# TRANSMITTING NATION
## "Bordering" and the Architecture of the CBC in the 1930s[1]

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FIG. 1. CBL TRANSMITTER BUILDING AT HORNBY, ONTARIO, 1937. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934709.

National boundaries are as much conceptual as they are material. They delineate a space of belonging and mark a liminal region of identity production, and yet are premised on a real, physical location with economic and social implications. With this in mind, I introduce the idea of "bordering" as a potentially useful critical term in architectural and design history. Indeed the term may open up new avenues of research by taking into account both material and conceptual infrastructures related to the production of "nations." Nations are not as fixed as their borders might suggest; they are lived entities, continually remade culturally and socially, as cultural theorist Homi Bhabha asserts with his notion of nation as narration, as built on a dialectical tension between the material objects of nation—including architecture—and accompanying narratives.[2] Nation is thus conceived as an imaginative yet material process. But what is an architecture of bordering (or borders)? Initially we might think of the architecture at international boundaries, including customs buildings and the infrastructures of mobility (highways, bridges, tunnels, etc.) or immobility (walls, spaces for detainment of suspected criminals or terrorists, etc.). Military installations (forts, air and naval bases, the coast guard, etc.) might also come to mind. These are all rather direct manifestations of the establishment, protection, and maintenance of national borders. In this article, I would like to extend this concept even further to consider how bordering (the process of continually recreating borders culturally) is essential to the production of "nations" and that this is as much a conceptual as materially

grounded process. And to do so, I will look at the example of radio—a seemingly borderless and immaterial medium. Radio waves, which can carry socio-political content and thus are a potent force in nationalism, are affected by material constraints, including geographical features and atmospheric effects, and are based on social and economic infrastructures. The properties of radio are thus somewhat analogous to national boundaries. By drawing attention first to the importance of media like radio to the engendering of nations, especially in the geographically immense and culturally complicated terrain of Canada, then underlining the significance of architecture to the policy governing the Canadian system of radio broadcasting, I hope to indicate one way in which we might envisage "bordering" in architectural studies. I will focus on the transmission site in Hornby, Ontario, about thirty miles northwest of Toronto, arguing that the architecture and ornament of the transmitter building reinforce the interest of the new Canadian Broadcasting Corporation (CBC) to represent itself as a national institution in part by aestheticizing the activity of radio transmission (fig. 1).

## THE SPACE OF RADIO

Mass media play an essential part in the process of "bordering" or the narrativization of nations. In his influential book *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, Benedict Anderson argues that the advent of the modern nation state resulted from the development of "print-capitalism," particularly on the peripheries of European empires (especially the Americas).[3] Newspapers and other print media allowed people who might otherwise not meet each other to share in a common sense of belonging, spurring a national consciousness. Other scholars had made similar claims about the role of communications to the engendering of the nation, including Canadians Harold Innis and Marshall McLuhan.[4] It is perhaps not surprising that early on Canadian scholars highlighted the importance of communications to the projection of the nation since the role of the state in the affairs of culture—mass or otherwise—has been (and continues to be) a regular feature in public discourse. As media historian Mary Vipond noted in her presidential address to the Canadian Historical Association,

> Since Harold Innis's seminal work on the fur trade, we have learned to think of this country along east-west lines of communications, waterways, railways, telegraph lines, and radio and television networks providing the technological means by which the country has been constructed economically, politically and symbolically.[5]

Vipond's comment reminds us that the "imagined community" of Canada—that cultural construction yet socio-political site—is inextricably based on material infrastructure. So as much as we understand Canada as the culmination of cultural representations and practices ( seen on maps and money, in photographs and films, read in novels and newspapers, heard in broadcasts, discussed in conversations, etc.), it is predicated on the sometimes overlooked architectures of bordering, the architectures that facilitate the mobility of people, capital, and ideas. Railway stations and hotels, art galleries, and legislative buildings, for instance, all play significant parts in the history of bordering Canada (that is, they produce or reassert the space of the nation in one way or another and thus serve as nation-building institutions). Less visible in day-to-day life but also essential to bordering, I contend, are broadcasting studios and transmitting stations.

