 6 June 1890.

census records for the city.[53] In the main, boarding houses in Victoria conform to patterns discerned by scholars who have looked at boarding houses in other Canadian cities – that is, many of Victoria's boarding houses were run by widows and conducted as family businesses.[54] The city's best-known boarding houses – "Roccabella" on McClure Street near the Anglican Cathedral; "Revere House" on Pandora Avenue, near the new Methodist Church; and Mrs. McDonnell's "private boarding house" on Birdcage Walk in James Bay, close to the Parliament Buildings – accommodated professional men such as architects, land surveyors, school administrators, and financial investment agents.[55] These genteel boarding houses were located in residential neighbourhoods some distance from the city centre (see figure 11). Boarding houses that catered to tradesmen and labourers stood on less fashionable streets and included a large establishment run by Charles Monk. Census records indicate that Monk and his wife provided accommodation in two adjacent buildings (at No. 6 and No. 8 Humboldt Street), for twenty unmarried men who worked as cabinet makers, carpenters, bakers, boiler makers, and building painters.[56] Nearby at 11 Humboldt Street was a boarding house run by Elizabeth Laury, a widow with five small children. Mrs. Laury's boarding house, a two-storey, eleven-room wooden structure, accommodated a dozen unmarried working men. Another widow, Mary Whittaker, provided accommodation for seven boarders, most of whom were teamsters and hostlers, in a boarding house situated at 70 Douglas Street.[57]

Several other women who are identified in the census as "boarding house keepers" were married to tradesmen and likely took in boarders to supplement

53. *Henderson's 1891 British Columbia Gazetteer and Directory*, classified business directory, 729. Unfortunately for us, the principal directory publishers in British Columbia – R.T. Williams & Company and the Henderson Directory Company – did not routinely identify residents as boarders or roomers in the alphabetical section of their city directories. In Ontario, in contrast, directory publishers indicated people who were boarders and roomers by using the abbreviations "bds" and "rms" after individual names. With this information, Richard Harris was able to identify a large cohort of lodgers in Toronto and Hamilton. See his important work, "The End Justified the Means: Boarding and Rooming in a City of Homes, 1890–1951," *Journal of Social History,* 26, no. 2 (Winter 1992): 331–58.

54. Bettina Bradbury, "Pigs, Cows, and Boarders: Non-wage Forms of Survival among Montréal Families, 1861–1891," *Labour/Le Travail*, 14 (Fall 1984): especially 32–45; and Harris, "Boarding and Rooming in a City of Homes, 1890–1951," 343.

55. Statistics Canada RG 31, Census of Canada, 1891: microfilm reel T6292, Victoria City, District 4, sub-district 7, James Bay Ward, p. 2, household 9, Library and Archives Canada (hereafter LAC), accessed 25 April 2013, http://www.collectionscanada.gc.ca/databases/census-1891/

56. Monk owned two almost identical houses on the north side of Humboldt Street, near Douglas Street. Each two-storey wooden house contained seven rooms.

57. RG 31, Census of Canada, 1891, microfilm reel T6292, Victoria City, District 4, sub-district 7, James Bay Ward, p. 2, household 8, LAC; and sub-district 3, Johnson Street Ward, p. 52, household 251.

Figure 11: Distribution of boarding houses in the City of Victoria, c. 1891. Note that most are located in residential neighbourhoods outside of the city centre.

