STEPHANIE WEBER

Concordia University

Conceptualizing Nation in the Glass of Canada's Crystal Palaces

The long nineteenth century saw space in Europe and its colonies reorganized on a mass scale. This new figuration of space, especially during the period surrounding the Industrial Revolution, was in part a function of revealing – of making visible. It is no coincidence that this era also saw the birth of technologies that allowed the widespread integration of expansive glass surfaces into more and more of its architectural space, so much so that the glass surface, and its architectural corollaries, have become visual emblems of the era. New structural types such as the Victorian museum and Parisian "arcades," utilizing glass and allowing visibility, were solidified (Mitchell 1988, 7). The Industrial Revolution is often conceptualized in the glimmering shadow of the Crystal Palace, the sprawling paradigm of nineteenth-century engineering that prompted almost immediate global fascination and replications. Both literally and metaphorically, glass in the Victorian era allowed a new immediacy between seer and seen.

In Canada, plate glass saw a similar trajectory, being increasingly inlaid in urban shopfronts in industrializing cities, maintaining visibility for commercial spaces, and constituting large structural areas of the buildings constructed to house exhibitions of industry and agriculture throughout the Dominion. Canadian society, like that of England, was restructured as a result of the industrial revolution, but its industrialization, like its identity, was coloured by its status as a colony (Spence and Spence 1966, 13-16).[i] This pattern occurred during a period that saw both sweeping changes in the organization of the Canadian economy and built landscape, shifts that drew a variety of reactions from Canadians. This paper examines the mythology of the Crystal Palace in the Canadian context, and considers some examples of Canadian exhibition structures inspired by London's Crystal Palace, focussing in particular on representations of the glass that featured heavily in their design.

Victorian conversations around Canadian nationalism were complicated by the way that Canada's identity was still, for many, inextricable from its connection with Britain (Berger 1969, 1-2). Though Carl Berger's classic argument that Canadian's imperialism was simply "one form of Canadian nationalism" has been challenged effectively from a variety of perspectives, it remains true that ideals of nationalism and imperialism in Canadian history

often overlapped and intermingled within parties, across decades, and even in the changing philosophies of individuals (Berger 2013, 259; Carr 1982, 91-99). The vast array of representations of Canadian crystal palaces in Canadian periodicals, similarly contradictory and inconsistent, are reflective of this political and social ambiguity. I suggest that glass's physical capacity for dualism is an apt metaphor for the contradictory nature of the ideals it signified. I seek to explore the hypothesis that in the Canadian context, the paradoxes encompassed by the developing cultural imaginaries around glass are mirrored by the paradoxes of Victorian Canadians' ambiguous and conflicting relationships with nationalism, modernization, and imperialism.

This paper engages with glass as a material because of the way it can embody a multiplicity of functions simultaneously: as glass reveals, so too does it protect the objects behind it, and as it facilitates an experience of visual immediacy between the spaces on either side of it, it also negates the transfer of sensory experience other than sight by its material solidity. If it is transparent in one instant, in the next it might refract light, shooting rays off its surface and glinting in the sunlight, or appear to glow from within, casting a wash of light from its interior to observers. If the light changes, a surface may suddenly reflect the image of the onlooker in it rather than reveal what lays beyond. The capacity of glass to embody a symbolic ideal – of commodity display or house of curiosities, of nationhood or modernity – is complicated by its ambiguity. If the role that glass plays can literally change in an instant, the metaphorical or philosophical meanings that have been ascribed to it are necessarily in a constant state of tension. I will engage with this tension, suggesting that glass would have embodied a multiplicity of symbolic and referential meanings in an era characterized by shifting political alignments, competing visions of national identities, and a complicated and fluctuating relationship with the concept of "Canada" itself.

Depictions and descriptions of crystal palace exhibition buildings are one place in which the tension between the metaphorical significances of glass in nineteenth-century Canada comes to the fore. Following the erection of Joseph Paxton's renowned Crystal Palace in London's Hyde Park 1851, imitations were constructed throughout the world, and Canada was no exception. Over a dozen exhibition structures termed "crystal palaces" were completed in Canada by 1891, the first four of which were in Kingston, Toronto, Hamilton and Montreal. These structures, built for agricultural exhibitions, came to be recognized as "the appropriate symbol for the improvement of agriculture through technology" by encapsulating technological achievement as well as recalling the symbolism of Paxton's glass structure: its "modernity, clarity, lucidity, order and sense" (Graham 1994, 7; Teukolsky 2007, 88). This signification, however, relied on Canada's emulation of its imperial origins, highlighting the manner in which Canadian nationalism was often articulated in tandem with its imperial connection. At the same time, Canada's structures never matched the original in size or proportion of plate glass because of the country's climate, so coverage and depictions of Canadian structures often either obscured their material condition to praise their success or were critical of their perceived inferiority. Plate glass thus became,

paradoxically, a marker of both Canadian national progress and Canada's shortcomings. The dualistic metaphorical quality of glass itself – transparent and reflective, bright and clean yet reminiscent of its less-than-pristine origins – was thus drawn into that larger dualism of national independence and imperial allegiance that characterised the English Canadian political imaginary at this time.