Indeed, while Anderson's work highlighted the role of print-capitalism in the production of imagined communities, the radio was a potentially even more powerful medium for spurring national imaginings. This early electronic medium had the time-space compressing effect of instantaneity, making it even more of a centralizing and nationalizing instrument than newspapers. It would have a significant impact on national movements, for example in post-World War II decolonization movements.[6] Emphasizing the power of radio to make the "imagined" catastrophically material, McLuhan argued that, "It was Hitler who gave radio the Orson Welles treatment for *real*."[7] In Canada, the place of radio as a component of national culture was a topic of great concern beginning in the mid-1920s. Sir Henry Thornton devised the first network of stations for the Canadian National Railway (CNR) as a means of fostering nationalism and promoting tourism.[8] As Vipond points out, network broadcasting also allowed the publicly-owned corporation to "provide better programs more cheaply," make more efficient and cost-effective use of CNR's telegraph lines (which had been upgraded in 1926 to the carrier-current type), and accompany its nationwide train service and disparate staff.[9] The CNR network in cooperation with private and some American stations produced a "coast to coast" network for the celebration of Canada's Diamond Jubilee on July 1st, 1927, and although only established for the duration of the event, the network drew attention to the nationalizing potential of the medium in the country.[10] The radio infrastructure of the CNR would later become the foundation of Canada's public broadcasting system.[11]

Following a controversy sparked by broadcasts made by religious groups (including notably the International Bible

Students Association—an organization of Jehovah's Witnesses) and the government's decision to shut down particular stations in 1928, a royal commission was formed to study broadcasting in Canada.[12] The 1929 Aird Commission (named after the chair, Sir John Aird) recommended public ownership, and while all of its recommendations were not followed, it would become the foundation of the 1932 Canadian Radio Broadcasting Commission and subsequently the Canadian Broadcasting Corporation (1936).[13] In the words of Graham Spry, co-founder of the Canadian Radio League, a key lobby group for public radio:

> For a nation, so widespread in its range and so varied in its racial origin, radio broadcasting, intelligently directed, may give us what provincial school systems, local newspapers, and the political system have yet to give us, a single, glowing spirit of nationality making its contribution to the world [...] Here is a great and happy opportunity for expressing, for achieving that which is Canada. It is here and now; it may never come again.[14]

This statement, initially made in 1932, would be quoted in a memorandum to the Transport Minister C.D. Howe of the newly elected liberal government. The memo would form the basis of the Canadian Broadcasting Act of 1936 which brought the CBC into existence.

Besides providing a new institutional framework, including a Board of Governors representative of the different regions of the country and the establishment of a general manager and assistant general manager, the new public corporation was allotted more autonomy from the government in terms of both operations and regulations. Unlike the British Broadcasting Corporation, which held a monopoly and thus had no competition from commercial stations (in the country), or the Australian system, which ran a public network alongside commercial stations with a governmental department acting as regulator, the CBC was uniquely charged with providing a national network and public programming as well as regulating private stations and short-term networks. Essential to the agenda were the limitation of power of private stations and the construction of high power stations owned and operated by the CBC. To public radio lobbyist and later member of the first Board of Governors of the CBC, Alan Plaunt, the chain of stations "would be a national property as important to the continued existence of Canada as a nation as trans continental [*sic*] railways to its inception."[15] The idea of constructing a chain of high power stations had been recommended by advocates of the public system from the Aird Report on, but it was only with the passage of the Canadian Broadcasting Act of 1936, which allowed for borrowing up to five hundred thousand dollars for capital expenses, and the persistence of the Board of Governors that stations were built and the bordering potential of the CBC—of making the narratives of the nation accessible to a majority of the population—could be realized.

## THE ARCHITECTURE OF TRANSMISSION

The architecture of radio broadcasting and transmission was still rather novel when the CBC began its initial building campaign in 1937. Perhaps the most famous example of a large-scale commission was the BBC Broadcasting House designed to fit the peninsula surrounded by Langham Street and Portland Place in London by Lieutenant-Colonel G. Val Myer. The building was described as akin to a "fortified medieval castle"—even "the New Tower of London" by the editor

11 THE NEW TOWER OF LONDON. By Lt.-Col. G. Val Myer.—This view is taken from Langham Place with Portland Place to the left and Langham Street to the right. The new building parts the roads like a battleship floating towards the observer. The architect has tried to echo the curves of Nash's church of All Souls', Langham Place, whose portico may be seen on the right of the photograph. The narrowness and restriction of the site can be seen clearly from this point. There is no room for interior lighting courts. The battleship shape is seen only from the point where the observer is standing; from the portico of All Souls' church the effect of a battleship disappears.