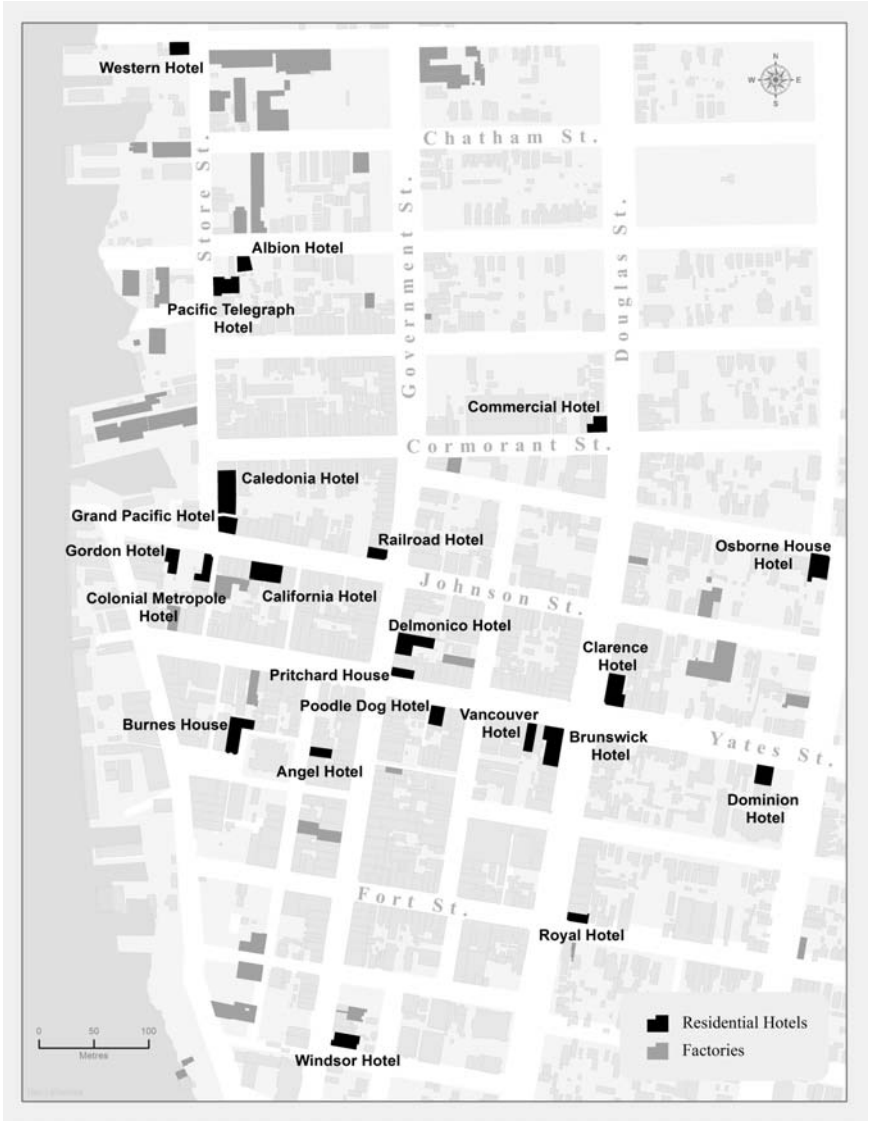

Figure 12: Proximity of residential hotels to factories.

the family income. Twenty-six-year-old Catherine Gardener is representative. Her husband, Frank, was a carpenter and they provided lodging in their home on Green Street for a couple of carpenters and a building painter. Thirty-five-year-old Nellie Rogerson, who lived on Pandora Avenue with her husband Isaac, a building contractor, is also representative. The Rogerson household included seven lodgers – five carpenters, one cabinet maker, and a blacksmith.[58]

Other examples of respectable boarding houses can be gleaned from the census.[59] Overall, however, these places accommodated fewer than 100 wageworkers.[60] Many more wageworkers lived in residential hotels. In 1891, there were about two dozen residential hotels in Victoria. As Figure 12 indicates, most of the residential hotels were located close to the city centre.

Many of the hotels were relatively new and comparable in style and function to the downtown rooming houses described by architectural historian Paul Groth in his history of residential hotels in the United States:

> The construction [of downtown rooming houses] was not temporary; owners were confident that single-room living would bring in reliable rents for a long time. On the ground floor were store windows and commercial spaces that in their form, use and lease income clearly said "downtown." The fifteen to forty rooms on the floors above said "residential" to those living in the structure. Relatively generous light wells illuminated and ventilated the upstairs rooms and reinforced the permanent commitment to residential use.[61]

The Colonial Metropole Hotel at 31–33 Johnson Street exemplified this kind of dwelling (see figure 13). Originally built as a two-storey wooden structure in 1885, it was rebuilt as a three-storey brick structure in 1891. One side of the ground floor was leased to a variety store, the other side to a shoe store. Rental accommodation in this 40-room hotel was located on the second and third floors of the building. According to advertisements, rates in the Colonial Metropole were "moderate and reasonable" and rooms were "well-furnished

58. RG 31, Census of Canada, 1891, microfilm reel T6292, Victoria City, District 4, sub-district 6, Yates Street Ward, p. 54, household 283, LAC; and sub-district 3, Johnson Street Ward, p. 21, household 98.

59. Census information about boarding house keepers can be misleading. Several women recorded on the official 1891 census of Victoria as "boarding house keepers" were in fact brothel operators. See Patrick A. Dunae, "Sex, Charades and Census Records: Locating Female Sex Trade Workers in a Victorian City," *Histoire sociale/Social History*, 42, no. 84 (November 2009): 268–97.

60. Peter Baskerville asserts that census takers and directory publishers undercounted the number of women who operated boarding houses in Vancouver and Victoria in 1891. Baskerville, "She Has Already Hinted at 'Board' Enterprising Urban Women in British Columbia, 1863–1896," *Histoire social/Social History*, 26, no. 52 (November 1993): 227. Undoubtedly the incidence of boarding was underrepresented in contemporary records. Many private family households included lodgers and boarders, and so functioned informally as boarding houses.