Method

In one sense, my approach to this history is aligned with that of material culture since one of my focuses is on the utility and physical presence of one material. Historians such as Karen Harvey suggest the utility – even the necessity – of scholarly attentiveness to physical traces of the past for what they can offer as points of access to historical moments. By beginning investigations with physical objects, one can start to reconstruct the visual culture of an age, connecting fragments of ephemera to suggest what people were seeing and experiencing during particular periods. As Arjun Appadurai describes, attentiveness to the "lives" of historical objects can also reflect important revelations concerning their exchange value, and thus to question and reveal the political relationship between exchange and value (Appadurai 1986, 3-4).

Though I borrow from these ideas, this paper also differs significantly from these avenues of approaching history. I access glass as a material, in the context of Canadian crystal palaces, through that which illustrates or describes it, not through the examination of any physical artefacts. I explore the possibility of mapping a cultural imaginary of glass in Victorian era Canada in order to begin to define a nation-specific visual culture of glass. My use of the "cultural imaginary" draws from one anthropological use of this heterogenous term, which defines the "shared mental life" of a culture, an ethos held in common by a people with shared formative experiences (Strauss 2006, 322-323). The literary critic Chris Brooks suggests the term "symbolic realism" for the way Victorians comprehended their visual culture, a manner characterized by the tendency to understand architectural material and elements for their "real" or physical functions simultaneously with, and inextricably linked to, both their symbolic and referential meanings (Brooks 1984, 149). Brooks argues that the boundaries between these meanings were barely perceptible in subjective experience, so the clarity of transparent glass might be understood by contemporaries both according to its literal function of conducting sight and light, and simultaneously through any cultural associations with clarity, including cleanliness, morality, or truth. Because many of these concepts were later fundamentally embraced by twentieth-century modernists, many seminal texts of architectural history have tended both to focus on glass as a material characterizing these later modernist efforts, and to see the glass-heavy Victorian structures that I examine in this essay as precursors to modernist designs, early examples of the forms which came to dominate the zeitgeist some decades later. This paper, however, seeks to address these structures, and the glass within them, on their own terms and in the particular context of Canada in the nineteenth century.

London's Crystal Palace in the Canadian Press

Global emulation of the Crystal Palace was likely in part a result of the proliferation of romantic mythologies around the technologically unequalled Paxton palace in Hyde Park, narratives that are well documented throughout the abundant literature on this structure. Contemporaries marvelled at the colossal scale of its nine hundred thousand square feet of sheet glass, suggesting the relationship of its gigantic curtain walls to space not just beyond the structure itself, but beyond the physical realm (Hardison 1997, 283). Lothar Bucher's much-cited 1851 account of the Crystal Palace, for example, speaks to its spectacular, even dreamlike effect: "incomparable and fairylike," Bucher wrote, it is impossible to see "the actual size or distance" of the structure from inside, as "all materiality" of the building "blends into the atmosphere" (in López 2014, 106; Weston 2003, 76).

These narratives were similarly prevalent in Canadian publications, which emphasized the importance of the London structure for its technical innovation and its symbolic connection with industrial progress. Anticipating the opening of the Hyde Park Crystal Palace in 1850, the Toronto *Globe* immediately praised "Mr. Paxton's huge transparency" as a "wonderful advance," highlighting the "triumphs of skill" and engineering of "a structure composed entirely of iron, wood, and glass, without a square for brick or an inch of mortar" ("The Crystal Palace in Hyde Park" 1850, 598). The fascination in Toronto papers on the doings of empire reflects the fact that it was by many accounts "a steaming cauldron of Imperialist sentiment" compared to the rest of Canada (Carr 1982, 96). Prior to Confederation, however, many anglophone Canadian subjects both inside and outside Toronto understood themselves as essentially British, and Canada's connection to Empire was, according to Phillip Buckner, a "source of pride to most English-speaking Canadians" (Buckner 2006, 183-185). To echo awe for the technological triumphs of Britain from the colony underscored the sense of imperial loyalty pervading the English-speaking citizens of the dominion. Such pride in Empire persisted even following Confederation and as intellectual movements toward defining Canadian nationhood took hold.[ii] Indeed, decades later, in 1889, the *Ottawa Journal* remembered the relocated palace as a "marvel of skill" for which "no less than 240 plans were drawn, examined and rejected" before the great "tropical garden under glass" could be constructed and inspire a subsequent "epidemic of exhibitions" throughout the world ("Her Centennial Exposition" 1889, 3).

The palace was not only lauded by Canadians for its technical and architectural achievement, but also invited interest for the ways it embodied and prioritised visibility through its total transparency. Architectural theorist Anthony Vidler argued in 1992 that "modernity has been haunted, as we know very well, by a myth of transparency," a modernist ideal of "transparency of the self to nature, of the self to the other, of all selves to society" that was both represented and actively constructed in the "universal transparency of building materials" from the late eighteenth century until the early twentieth (Vidler 1992, 217). Further, Victorian scholar Estelle Murail has proposed that nineteenth-century modernity, in particular, was "pervaded by a scopic dream […] aimed at making all surfaces transparent" (Murail 2013, 2). This ideal emerges in an