FIG. 2. *ARCHITECTURAL REVIEW*, VOL. 72, NO. 8, 1932, P. 46. | REPRODUCED WITH PERMISSION FROM *AR*.

of *Architectural Review*, which ran an entire issue on the building upon its opening in 1932 (fig. 2).[16] As a bastion of public service and edification—at least as conceived by BBC general manager Sir John Reith—the comparison seems apt, and its art deco style, especially on the exterior (which includes reliefs by Eric Gill), suggests the negotiation of "tradition" yet modernity of the new corporation. The Broadcasting House was also commonly likened to a battleship, which also appears to reinforce conceptually the mission of the BBC ruling the air waves with the incorporation of its Empire Service that began later in 1932. Perhaps unsurprisingly, the BBC hired architects associated with the Modern Movement—including Raymond McGrath, Wells Coates, and Serge Chermayeff—to design many of the interiors and furniture, studios and instruments.[17] The technical and mechanical

THE DRAMATIC CONTROL ROOM No. 1

By Wells Coates

BROADCAST plays are produced from the Dramatic Control Room. As many as ten separate studios may be brought into use during the production of a single play. Half the actors may be in one group of studios, half in another, and all "noises off" are in the Dramatic Effects Studio. The equipment of the room consists of a loud-speaker for listening to the progress of the production, telephones for communicating to the main control room, and the dramatic control unit itself, in which is incorporated a microphone for giving instructions to artists during rehearsals. The control of all these circuits is literally in the hands of the producer, and during transmissions instructions may be given to artists and studio officials by means of headphones.

At the dramatic control panel table sits the producer, who gives the actors in other studios their cues by switching on cue lights controlled by the keys on the dramatic control panel, or governs the volume of sound going out to the ether by turning the control handles which, if necessary, cut out any studio or actor. Thus, when dramatic effects like rain, wind, or the hoofs of a horse are required, a switch will give the cue to the dramatic effects studio on another floor, and the turning of a control handle will increase the sound or diminish it until the producer cuts it out by turning the handle back.

This table (see 117) is framed up in streamlined tubular steel sections, supported and fixed to the floor at one end by two free-standing legs. At the other end the legs are enclosed to form an accessible duct for the collection of converging wires and cables rising from the floor duct. The panel enclosure and table are in mahogany laminewood, the whole cellulosed a lavender grey.

The studio walls are acoustically treated with 1-in. insulwood building board. The low dado, the skirting, the architraves to door, and the continuous horizontal cover strips are in grey rubber, and the floor is close carpeted.

The panel is illuminated by day through a flush daylight glazed with georgian-wired rough-cast glass lightly sandblasted, over which flood-lights are arranged for night illumination.

The chairs are in enamelled tubular steel, and have bucket seats.

PLATE IV August 1932

FIG. 3. *ARCHITECTURAL REVIEW*, VOL. 72, NO. 8, 1932, PLATE IV. | REPRODUCED WITH PERMISSION FROM *AR*.


FIG. 4. *JOURNAL OF THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA*, VOL. 15, NO. 10, 1938, P. 219. | REPRODUCED WITH PERMISSION FROM *RAIC*.

aspects of radio were thus reinforced visually through the furnishings, such as the dramatic control panel table by Coates (fig. 3), keeping with the sense of modernity of the medium and the almost military regimenting of its programming and broadcast. The art deco-cum-modernist idiom seen in the architecture of the BBC was also apparent in the United States. Renovations of older auditoriums and purpose-built broadcasting studios for both the National Broadcasting Company and the Columbia Broadcasting System were designed to appear modern and were put into the hands of capable architects associated with the Modern Movement, such as William Lescaze.[18]