61. Paul Groth, *Living Downtown. The History of Residential Hotels in the United States* (Los Angeles 1994), 97.

Figure 13: Colonial Metropole Hotel, c. 1892.
Image D-04110, courtesy of Royal BC Museum, BC Archives.

and cheerful."[62] Rates varied between hotels, but most charged about twenty dollars a month for room and board and sixteen dollars for lodging without meals.[63] Rooms came with a bed, wardrobe, and wash stand. Hot water bathrooms and lavatories on each floor were shared by residents.[64]

For enumeration purposes, hotels were classified as census households. Hotels – compared to single family residences, workers' tenements, and boarding houses – were challenging places to enumerate. While it was relatively straightforward to enumerate hotel proprietors and employees who lived on the premises, it was more difficult to determine the status of temporary and permanent members of these ambiguous census households. Inevitably, some hotel residents were absent when the enumerator made his rounds, and so census records for these establishments are uneven and incomplete.[65] Nevertheless, the residential hotel population comes into focus when

62. *Victoria Daily Colonist*, 21 January 1891.

63. *Lynch's Ready Guide. Containing railway, steamer, stage and ocean steamship timetables and General Directory to Victoria, British Columbia and Puget Sound* (Victoria, BC 1892), 33.

64. Groth, *Living Downtown*, 90–94.

65. The problem of enumerating hotel dwellers has been and continues to be a methodological issue for census takers. For more on the census under-enumeration of residential hotels in the

we record-match federal and municipal census returns. We have identified over 1,200 hotel residents, including over 450 enumerated on the Dominion census. Extrapolating from these records, we found the median age of the residential hotel population was 30 years, just younger than the median of the cabin-dwellers. Much like the cabin-based group, nearly all of the men (86 per cent) were single. The few married men we did find were the hoteliers themselves or spouses of resident housekeepers.[66] Nearly half (47 per cent) of the hotel residents were from the British Isles, with another 41 per cent from Eastern Canada (mostly from Nova Scotia and Ontario). The remainder of the men were from continental Europe and the United States, with the exception of a handful of single Chinese men who worked as hotel cooks and domestic servants.

The residential hotel population was more diverse in terms of occupational strata than the cabin-dwelling population and, generally, the boarding-house population. There were more skilled tradesmen in hotels, and their presence is a testament to the construction boom underway in Victoria at the time. But Victoria's residential hotels accommodated members of every occupational social class (see figure 12).[67] White-collar workers often resided in the same hotels as blue-collar workers. Stonemasons and plumbers might be found sitting around the bar in, say, the Colonial Metropole Hotel, with office clerks and telegraph operators. Wageworkers in residential hotels enjoyed amenities not found in cabins or tenements, and a measure of autonomy not found in boarding houses.[68]

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late 19th and early 20th centuries see Groth, *Living Downtown*; and for a modern discussion of hotel enumeration see L. Brownrigg, "People Who Live in Hotels: An Exploratory Overview," *Ethnographic Exploratory Report #23, Statistical Research Division* (US Census Bureau 2006).

66. To offer but a few examples, Joseph and Ronda Sauer were resident proprietors of the Grand Pacific Hotel; hotel owner Henry Noble resided with his wife Clara in the Commercial Hotel; Robert Ward conducted the Albion Hotel with his wife Annie; hotelier Thomas Burnes and his wife Katherine resided in the eponymous Burnes House Hotel. Other married couples included John and Julie Clark who lived in the Poodle Dog Hotel; John was a telegraph operator and Julie worked as a housekeeper. A contrary example to this pattern is a married couple, George and Eliza Witt, who resided in the Colonial Metropole Hotel. He was enumerated as a "travelling actor" and she as an "actress." Presumably, they both worked on a regional theatre circuit, but called the Colonial Metropole Hotel home. RG 31, Census of Canada, 1891, microfilm reel T6292, Victoria City, District 4, sub-district 5, Yates Street Ward, p. 8, households 34 and 35, LAC; and page 55, household 173.

67. To aid in comparing the myriad of occupational titles we found in both the Dominion and check censuses, we utilized the occupational class structure developed by Gordon Darroch and Michael Ornstein, "Ethnicity and Occupational Structure in Canada in 1871: The Vertical Mosaic in Historical Perspective," *Canadian Historical Review,* 61 (September 1980): 305–33. Thanks to Lisa Dillon, Département de démographie, Université de Montréal, for advice on applying Darroch and Ornstein's occupational class scheme to the 1891 census.