1850 *Globe* article which notes the "many splendid points of view" that would be afforded as well as the "extraordinary facilities for an illumination" resulting from the transparent walls and roof of the Crystal Palace ("The Crystal Palace in Hyde Park" 1850, 598). In an article in the *Journal of Education for Upper Canada,* which proposed that the palace "combined recreation and instruction," great detail is lavished upon a description of the "spectacle of unequalled splendor and brilliancy" of the vast, open structure. The article alludes again to the palace's brightness, which might "throw over" the "faculties" of viewers confronted with "the flood of light, which enters its walls of transparent crystal," lined with "the rich products of human skill and ingenuity" ("The Sydenham Crystal Palace" 1855, 121).[iii]

The popularity of the London Crystal Palace in Canada is also significant specifically for its symbolism of imperial power. Exhibitions brought products from a vast area into one concentrated spot, enacting a collapse and concentration of space and time. The philosopher William Whewell remarked at the time of the Great Exhibition that "by annihilating the space which separates different nations, we produce a spectacle in which is also annihilated the time which separates one stage of a nation's progress from another" (in Miller 1995, 54). This experience was brought directly to Canadians with a panorama exhibition of the Great Exhibition, which was introduced to Torontonians in 1852 by the famed American showman and businessman P. T. Barnum. In advertisements that appeared throughout the *Toronto Examiner* in August 1852, the public was encouraged to visit St. Lawrence Hall, a large exhibition gallery on the corner of King East Street and Jarvis Street, in order to see a "Monster Panorama of the Crystal Palace" (figure 1).[iv] These advertisements describe a panorama of "the whole exterior and interior of the renowned CRYSTAL PALACE; the Royal Procession; the grand speeches by Queen Victoria and the British Court;" alongside several views of certain exhibitions and "a bird's eye view of the Crystal Palace and the West End of London" ("Monster Panorama" 1852a and b, 3). Panoramas, large paintings on a circular canvas that surrounded viewers on all sides, had spectators look out upon the massive picture which functioned to place them, illusorily, in the midst of a scene (Oleksijczuk 2011, 1). They often required specific infrastructure: purpose-built structures that accommodated an uninterrupted cylindrical photorealistic painting and a platform at the centre. Historian Denise Oleksijczuk notes that early British panoramas "solicited viewers ideologically," suggesting the dominance of the British Empire by bringing depictions of British military victories in far-away places into viewers' immediate proximity (Oleksijczuk 2011, 173-174).[v]

That the Great Exhibition was presented through the medium of the panorama is doubly significant considering the philosophical consequences of both platforms. Media theorist Anne Friedberg has observed that panoramas, like other visual technologies that gained popularity in the Victorian era, could be considered detemporalized and derealized "machines of virtual transport" (Benjamin 1999, 5-6; Friedberg 1993, 4). She notes the way that panoramas condensed time and space virtually, mirrored in the way that changes in transportation were altering

industrializing landscapes physically (Friedberg 1993, 4). The Great Exhibition was another moment at which space and time were concentrated, moving products from the world over into the field of vision of visitors to the industrial exhibition, a movement facilitated by the railway system (Miller 1995, 53). The subject matter of the Toronto panorama, then, acted as mirror of the poetic consequences of the panoramic medium itself. In addition, the experience of both subject and medium were layered with the reverberations of imperial power and colonial participation, and these implications of power and vision had echoes in the experience of the architecture of exhibitions.

Such interest in the achievements of the Imperial centre in Canada underscores English Canadian's identification with Britain, as reflected in newspaper coverage and attendance at the panoramic displays. As Phillip Buckner and R. Douglas Francis describe in the introduction to their volume *Canada and the British World*, "many English Canadians," especially since many were British immigrants or their direct offspring, "had the sense of having two homes" in the mid-nineteenth century, feeling that "Canada was essentially a 'British' nation" (Buckner and Francis 2006, 1, 7; Buckner 2008, 72). By the end of the twentieth century, although English Canadians by then largely described themselves as "Canadian," loyalty to Britain was held simultaneously with a loyalty to Canada, and these citizens, according to Buckner and Francis, "did not perceive any conflict in being loyal both to the Empire and to Canada" (Buckner and Francis 2006, 7; Buckner 2008, 72-73).


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Toronto, August 24th, 1852. 730

Figure 1
"The Monster Panorama of the Crystal Palace" Advertisement, *The Toronto Examiner,* August 25, 1852, 3, Newspapers.com.

Canadian Exhibition Palaces

Canadians were not just viewing the Crystal Palace from afar, however; they were also building their own exhibition palaces, so the same architectural orientation toward display and visibility was being undertaken in the colony. Canadian exhibition buildings were explicitly derivative

of Paxton's structure, echoing the original both in purpose and iconography, and usually known, either officially or unofficially, as "Crystal Palaces." Considering Canadians' fascination with the original palace, these buildings seem to suggest an almost direct line of influence from the imperial centre to Canada. Because these structures served to articulate a certain nationalism by putting the products of national industry on display, it is useful to note the way that they articulated Canadian nationalism by emulating Britain. Buckner's contention, that many English-speaking Canadians had a "strong sense of British identity" inextricable from "a strong commitment to the British Empire," aligns with the idea that Canadians may have been articulating a "colonial nationalism," in which the strength of the Empire was felt also to mean the strength of Canada (Buckner 2006, 184-185). Like the original Crystal Palace, Canadian structures eventually acted as central symbolic icons, metonyms for the exhibitions themselves. Images of the palaces appeared on the exhibitions' posters, pamphlets, admission tickets, entry forms, and were even emblazoned on commemorative medallions (figures 2-3). Their significance was underscored by the way they laid claim to the moniker "crystal."