In an article published in the *Journal of the Royal Architectural Institute of Canada*, architect Mackenzie Waters argued that, together with gasoline stations, broadcasting stations were an excellent opportunity for modern architects.[19] He noted that radio is an international medium, but has developed differently in various countries, and went on to explain how he had delivered a letter from Lescaze to Dutch architects Ben Merkelback and Charles Karsten (who had recently completed the AVRO[20] studio in Hilversum, Holland). Waters noted that in Lescaze's opinion "nothing had been left undone to make [the publicly funded AVRO studio] as nearly perfect as possible."[21] Implicit in Waters's article is the idea that the rather late-blooming and similarly public subscribed CBC might likewise commission modernist, public-oriented broadcasting stations rather than treat radio "as a mystic and unnatural business carried on in sacrosanct seclusion."[22]

Directly following Waters's article in the journal are a photograph and floor plans of David Gordon McKinstry's CBC Station in Hornby near Toronto, which opened on December 25, 1937, and hosted channel CBL (fig. 4). A nearly identical station had opened earlier that same month in Verchères, outside Montreal, and was transmitting CBF to French listeners in Quebec. Upon their openings, Transport Minister C.D. Howe assured listeners that they were not local stations but regional, serving most of and "draw[ing] upon the artistic resources" of their respective provinces.[23] These became by far the most powerful stations in Canada and were the first of a series of four (the other two were built in Watrous, Saskatchewan [CBK] and Sackville, New Brunswick [CBA]). The buildings were described by the CBC as "the most modern in the world and based on the latest developments in radio transmission" when compared to stations in the United States, Great Britain, and Continental Europe.[24]

The single-storey Hornby transmitter building is located on a large, fifty-acre site. The location was chosen based on a field strength survey carried out in a one-hundred-mile radius around Toronto. The flatness and clay soil in the area made the Hornby site ideal.[25] The acreage accommodates about twenty-one miles of copper wire, buried nine inches below ground and radiating from the six hundred and forty-seven foot tall tower like spokes of a wheel.[26] This new antenna design, with its tapering "needle" effect at the porcelain insulator base (described as being "about the size of a hat box"),[27] contrasted with the older type that included wires stretched between two or more towers (fig. 5).[28] Four guys of one and three-eighth-inch wire rope add additional support to the steel structure and were tested to withstand a one-hundred-twenty-mile gale.[29] Mounted with lights to prevent accidents with airplanes, the antenna was seen from miles around and was about two hundred feet taller than the Canadian Bank of Commerce Building in Toronto (then the tallest building in the

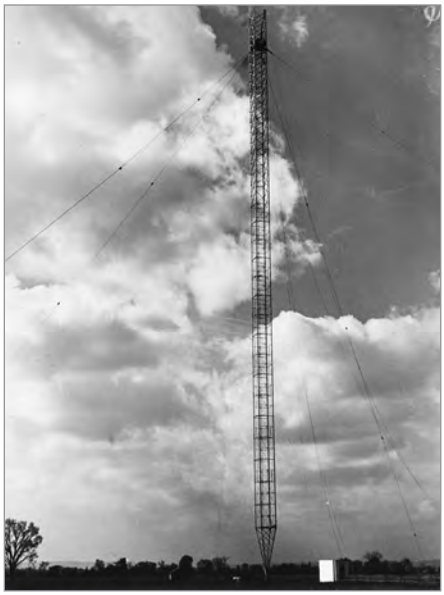

FIG. 5. CBL TOWER DURING CONSTRUCTION, 1937. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934715.

FIG. 6. CBL BUILDING AND TOWER DURING CONSTRUCTION, 1937. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934714.

FIG. 7. MAIN ENTRANCE TO CBL STATION, 1937. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934716.

British Empire) (fig. 6).[30] The antenna and tuning building sit about five hundred feet from the transmitter building, connected by an insulated transmission line mounted three feet above the ground.

The transmitter was described in the local press as "the ultra-modern etherizer."[31] And while this was largely based on technical facilities, McKinstry's design reinforced the building's modernity visually with the incorporation of popular streamlining motifs (parallel, horizontal lines around the roof and jambs), the abstract CBC logo, and the use of glass bricks to provide illumination during the day and interesting lighting effects at night (figs. 4 and 7). The use of curvilinear forms is carried into the interior of the building, marking the space between the office and control room as well as the steel-railed observation platform in the transmission room designed to host visitors (figs. 8-9). That a viewing platform was included in the design speaks to a perceived public interest in the building, despite its somewhat remote location. While watching engineers at work, visitors would have noticed the asphalt tile map of Canada, which indicated the names and locations of radio stations in the country.[32] Much like post offices and railway terminals which were often decorated with the names of cities from across the country, this radio station was construed as part of an essential communication infrastructure that represented Canada and might likewise be understood as contributing to the narrativization or conceptual bordering of nations.