68. Residential hotels were more attractive than boarding houses to wageworkers who valued independence and autonomy. Hotel residents were not hampered by the strictures of

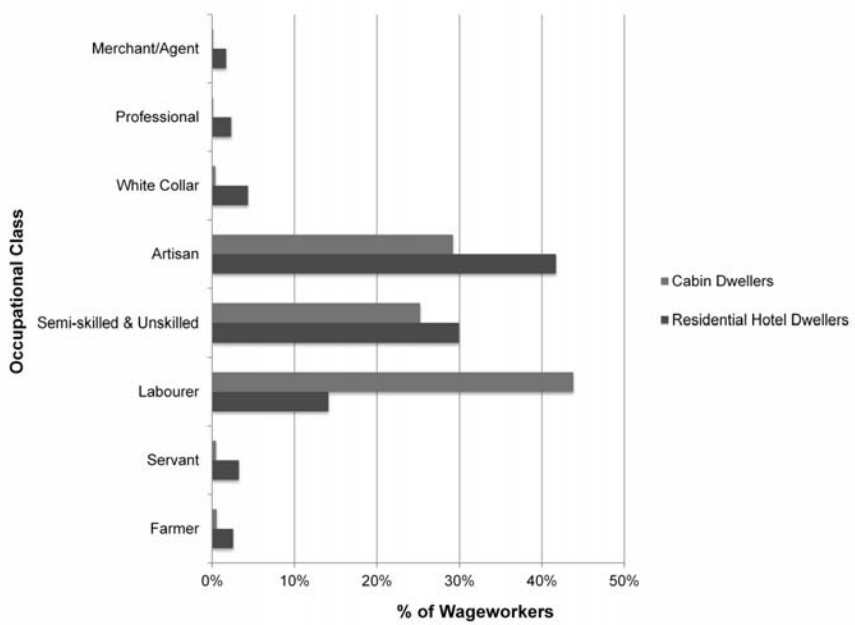

Figure 14: Comparison of occupational social classes between cabin dwellers and residential hotel dwellers. Observe the relative diversity found in the residential hotels compared to the wageworker cabins.

The dynamics of residential choice are unclear and raise questions that invite further research. Although building tradesmen are present in almost all of Victoria's residential hotels, tradesmen with different skills tended to favour different establishments. For example, carpenters favoured the Brunswick Hotel and the Vancouver House on Yates Street, while plasterers and plumbers favoured the Colonial Metropole and the California Hotel on Johnson Street. Bricklayers were prominent in the Commercial Hotel on Douglas Street. Specific occupational groups may have congregated at certain residential hotels for no other reason than word-of-mouth. In this scenario, a newly arrived carpenter in Victoria might ask a fellow carpenter to recommend a place to stay. If the workmate was ensconced comfortably in the Brunswick Hotel, he would likely recommend it to his new chum. This informal system of occupational congruence would have been convenient for building contractors who required workers with particular skills. A contractor in need of, say, bricklayers, may have known to look for them first in the Commercial Hotel.

boarding houses that sometimes seemed "too much like [family] homes." Wendy Gamber, *The Boardinghouse in Nineteenth-Century America* (Baltimore 2007), 164. See also Baskerville, "Familiar Strangers: Urban Families with Boarders, Canada, 1901," *Social Science History*, 25, no. 3 (Autumn 2001): 321–46.

The proximity of a man's workplace may have influenced where he lived. If so, this would account for the longshoremen, ships' firemen, and sealers who lived near the harbour in the Railroad Hotel, Gordon Hotel, and Grand Pacific Hotel, and the machinists and iron moulders who boarded at the Pacific Telegraph Hotel, not far from iron foundries on the north side of town. It should be noted, however, that labouring men who lived in residential hotels were more distant from their worksites than men who lived in cabins or tenements.[69] As well, dwellings may have been chosen because of their amenities. The Dominion Hotel, a three-storey brick structure located on the east end of Yates Street, represented the top of the scale. It had recently been refurbished, boasted a well-appointed dining room, and was located a good distance away from sooty factory smokestacks. At the other end of the scale was the Albion Hotel, a small, two-storey, wood-frame structure on Herald Street. Located in the very centre of the industrial sector of Victoria, it was probably very noisy.[70] The high demand for accommodation and low vacancy rates may also have determined where tradesmen lived. All of the residential hotels were fully occupied and many of them were crowded. For example, the Brunswick Hotel on Yates Street, a two-storey brick building with 24 rooms had over 40 residents; the Colonial Metropole Hotel with its 40 rooms accommodated 85 residents; the Dominion Hotel with about 50 rooms contained over 100 residents. The ratio of residents-to-rooms indicates that occupants had to double up in many hotels, especially when they first arrived in town.

A worker's pay packet also determined the type of dwelling he rented. As Daunton noted, the higher the ratio of workers' wages to rent, the more favourable the housing market to tenants.[71] A detailed analysis of the cost of living in Victoria is beyond the scope of this study, but prevailing wage rates for labourers and tradesmen in 1891 indicate that the ratio of wages to rent was favourable for working men. Labourers earned between two dollars and three dollars a day and so, presumably, could have managed the cost of a cabin or tenement. Skilled tradesmen were better paid, with stonemasons and master carpenters commanding as much as five dollars a day.[72] Based on these rates, skilled workers could have afforded a room in one of the better residential hotels – assuming, of course, that a room was available. If a tradesman was a boarder, he would have taken his meals in the hotel dining room. If he was

69. The relationship between the type of rental housing and the journey to work is an area of inquiry yet to be explored by historical geographers; however, in a preliminary analysis of the journey to work in Victoria, we have observed this pattern to be true.