The architects of Toronto's 1858 Palace of Industry were Sandford Fleming and Collingwood Schreiber, who designed it for the Board of Agriculture for Upper Canada as a permanent structure to house an annual provincial exhibition of agricultural and mechanical products (Crystal Palace 1858?, 13). The glass of the Toronto walls was imported from Chance in Birmingham, the same suppliers of the glass of the London palace ("The Thirteenth Exhibition" 1858, 2). In 1879, it was dismantled and moved to a new site on the Provincial Exhibition Grounds, reusing the majority of the woodwork, roof, columns and iron work, sashes, and glass, and remedying problems with the floor, which had rotted, while enlarging its interior and making the space more conducive to introducing natural light ("The Provincial Exhibition" 1879, 2). The glass from the old site was reused and re-cut before it was installed in the new structure ("The Provincial Exhibition" 1879, 2).

Figure 2
Crystal Palace Medallion, 1880-1882. C4-0-1-0-2, acc #1981-127. CNE Archives, Toronto, Ontario, Canada.

Montreal's palace, designed by the Montreal architect John William Hopkins, was inaugurated in 1860 by the Prince of Wales where it was "feted by the citizens within its glass and wooden walls" as "The Provincial Exhibition Building and Museum of Canadian Industry and Art," though many newspaper articles referred to it simply as the "Crystal Palace," especially as the nineteenth century

progressed ("The Provincial Exhibition Building" 1860; "From the Ashes" 1896, 3; Unattributed, "The Crystal Palace"). The glass that made up this structure was German, so like Toronto's, its glass plates were imported from Europe (Hawkins 1986). It was originally located on St. Catherine Street West on the block surrounded by University Street, Cathcart, and McGill, on a location owned by the University. Like Toronto's palace, it was enlarged and moved some years after it was originally constructed. In 1878, it was moved to the "Exhibition Grounds," between Avenue du Parc and De L'Esplanade, at some cost to the city following a legal dispute between the building owners and the property on which it stood ("The Crystal Palace Grant" 1878, 4; untitled 1878, 2; untitled 1879, 1). There, it hosted "every exhibition in the city" in an expanded structure with new space surrounding it ("From the Ashes" 1896, 3).

Figure 3
"Admission ticket to the inauguration by H.R.H. the Prince of Wales, 1860" Montreal, 1860. M14327, McCord Museum

The non-domestic origin of the glass in Canada's vernacular palaces is worth pursuing further. As in England, many Canadians were involved in the project of constructing a narrative of progress and civilization, and if glass had come to ideologically encompass modernity throughout the British empire, its presence and manufacture in Canada's leading urban centres may well have suggested a country coming into its own as a self-sufficient, industrializing nation (Armstrong 2008, 1). Canada's position as a colony of Great Britain meant that it was expected to be both an exclusive market for manufactured English goods and a supplier of England's raw materials, but not to manufacture its own industrial goods (Spence and Spence 1966, 16). Attempts at establishing a colonial production of this industrial product were thus hindered by British policy and affected by trade and tariff agreements with Britain (Pacey 1981, 38).[vi] Colonial production thus remained inferior to that of the imperial centre and importation of plate glass remained the norm in Canada for the entirety of the century (Pacey 1981, 33-47).

The function of these structures is also significant for its connection to the identity-making of the nation. In international exhibitions that featured Canada, the British government promoted products and raw materials from the colony, demonstrating that it was a "land of abundance and promise" (Buckner 2008, 79). On the domestic scale, these buildings were used for a variety of fairs and exhibitions displaying "a total representation of colonial society, from farmers and fisherman to manufacturers and mechanics," which were funded by Provincial governments, often with an explicitly didactic purpose, "to measure and affirm

national identity" (Heaman 1999, 85). These fairs, particularly when they began to be held annually in these purpose-built structures in the late 1850s, attracted large crowds, and there were often multiple fairs each year in cities across Canada. The 1858 Toronto Exhibition was reported to have attracted "upwards of twelve thousand persons" by train and steamboat from Hamilton, Collingwood, Montreal, Ogdensburg (New York State), Niagara, and St. Catharines ("The Visitors and the City" 1858, 2).

When exhibitions were held in these structures, visibility was the primary function of the architecture; glass played a facilitating role, literally and metaphorically, for this experience of perception. Exhibitions were sites of spectacular displays and competition intended for widespread visual consumption, and the ability of the palaces themselves to facilitate this sustained gaze of exhibition visitors is encapsulated by the physical transparency of glass. At once, palaces provided an unadorned backdrop for the display of objects and acted as objects of wonder and advancement themselves. Many newspaper articles emphasized the ways that exhibitors "placed their goods in allotted places, so as to show them to the best advantage" ("The Union Exhibition" 1859, 2).[vii] Small glass cases also proliferated throughout the interior of the spaces. In an 1862 description of that year's Provincial Agricultural Exhibition in Toronto, the wares of Thomas W. Poole, a doctor, were listed in full in the *Globe,* with the paper nodding to the containment of all the specimens "in glass bottles, collected and arranged by himself" ("Seventeenth Annual Exhibition" 1862, 1).