The use of an art deco idiom for the architecture reinforced visually the modernity of the invisible medium of radio, representing the great power and technology of the transmitter. Much was made in the popular press of the great cost of the tubes (figs. 10-12).[33] And the ornament—for instance around the entrance and on the doors (figs. 7 and 9)—seem to refer to their shapes. Like the BBC Broadcasting House and some of the network studios in the United States, albeit on a much more modest scale, the Hornby transmitter was cast in a user-friendly modernism that appeared new yet not unfamiliar, a sensibility seen in contemporary radio cabinet design as well. In fact, the modernizing of tradition was evident in the program marking the opening of the station (CBL) on Christmas 1937, which included a speech from King George VI. The new medium reinvigorated the institution of the monarchy, offering a rare sense of connection to the sovereign for some two hundred million British subjects who potentially listened in. The link to the King through the broadcast reasserted a sense of identity no doubt for some, contributing, in a complicated way, to the process of bordering.

As seen in the plans published in the *Journal of the Royal Architectural Institute of Canada* (fig. 4), the space of the station was divided roughly into two areas: the space of the transmitter to the right and living quarters for the eight engineers who would be stationed there on the left. Space allocated for a short-wave transmitter, which was in fact

FIG. 8. VIEW OF INTERIOR FROM VISITOR'S GALLERY OF CBL, SHOWING THE CONTROL CONSOLE, 1937. NOTE THE MAP ON THE TRANSMISSION FLOOR. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934710.

FIG. 9. CBC BROADCAST OPERATOR AT CONTROL CONSOLE. VIEW TOWARD VISITOR'S GALLERY, CBL TRANSMITTER BUILDING, 1937. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934717.

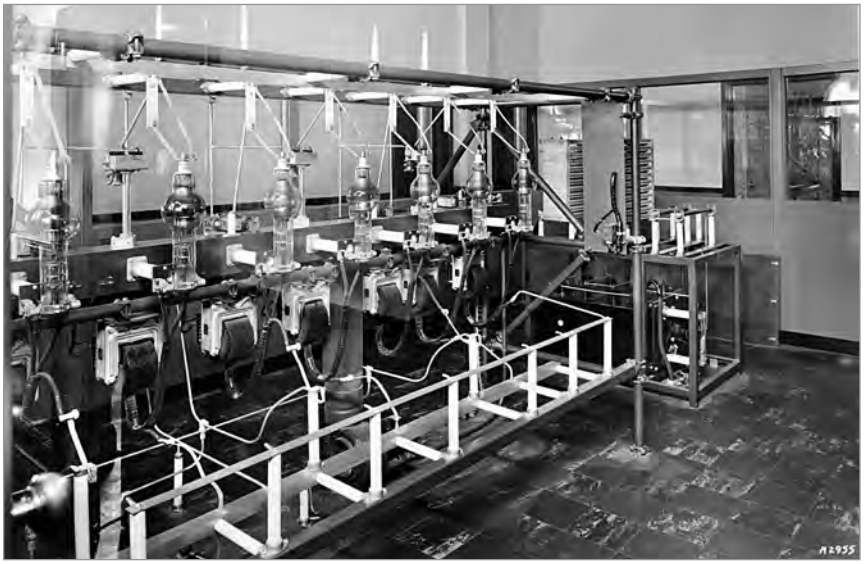

FIG. 10. FULL VIEW OF THE BANK OF HIGH VOLTAGE RECTIFIER TUBES, CBL TRANSMITTER BUILDING, 1937. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934712.