70. In advertisements, the Albion Iron Works boasted that its foundries operated continuously, day and night.

71. Daunton, "Cities of Homes and Cities of Tenements," 296.

72. Information on wages is derived from federal government Immigration Branch reports. See Canada, Parliament, *Sessional Papers* No.7, Report of the Immigration Branch, Department of Agriculture (1892), Victoria, BC District Agency, 144–45.

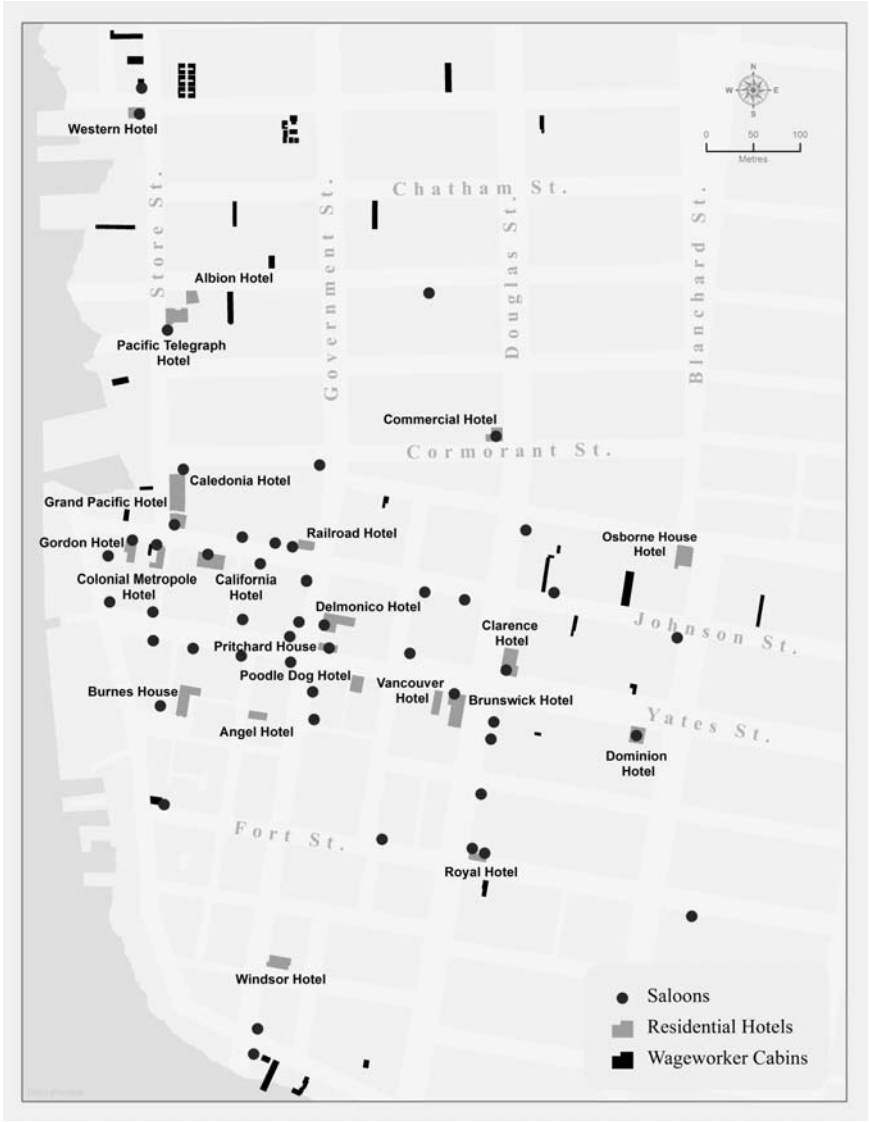

Figure 15: Spatial relations of saloons to residential hotels and wageworker cabins in Victoria, 1891.

a lodger, he might have taken his meals in nearby saloons and restaurants. Most saloons offered free biscuits, cheeses, and cold cuts on the bar, and sold inexpensive hot meals. A glass of beer was only five cents. Full-course meals in ordinary restaurants cost about 25 cents, and many restaurants were open 24 hours a day. Working men who lived in furnished tenements could take nourishment from these places, but frugal workers may have purchased their own groceries and prepared meals in their small abodes. Grocery stores were conveniently located near to cabins and tenements on Store Street, Johnson Street, Humboldt Street, and McClure Street, and basic provisions were not expensive. A loaf of bread cost 5 cents, a pound of beef 15 cents, and a bushel of potatoes 60 cents. Ten cents bought a quart of milk, 12 cents a quart of beer, and 35 cents a pound of coffee.[73]

It is tempting to imagine that wageworkers formed a sociable community or fraternal culture. They might have congregated in some of Victoria's many saloons for fellowship, recreation, and entertainment. With the exception of temperance establishments like the Osborne House and Angel Hotel, all of the residential hotels had saloon bars attached to the premises. As Figure 15 shows, detached saloons were located close to most of the cabin clusters and tenement blocks.