Despite being described as direct descendants of the original palace, however, Canadian exhibition buildings were not simply smaller palaces of glass and iron as one might assume. The Montreal structure was largely constructed of white and rose-coloured brick, its roof was tin, and the frames of both the Montreal and Toronto buildings were composed of timber as well as iron.[viii] The Toronto structure was built on a foundation of brick, and though its sides and roof contained large panels of glass, its frame was trimmed with light green, making it not entirely clear or even unadorned, and the spandrels of its roof were criticized in the *Globe* for appearing "unnecessarily heavy looking," a stark contrast from the lightness so often emphasized in the original structure ("The Provincial Exhibition" 1878, 8; "The Thirteenth Exhibition" 1858, 2). The author suggested that this heaviness must mean that the structure was "of course, all the more substantial," but wished that more expense had been spared to have the glass walls elevated, and the "solid massive roof" broken up, in order to "heighten the effect of the building considerably" ("The Thirteenth Exhibition" 1858, 2). Significantly, the glass that made up the Toronto structure seems not to have been fully transparent; the vertical windows are often referred to as "obscured glass," and, inside, the building was painted with "light colours," and ceilings "light blue and studded with gold stars" ("Exhibition Park" 1878, 1). An 1864 newspaper article even recommended certain renovations to Toronto's palace, including "thoroughly painting" the "whole of the interior and the glass" (Crystal Palace 1858?, 12; "The Provincial Exhibition" 1858, 2; "The Provincial Fair" 1864, 1).[ix] Upon the inauguration of the Canadian Exhibition Building, the

Globe even argued that though it had been "erected on the general plan of the Sydenham structure," it "[could not] lay much claim" to the "appellation" "Crystal Palace," "a great portion of the material being wood." "The French name – 'Palace of Industry' – seems for many reasons the most suitable," the author argued, subsequently referring to it as such ("The Provincial Exhibition" 1858, 2). Pride in these sites of nationally significant architecture thus sat uneasily with disappointment in their inadequacy to the original.

Scholars such as Fern Graham reason that these material differences necessitate a framework that would allow historians to consider Canadian crystal palaces as individual, nation-specific articulations of a certain building type (Graham 1994, 4-12). Applying such an understanding would necessitate a shift in emphasis from the glass panelling to the other materials that made up the structures, since masonry and tinning is what made Canadian palaces distinctive. Indeed, even those Canadians who emphasized their connection to Britain sought to indicate that they were "British, not merely British," or "British, but on their own terms and in their own way" (Buckner 2008, 74). In one respect, an argument for nationalistic individuality seems to have teeth, particularly in sources following Confederation, when intellectual movements that sought to establish and solidify a "Canadian" identity gained force and popular support (Hastings 2006, 92-95).[x] Consider, for example, the nationalistic thrust of an 1880 report on Toronto's Dominion Exhibition of that year, which complained about the lack of visibility of the Canadian flag: "This is a Canadian exhibition, and Canada has a flag, but it was conspicuous by its absence," wrote the author, going on to emphasize that "all these are the productions of Canada, the raw material is Canadian, that the hands that have fashioned them are Canadian, and […] to Canada belongs the honor and credit of the exhibit" (E.W. 1880, 6).

The use of these buildings further suggests their symbolic role in reifying Canadian national identity, for in addition to their role as homes for Provincial exhibitions, these structures were also often used for politically significant nation-building events. Montreal's palace saw celebrations of the birthdays of influential public figures, served as a concert hall for singers, provided the site for troop promenades of the Rifle Brigade, and was the sleeping quarters for 1,048 attendees of a celebration of Saint-Jean-Baptiste day in 1874 (untitled 1863, 1; "From the Ashes" 1896, 3). Toronto's palace was used for industrial and agricultural exhibitions on both the provincial and county scale, but also for unrelated fairs and other large gatherings including speeches, luncheons, banquets and concerts (figure 4) (Crystal Palace 1858?, 13; "Crystal Palace Luncheon Rooms" 1881, 1-4; "The Celebration in Toronto" 1875, 5). Exhibition "spectacles" were another major example of the use of crystal palaces as backdrops for the reification of national identity. At these events, held during industrial exhibitions, the process of nation-making was central. These shows acted out historical events using elaborate sets, ensembles of actors and even firework displays, and were intended to draw crowds to the expositions and entertain them in masses. The Canadian historian Karen Stanworth has suggested that these spectacles served both as entertainments and as codifiers of "cultural narratives

about citizenship, empire, and Britishness" (Stanworth 2015).

Figure 4
"Military Lunch at the Crystal Palace After the Review on the Queen's Birthday," June 7, 1879, BANQ, Patrimoine Quebecois, 0002733062.