FIG. 11. PART OF THE BANK OF HIGH VOLTAGE RECTIFIER TUBES WHICH CHARGE THE ALTERNATING CURRENT SUPPLIED BY HYDRO INTO A DIRECT CURRENT SUPPLY REQUIRED FOR THE OPERATION OF THE VACUUM TUBES IN THE 50,000-WATT TRANSMITTER. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934711.

never installed, can also be seen; however, another fifty-kilowatt transmitter was installed in 1948, allowing for both Toronto-based CBC stations to be broadcast from that transmitter (using the same antenna).[34] The basement area marked "unexcavated" would later be finished as a fallout shelter, with living space, bunks, and small emergency broadcast studio in the years following the Second World War. This reminds us of the strategic importance of transmitters and their essential communication role during times of crisis. Indeed, one reporter, observing the barred and steel sash windows, described the new stations as "transmitting fortresses" even before they opened.[35] Within a couple of years, Nazis would stage the capture of a station in Gleiwitz and broadcast anti-German rhetoric in Polish in order to drum up support (and present justification) for the invasion of Poland, which took place the following day.[36] The "Gleiwitz Incident" underlines the political and symbolic valence, not to mention strategic importance, of radio stations and transmitters in this era. And while the consequences were not so dire in Canada, the stations constructed by the CBC should also be considered sites of political and cultural significance.

The building of the transmitters was seen as essential to curbing the tide of Americanization in Canada.[37] Particularly with high power stations in the United States able to be heard clearly in Canada—and in some cases private, Canadian stations were part of American networks already—many Canadians feared a loss of cultural identity, even sense of sovereignty. By 1925, while there were forty-three Canadian stations, the United States had five hundred and fifty-five stations (one hundred and thirty-eight of which had five hundred watts of power or more), with half located in states bordering the Great Lakes.[38] Radio frequencies were seen as natural resources that could be lost to foreign interests unless occupied. Despite frequency allotment agreed upon by the United States and Canadian governments in 1932, Canadian listeners were still posed with problems due to Mexican interference, so a radio conference was organized in Havana in 1937, where it was decided that fifty-kilowatt stations had to be built on all clear channels within five years, and, with the Havana American Regional Broadcasting Agreement, the CBC and thus Canadian listeners were assured of increased coverage. According to an engineering survey carried out by the CBC in 1936, only seventy-five percent of Canadians had reasonable reception, with the basic network serving only sixty percent (and only forty-nine percent at night, due to interference).[39] This would increase to over eighty-five percent after the construction of high power transmitters in Hornby and Verchères, and later, in 1939, those in Watrous and Sackville. A five-kilowatt transmitter would also be built in Marieville, Quebec, to boost coverage of the English channel, CBM. Sackville would later become the site of the CBC's International Service in 1945, when a new facility containing both the domestic fifty-kilowatt transmitter for CBA and two fifty-kilowatt short-wave transmitters officially opened.

The fact that it took nearly a decade from the time of the Aird Commission to witness the construction of the publicly owned high power stations speaks to the struggle and complexity of broadcast policies in Canada. What emerged was a unique system that helped to border Canada. The transmitters were an integral part of the CBC's policy and legitimacy. Only after their completion would the majority of Canadians be able to tune in and feel connected to rest of the country. And, I would argue, the building of the transmitters as part of the CBC's and the government's policies was an assertion of nationalism, an activity of bordering. The building of a chain of high power transmitters fit not only into domestic policy governing the CBC—*i.e.*, reaching the majority of Canadians—but also foreign policy. The transmitters built in the same year as the Havana conference could therefore be seen as statements of sovereignty. The Canadian public space on air was made available by these transmitters in contradistinction from other national public spaces. The opening of the stations coincided with an increase of CBC programming from six to twelve hours a day, allowing more Canadians to hear more national broadcasting. The buildings were also a statement of modernity, one echoed later by future broadcast studio buildings and the headquarters of the CBC in the Edward Drake Building in Ottawa (D.G. McKinstry, 1961-1964). By

FIG. 12. TOP VIEW OF 100,000-WATT VACUUM TUBE, TWO OF WHICH ARE REQUIRED IN THE TRANSMITTER. ALTHOUGH THE TRANSMITTER IS RATED AT 50,000 WATTS, ACTUALLY ON PEAK MODULATIONS, 200,000 WATTS OF POWER ARE DEVELOPED FOR NORMAL OPERATION. | CANADIAN BROADCASTING CORPORATION FONDS, LIBRARY AND ARCHIVES CANADA, RG 41, VOL. 542 FILE PART 1, E010934713.

turning to radio to investigate the architectures of bordering—sited on disciplinary boundaries of architectural, design, and communications history—I hope to have shown some of the potentialities of exploring this liminal space in discursive terms, mirroring the very complexity of spaces themselves.