Some of the saloons may have functioned like the taverns Peter DeLottinville described in his study of working-class culture in 19th-century Montréal. "Taverns," DeLottinville said, often "held attractions beyond the simple comforts of food and culture" for inner-city, working-class bachelors. "With no public parks in the immediate area, and only occasional celebrations by national societies and church groups," their recreations were often centred on the local tavern.[74] But the saloons of Victoria may have had fewer regular patrons than their counterparts in more established cities like Montréal, simply because the clientele was so transient. The fragmentary records suggest that the wageworkers' frontier was a very fluid place, as workers moved from job to job and region to region in response to labour shortages and higher wages. The fact that so many of the wageworkers had come from outside the region indicates the migratory character of this cohort and the tendency of men to be somewhat rootless in their salad days.

In this respect, the Sivertz brothers may be representative of our larger cohort. Christian Sivertz was one of the few wageworkers who left a personal account of his experiences as a young man. In the late 1880s, he left his home in a community of Icelandic settlers in Manitoba and set out for the Pacific Northwest. He worked initially as a stoker on steamboats based in Tacoma.

73. Canada, Parliament, *Sessional Papers* No.7, "List of retail prices of the ordinary articles of food and raiment required by the working classes at Victoria, BC agency in 1891," 145.

74. Peter DeLottinville, "Joe Beef of Montréal: Working-Class Culture and the Tavern, 1869–1889," in *Canadian Working-Class History: Selected Readings*, 3rd ed., ed. Laurel Sefton MacDowell and Ian Radforth (Toronto 2006), 105.

The 25-year-old wageworker had no trouble finding well-paid work when he came ashore in Victoria in 1890. His first job saw him on a construction site, erecting a power house and car barns for the new electric street railway company. Next, he hired on with a contractor building a massive breakwater and quay at the entrance to Victoria Harbour. A younger brother arrived in the city soon after and found work as an assistant in a grocery store on Humboldt Street. He probably lived in one of the nearby tenements or boarding houses. An older brother arrived in 1892, worked for the city's Public Works department for a while, then moved over to Point Roberts in Washington State.[75] There were probably thousands of wageworkers like the Sivertz brothers who traversed "the great marine highway of Puget Sound and the Strait of Georgia" during this period.[76] The transitory nature of these workers is evident in the rent books of tenement owners, which show a high turnover among tenants. Typically, tenants stayed for less than a year. Sometimes they left Victoria for temporary employment in other places and sometimes they simply shifted across town, exchanging a small furnished cabin in one neighbourhood for a modest dwelling in another. Wageworkers in residential hotels were similarly mobile, as we can see by comparing the names and addresses of hotel residents in city directories from 1892 and 1894. There is scarcely any continuity over this short period of time.[77]

Marriage might also determine where a wageworker lived; it may have provided an escape from the congested quarters of bachelor cabins and tenements and a ticket to one of Victoria's streetcar suburbs, such as Fernwood, James Bay, Rock Bay, and Victoria West. Christian Sivertz charted this course in 1892 when he married and built a home with his wife on Spring Road in Fernwood.[78] Many other wageworkers followed a similar matrimonial path – as we can see by record-linking decennial census data from 1891 to 1901. Consider, for example, Albert McDonald, a 24-year-old teamster who occupied a Humboldt Street tenement in 1891, but in 1901 was employed as a warehouseman and lived in a tidy bungalow on Catherine Street in Victoria West. He was married and the father of two small children. Twenty-eight-year-old Walter Disher was

75. B.G. Sivertz, *The Sivertz Family, Book I: Christian Sivertz of Victoria and Canada's Early Labor Movement* (Victoria, BC 1984), 9–11.

76. Abbott, *How Cities Won the West*, 11.

77. The transitory nature of urban wageworkers is evident by comparing the names of Victoria hotel residents in *Williams' Official British Columbia Directory* over a three-year period, 1892 to 1894. Names that appear in one year are replaced by other names in successive years. By comparing directories over a short span of time, we can also see evidence of workers' moving between different cabins and tenements.

78. Sivertz worked at a number of jobs before securing a permanent position as a letter carrier with the Dominion Post Office. He was a pioneer in the Victoria Trades and Labour Council (1890) and attained high office in the labour movement when he was elected president of the BC Federation of Labour. See Paul Phillips, *No Power Greater. A Century of Labour in British Columbi*a (Vancouver 1967), 20.

a bachelor resident in one of Collins' brick cabins on Store Street in 1891; ten years later he was living in his own home on David Street in Rock Bay with his wife and newborn child, and was working as a streetcar motorman. These men were relative newcomers to Victoria in 1891, and the cabins and tenements they occupied when enumerators called were mere way stations on a longer life journey.[79] Suitable in the short term, these small, modest dwellings might best be regarded as transitional domestic spaces in the urban industrial frontier of the Pacific Northwest.