One acutely political example of the multi-use of these buildings, an 1870 illustration of "Volunteers Drilling at the Crystal Palace, Toronto," depicts the use of the structure for military organization (figure 5). In the image, small crowds of people look on toward Toronto's crystal palace, gathered in groups to take in a scene that suggests a spectacle. Here, however, the palace is not the object of their gaze: it forms a backdrop for a gathering of militiamen forming in preparation for the Red River Expedition to quell the Métis rebellion led by Louis Riel.[xi] In the image, the material of the palace itself is uncertain. The parts that were transparent are darker than the roof, which seems to suggest that the interior is darkened, so the ability of the structure to let light enter and leave it is not emphasized. Indeed, according to an 1864 article, when used by troops, the palace was an "unseemly object," "partitioned off into rooms and darkened" ("The Provincial Fair" 1864, 1). However, its presence in this drawing is significant: the architectural details of the building are related in exacting detail, despite the focus of the image, and an accompanying caption is sure to note that the building was "principally composed of cast iron and glass" ("Volunteers Drilling at the Crystal Palace" 1870, 505). That the palace is constructed of glass is thus underscored, suggesting the symbolic power of the material, despite the fact that its materiality did not lend itself to this use. Crystal palaces, then, both housing these events and seeming to encapsulate in themselves Canada's newest industrial technologies, would have been associated with national pride and imperial belonging, as well as development and progress. That these spaces were also used for military purposes is significant beyond the pragmatic consideration of their physical ability to shelter a large number of people. The structures, providing the backdrop for nation-defining events, act both as testaments to Canada's technological ability to construct an architecturally complex endeavour using modern materials and symbols of events literally held to demonstrate technological, agricultural, and artistic success for audiences throughout and beyond the nation. In both instances, nationhood is key.

Yet nationhood is only part of the picture of the Canadian crystal palaces, and indeed there is a risk that emphasizing the physical distinctiveness of the Canadian buildings and the role they played in nationalistic discourse skews our historical understanding by ignoring the manner in which Canadians most often depicted their structures: as echoes of their Imperial progenitor. On close examination, it becomes clear that images in Canadian

sources, both before and after Confederation, often downplay the material differences in the service of illustrating the crystal palaces as though they functioned like the original. The argument for Canadian specificity, while clarifying the material makeup of the structures, might thus also blind us to the visual culture that was developed to mythologize the buildings, which is central to a visual historical understanding of what they meant culturally. Many of the textual sources that describe these structures align them with the original palace, both by means of direct comparison and by description that seemed to imply more of a resemblance than was the case. Toronto's Exhibition Building was praised for its "admirable likeness to its great prototype of Hyde Park," a descriptive letterpress from its opening explaining that "the outline is very nearly the same, and the transepts are produced in miniature with excellent effect," and that its architects had "successfully reproduced a good copy of the great original" (Crystal Palace 1858?, 12). "The walls are chiefly cast iron and glass," described a report in the *Globe* ("The Thirteenth Exhibition" 1858, 2). A transcription of an address from Queen Victoria in the *Montreal Gazette,* promising the attendance of the Prince of Wales for the inauguration of the first Toronto palace, called that structure "similar in design, but of smaller dimensions to those of London and Paris" ("The Queen and Canadians" 1858, 2).

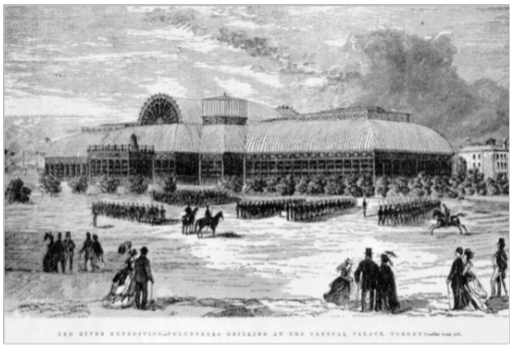

Figure 5
"Volunteers Drilling at the Crystal Palace, Toronto," *Canadian Illustrated News* 1, no. 32, June 11, 1870, 505. Library and Archives Canada.

Even more often than being directly compared to the London palace, Canadian versions were described with romantic language that linked them to the original structure. A collection of poetry by the Canadian writer C. W. Picton, dating from 1864 and addressed to the Mayor of Kingston, includes verse on the small palace in that city, which, positioning the architecture in some romantic celestial light, refers to the "enchain[ment]" of one's eye induced by "all the sparkling light/That from afar is shewn in colors bright," so much so that the speaker "forget[s]" whether he is "in earth or heaven" (Picton 1864, 17-18). In 1878, the *Globe* called Toronto's structure an "exceedingly beautiful and commodious building," noting its purpose to "furnish simple accommodation for the advantageous exhibition of goods" ("The Provincial Exhibition" 1878, 8). The *Globe* also admired the "plentiful supply of light admitted not only through the crystal walls of the building but through the roofs" of the Toronto palace. According to the *Gazette,* the Montreal palace was similarly "possessed of every convenience possible for

admission of the great desideratum, light" ("Our Exhibition" 1880, 4). It would seem that visitors to these buildings experienced a feeling similar to those awed observers who reported on the Hyde Park Crystal Palace's ability to flood its halls with a sense of wonder afforded by total transparency.

Some Canadian images of these buildings similarly depict it as an ethereal, transparent mass comparable to the London palace. In one postcard depicting Toronto's exhibition grounds, the Crystal Palace appears in the background of a scene of fairgoers congregated around an outdoor festival (figure 6). In the image, the structure itself appears faded against the dark tones of the gathered guests and the foliage in front of it, and its lightness makes it appear ethereal, almost ghostly. In keeping with the romantic descriptions of the structure that appeared in the city's newspapers, this image lightens the structure by physically depicting it with lighter ink. Here, the faded, indistinct quality of the structure also leans into the mythology around the original Crystal Palace, which was often described as "fairy-like," of "fairy fabric" or part of an "enchanted scene in fairy-land," enabling a "spectacle of unequalled splendor and brilliancy" ("The Crystal Palace" 1880, 73; "The Sydenham Crystal Palace" 1855, 121-123). Brooks' contention, that in Victorian architecture viewers might find "a synthesis of what the world is like in imaginative terms, with what it is in concrete terms," suggests the significance of such romantic imagery: in expressing realistic imagery, illustrators and writers also sought to communicate the romantic symbolism it would be understood to entail (Brooks 1984, 157).

Figure 6
"Exhibition Grounds, Toronto." n.d. Postcards. Toronto City Archives, Spadina Records Centre, Box 158722, Folder 37, Series 330, File 272, Sheet 1, Toronto, Ontario, Canada.

The depiction of how the palaces conducted light also differs greatly between illustrations. In a July 1879 image of the Montreal Crystal Palace published in the *Canadian Illustrated News*, the structure is situated in its new location on the "Dominion Exhibition Grounds," present-day Parc Jeanne-Mance (figure 7). In this image, the ability of glass to transfer light, casting a glow that reaches the area surrounding the structure, is central to the way that the scene functions. An accompanying image of the interior published alongside it depicts a crowd of people within the palace, gathered both on its ground floor and on balconies within the structure (figure 8). In the image, light streams down, seemingly through the roof of the structure, falling in beams and illuminating the heads of those in the crowd not sheltered by the rafters. The beams themselves, articulated with defined lines, serve to highlight the function of the structure: to illuminate its interior. The glass panels on the Montreal building thus assume primacy in these images despite the presence of other materials in the actual structure: here, the entire

building appears to be lit from within, and the whole of the structure conducts light with immediacy and lucidity. Because of the material conditions of the Montreal structure, this could not literally have been true. In less stylized images of the structure, the roof often appears heavier and the interior darker and more crowded. A William Notman photograph, taken from the interior of the structure in 1874, shows light streaming into the main thoroughfare, primarily through the façade, while much of the space in the cloistered areas is thrown into shadow (figure 9). An 1882 drawing for the *Canadian Illustrated News* by the architectural illustrator Eugene Haberer accurately darkens the ceiling and side walls of the building, so the promenade space of the exhibition appears not airy or fairy-like, but interior and even slightly cramped in some areas (figure 10). More common, however, were the romanticised illustrations that visually aligned Canadian palaces with the imperial original by means of their illustration.

Figure 7
"Crystal Palace, Montreal, by Electric Light – Incidents of the week," ***Canadian Illustrated News*** **XX, no. 3, July 19, 1879, 40. Library and Archives Canada.**

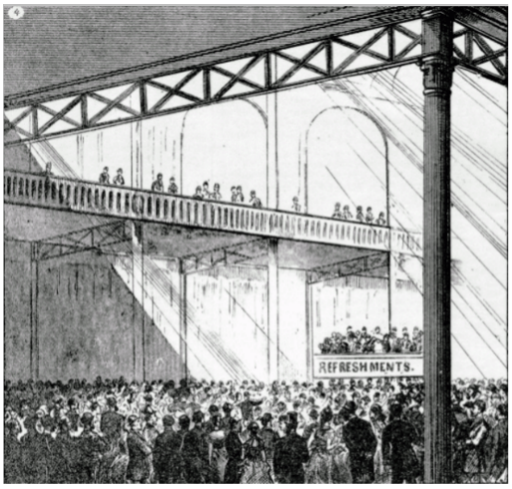

Figure 8
"Interior of the Crystal Palace, Montreal – Incidents of the Week," ***Canadian Illustrated News*** **XX, no. 3, July 19, 1879, 40. Library and Archives Canada.**

In visual images and printed descriptions, Canadian palaces also seemed to adopt the centrality and dominance of the original palace, which housed all sections of the exhibition in its comprehensive casing. At Canadian exhibitions, by contrast, attractions would have been spread across the grounds in multiple buildings, but in many of these illustrations, other structures are not visible, and the palace occupies the singular visual focus. The centrality of these main exhibition buildings is echoed in this description of the Toronto palace in the *Globe*: "during the day the city presented a very busy appearance, the streets being crowded with well dressed persons, male and female, wending their way to the great centre of attraction – the Crystal Palace" ("The Visitors and the City" 1858, 2). Though Canadian exhibition grounds would have featured multiple buildings and significant outdoor portions, the symbolic power of a

central, dazzling glass structure was apparently just as true for writers on the Canadian structures as it was for those who wrote about the original palace with fervour.