In any event, most of these modest dwellings were ephemeral places. By the end of the 19th century, Vancouver had displaced Victoria as the metropolis of British Columbia.[80] As manufacturing, construction, and service industries shifted from the provincial capital to Burrard Inlet, so too did the urban labour force. The demand for workers' dwellings in Victoria subsequently abated. Moreover, many of the dwellings were precariously placed. Wageworkers' cabins near the Albion Iron Works (figure 6) were destroyed in a conflagration in 1907. Fortunately there were no fatalities, but the units were never replaced. Cabins, tenements, and boarding houses on Humboldt Street were demolished to make way for the landmark Empress Hotel, which opened in 1908. Other habitations in the downtown core disappeared as properties were redeveloped for commercial use. Today, only a handful of former residential hotels are still standing in Victoria.

II

Our research question was prompted by work by Carlos Schwantes, particularly his 1987 essay, where he remarked on the challenges of documenting transient workers who left very few records of their experiences. The question was additionally challenging because wageworker habitations have largely disappeared. We have endeavoured to answer the question with a historical GIS of Victoria. In the course of constructing our HGIS we found about 2,000 workers by record-matching nominal entries from the 1891 Dominion census

79. In the fourth decennial census of Canada (1901), residents born outside the Dominion were asked to state when they immigrated to Canada. With this information, we can determine when immigrant wageworkers who were residents for the 1891 census arrived in the country. Most of the immigrants were recent arrivals. Walter Disher, for example, immigrated to Canada from England in 1889. Nominal census schedules for 1901 are available on microfilm from Library and Archives Canada and online: accessed 25 April 2013, http://www.collectionscanada.gc.ca/databases/census-1901/index-e.html.

80. Victoria's relative economic decline is well documented. See Belshaw, *Becoming British Columbian*, 69, 195–200; Forward, "The Evolution of Victoria's Functional Character"; John S. Lutz, "Losing Steam: The Boiler and Engine Industry as an Index of British Columbia's Deindustrialization, 1880–1915," *Historical Papers/Communications historiques,* 23 (1988): 168–207; and Robert A.J. McDonald, "Victoria, Vancouver, and the Economic Development of British Columbia, 1886–1914," in *British Columbia: Historical Readings,* ed. W. Peter Ward and Robert A.J. McDonald (Vancouver 1981), 369-95.

and municipal check census, and cross-referencing the data with city directory listings. Tallies based on historical census records and directory listings are never definitive. We are confident, however, that the cohort of men identified in our GIS is representative of the legion of working men resident in Victoria in 1891. We are also confident that the prosopographical profile of white, male wageworkers derived from our HGIS of Victoria is descriptive of wageworkers in other coastal cities in the Pacific Northwest at this time.

With census data alone, we can discern the demographic features of this cohort and observe characteristics that may be significant to labour historians. But we gain many more historical insights when we place the data within a GIS. Indeed, when we mapped wageworkers to their domiciles, social trends and residential patterns that had not been evident previously came into clear focus. We discovered that the urban labour force and the urban landscape were more stratified and nuanced than we had anticipated. We could see, for the first time, socio-occupational differences between wageworkers who lived in downtown residential hotels and their comrades who occupied tenements and cabins. Further distinctions were evident within residential sectors: skilled workers and artisans were attracted to certain hotels, while less-skilled (and less paid) workers gravitated to others. Looking more closely still, we could see that occupation was a significant determinant of who lived where. Carpenters, for example, tended to congregate in certain hotels, while machinists and iron workers congregated in others.

As well as allowing us to see the relationship between home and work, and the propinquity of coworkers, a spatial view also affords a look at the social life of working men. Saloons offered many amenities for them but, as our GIS reveals, very few saloons were located in the industrial sector in the city. The majority of the saloons, over two dozen in number, were concentrated in the downtown core. Conveniently located for men who lived in residential hotels and city centre cabins, they were not as convenient for wageworkers in outlying areas. But even for those in the heart of the industrial zone, downtown was only a fifteen-minute walk away, so we expect that workers from all parts of the city frequented the downtown saloons. On most nights, but particularly on Saturday nights, downtown streets and sidewalks would have been thronged with wageworkers drawn from spartan cabins to the conviviality of saloons or the entertainment of music halls.[81]

The value of GIS as an epistemology is evident here. If we regard epistemology as both a way of knowing and a way of thinking, we can appreciate the perceptual power of GIS. It facilitates an inductive, holistic approach to the past, one that utilizes both quantitative and qualitative methods of analyzing,

81. Several music halls were also located here. The Standard Theatre, on the southwest corner of Douglas Street and Yates Street, was one of the most popular venues for working men. It offered booze, billiards, and vaudeville for its patrons. Chad Evans, *Frontier Theatre: A History of Nineteen-century Theatrical Entertainment in the Canadian Far West and Alaska* (Victoria, BC 1984), 192.

representing, and understanding socio-spatial conditions and relationships. Consider, for example, the sensory dimensions of past landscapes. In recent years, urban archaeologists, historians, geographers, and other scholars have engaged with the "invisible landscapes" of the past – notably with the noises and smells of cities. Architectural historian Dell Upton memorably remarked: "Where one landscape order was evident to the eye in the arrangement of buildings and spaces, others apparent to the ears and the nose slashed through boundaries defined by brick and mortar."[82] In the late 19th century, the aural environment in cities was dominated by sounds made by horses, "the principal motive forces for transport and industry." As historian David Garrioch observed in a widely noticed essay on the sounds of the city, "hoof-beats, equine whinnies and snorts were ubiquitous. So were the rumblings of wooden and iron-rimmed wheels."[83] Certain smells were also ubiquitous: horse dung, urine (animal and human), and tobacco smoke.[84] Those sounds and smells were pervasive in Victoria. Within a GIS, particular sounds and smells can be spatialized and discerned more finely. The soundscape of cabin-dwellers on Discovery Street and Store Street (figure 6) was dominated by the incessant din of the Albion Iron Works foundry.[85] Residents on nearby Pembroke Street (figure 3) heard other keynotes, such as the screech of steel wheels on steel rails, as streetcars slowly left the car barns first thing in the morning and crept in again late at night. For workers in other parts of the city, keynotes would have been different again. Likewise, workers dwelled amid distinctive olfactory environments. Wageworkers who lived on Humboldt Street close to the mud flats of James Bay endured the unpleasant smell of offal from a soap factory and the acrid odours of a vinegar factory; men who lived on the south side of Rock Bay endured the sulphurous smells of the Victoria Gas Works. But ambient smells were not all unpleasant. The comforting smells of malt and barley emanated from a large brewery on Government Street near Discovery Street; fragrant scents were produced by a spice mill and coffee rotisserie situated a few blocks away, near workers' cabins on Douglas Street. Workers who

82. Dell Upton, "The City as Material Culture," in *The Art and Mystery of Historical Archaeology: Essays in Honor of James Deetz*, ed. Anne Elizabeth Yentsch and Mary C. Beaudry (Boca Raton, FL 1992), 53.

83. David Garrioch, "Sounds of the City: The Soundscape of Early Modern European Towns," *Urban History*, 30, no. 1 (2003): 7.

84. Upton, "The City as Material Culture," 59.

85. The term "soundscape" was coined by the musical composer and environmentalist, R. Murray Schafer. In his concept, specific "keynotes" resound within a soundscape. Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester, VT 1994). Joy Parr draws upon his work in a meditative essay, "Notes for a More Sensuous History of Twentieth-century Canada: The Timely, the Tacit, and the Material Body," *Canadian Historical Review,* 82, no. 4 (December 2001): 720–45. In the essay, she enjoins historians to be less reverent of the written word and more attentive to resources that convey the sounds, smells, and tactile textures of historical conditions.

lived in downtown tenements likely appreciated the smells of downtown bakeries. These sounds and smells of the city were not as intense for people who lived in genteel boarding houses and suburban homes, where floral notes were more prevalent.

With a historical GIS, we are more aware of the sensory character of the city, just as we discern spatial relationships between people and places more acutely. By taking a geospatial approach to historical questions, our knowledge and understanding of environments and populations is enhanced substantially. Moreover, when textual and statistical records are geo-referenced or spatialized in a GIS, we often see trends, patterns, and relationships that were not apparent to us before. As Richard White has said, HGIS "generates questions that might otherwise go unasked, it reveals historical relations that might otherwise go unnoticed, and it undermines, or substantiates, stories upon which we build our own versions of the past."[86]

We have outlined a new epistemological framework for the study of workers and their environments. We have utilized GIS beyond its cartographic and analytical characteristics, but as a tool that allowed for a reflexive, interpretive approach to knowledge production. Integrating both qualitative and quantitative data allowed us to represent the multiple spatial conditions experienced by Victoria's wageworkers in the early 1890s. Using mixed-methods analysis techniques, notably the qualitative methods that are the tradition of historians in concert with the quantitative methods more familiar to geospatial researchers, we have repopulated the city and reconstructed a largely vanished urban residential and social landscape in Victoria. We hope that the research methods and epistemology presented in this essay will be useful to labour historians who are interested in the experiences of workers in other cities.

86. White, "What is Spatial History?" quoted in Bonnell and Fortin, eds., *Historical GIS in Canada*, 3.