Figure 9
Batt, H.,"Interior of the Montreal Crystal Palace decorated for the St. Jean Baptiste Day, 1874," 1874, photograph. Library and Archives Canada, PA-028714, https://www.bac-lac.gc.ca/eng/collectionsearch/Pages/collectionsearch.aspx?q=jean%20baptiste%20montreal%20crystal%20palace&

In many representations of the Canadian palaces, then, the mythology of their glass is consistent with that of the original 1851 Crystal Palace in London. Despite their material differences, in illustrations and in popular press descriptions, the palaces appear as the spectacular object of the gaze of viewers, a central anchor for the exhibition, and as transparent channels for the unmitigated transfer of light. Images and descriptions in Canadian periodicals communicate the structure's spectacular role as both object of and backdrop for the spectacle of provincial exhibitions meant to draw crowds, demonstrate Canada's technological advancement, and engender feelings of collective pride and identity.

Figure 10
Haberer, Eugene, "The Montreal Exhibition – Interior of the Main Building," ink on paper – photolithography, *Canadian Illustrated News,* September 30, 1882. McCord Museum, M994.104.1.26.217. http://collections.musee-mccord.qc.ca/en/collection/artifacts/M994.104.1.26.217

Conclusion

The tension between the distinctively Canadian appearance and role of these exhibition buildings and the consistent effort to align them with the legacy of Britain's

is directly tied to the presence, quality, origin and ideal of glass in these structures, and this tension is encapsulated materially by glass, which could behave in two ways at once. Canadians' fascination with the glass of the London Crystal Palace, as indicated in their print culture, is indicative of a colonial loyalism bound up in the narrative of imperial power. Attempts to recreate this structure on a smaller scale follow this trend, but also indicate an effort to distinguish the nation. Theoretically, an impressive glass structure, designed, sourced and erected by a new country, might serve as a central symbol of that nation's independence and modernity, particularly as glass architecture came to signify that modernity. If these structures were emblematic of the success of the nation, however, it is also significant that the glass that made these structures modern and distinctive was sourced from outside of the nation, along with their stylistic inspiration and the nature of their function. The structural changes necessary for architectural adaptation to Canada's climate also made direct emulation impossible, and writers and illustrators responded in a diversity of ways: variously concealing or misrepresenting the true amount of glass in the palaces in order to align them with London's or assert their success, or describing their appearance accurately with either pride or criticism, but all the while continuing to place them at the centre of symbolically significant national events.

As historian Douglas Cole has noted, nineteenth-century Canadian nationalist movements were directly rooted in British cultural and racial identity, so the attempt to assert Canadian national success by emulating London is consistent with the manner in which imperial and national identity were often affirmed simultaneously, however paradoxical their concurrent thrusts of independence and allegiance might have been (Cole 1971, 165-166). The cognitive dissonance implied by the prevalence of narratives or images that overstated or misrepresented the presence of glass in order to both align Canadian exhibition buildings with the original and articulate Canadian independence is significant. The paradoxical dualism of glass, a material bound up in architectural articulations of this national success through emulation, is thus indicative of a larger duality, one in which Anglo-Canadian nationalism was inextricable from British imperialism.

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[i] In the eighteenth century, Canada's position as a colony of Great Britain meant that it was expected to be both an exclusive market for manufactured English goods and a supplier of England's raw materials, but not to manufacture its own industrial goods. Even after the enaction of the Jay Treaty in 1796 allowing trade with the United States, British trade policies remained the most influential force on Canadian industry.

[ii] The Canada First movement, founded in 1868, for example, though explicitly a movement championing the creation and promotion of a national identity, championed Canada's voice and influence through the Imperial Federation Movement, which would allow autonomy through participation in Empire.

[iii] In July 1885, the same *Journal* described the reconstructed palace at Sydenham in detail, suggesting its interest as an educational site. See "Description of the New Crystal Palace at Sydenham," *Journal of Education for Upper Canada* 7, no. 17 (Toronto: Lovell and Gibson, July 1854): 123.

[iv] The building was moved to this site in 1850, and is still standing in this location. See "St. Lawrence Hall National Historic Site of Canada," Canada's Historic Places: A Federal, Provincial and Territorial Collaboration, Administered by Parks Canada, https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=7527.

[v] For an examination of the recurring subject matter of panorama displays, see Oleksijczuk, 2011.

[vi] The period between 1845 and 1865 was one such period of economic strife, a recession catalysed by the laissez-faire Whig policy in the British Parliament. The 1849 repeal of the British Navigation laws was also a shock to Canada's economy as preferential trade agreements with Britain had shaped the colony's economic and industrial structure.

[vii] The cited article covers the "united" exhibition of the Toronto Horticultural and Electoral Division societies.

[viii] The descriptive letterpress for the Toronto structure additionally notes that the "essential part of the building is constructed of cast-iron." See *Descriptive Letterpress* (Toronto?: 1858?): 13.

[ix] The Dublin Exhibition Building also used "obscured glass."

[x] For example, editors and writers of the monthly periodical *The Anglo-Saxon* (1887-1900), as Paula Hastings (2006) identifies, sought to construct a specifically Canadian identity and distribute such ideas through literary means. Its writers believed in the superiority of and necessity for Canada to privilege the singularity of white, English speaking and Protestant identity.

[xi] Given the focus of this paper on articulations of Canadian nationalism, it is significant many British-descended Canadians understood Metis as an "other," and constructed the identity of "Canada" and "Canadian" in opposition to such "others." See Buckner 2008, 75.