## NOTES

1. I would like to thank Barry Magrill for agreeing to read the original version of this paper in my absence at the conference and Rhodri Windsor Liscombe for his insight and encouragement.
2. Bhabha, Homi K., 2004, "DessemiNation: Time, Narrative and the Margins of the Modern Nation," In Homi K. Bhabha (ed.), *The Location of Culture*, London, Routledge, p. 199-244; Bhabha, Homi K. (ed.), *Nation and Narration*, London, Routledge, 1990. Neil Leach argues that architecture is implicated in this process in his 2002 article, "Belonging: Towards a Theory of Identification with Place," *Perspecta*, vol. 33, p. 127-133.
3. Anderson, Benedict, 1991 [rev. ed.], *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, London, Verso.
4. See for instance: Innis, Harold, 1950, *Empire and Communications*, Toronto, University of Toronto Press; McLuhan, Marshall, 1962, *The Gutenberg Galaxy: The Making of Typographic Man*, Toronto, University of Toronto Press; and McLuhan, Marshall, 1964 [1994 ed.], *Understanding Media: The Extension of Man*, Cambridge (MA), MIT Press.
5. Vipond, Mary, 2003, "The Mass Media in Canadian History: The Empire Day Broadcast in 1939," *Journal of the Canadian Historical Association / Revue de la Société historique du Canada*, vol. 14, no. 1, p. 1. She points out the importance of north-south communication ties as well.
6. See for instance Franz Fanon's excellent discussion of radio during the Algerian independence movement in his 1965, "This is the Voice of Algeria," trans. Haakon Chevalier, *A Dying Colonialism*, New York, Grove Press, Inc., p. 69-98.
7. McLuhan, 1964 : 300.
8. The first network broadcasting in Canada occurred on New Year's Eve in 1923, connecting speeches (including one by Thornton) from Ottawa to stations in Ottawa and Montreal simultaneously. By the fall of 1929, the CNR produced coast-to-coast broadcasts. For more on the history of the CNR's radio service, see Weir, E. Austin, 1965, *The Struggle for National Broadcasting in Canada*, Toronto, McClelland and Stewart; Peers, Frank W., 1969, *The Politics of Canadian Broadcasting 1920-51*, Toronto, University of Toronto Press, especially p. 22-27; and Vipond, Mary, 1992, *Listening In: The First Decade of Canadian Broadcasting, 1922-1932*, Montreal and Kingston, McGill-Queen's University Press.
9. Vipond, 1992 : 71.
10. It should be pointed out that other networks existed in Canada in the early years, including the Trans-Canada Broadcasting Company (1928) and the Canadian Broadcasting System (1930), in addition to Canadian stations affiliated with the NBC (CKGW in Toronto and CFCF in Montreal) and CBS (CFRB Toronto and CKAC Montreal) networks in the United States. (Vipond, 1992 : 71-73.)
11. The stations and studios owned by the CNR (including those in Moncton, Ottawa, and Vancouver) were sold to the newly formed Canadian Radio Broadcasting Commission in 1933 for $50,000. (Vipond, 1992 : 51.)
12. Peers : 29-36.
13. For standard histories of the birth of the CBC, see Peers (1969) and Weir (1965).
14. Plaunt, Alan, "Memorandum RE: Canadian Broadcasting Reorganization," p. 24, Alan Plaunt Papers, box 17, University of British Columbia Special Collections. Also cited in Peers : 169.
15. Plaunt : 23. Also cited in Peers : 169.
16. 1932, "The New Tower of London," *Architectural Review*, vol. 72, no. 8, p. 43.
17. Incidentally, Coates and Chermayeff would design home radio sets for the British firm Ekco. On radio design in Britain, see Forty, Adrian, 1972, "Wireless Style: Symbolic Design and the English Radio Cabinet," *Architectural Association Quarterly*, vol. 4, p. 23-31.
18. Lescaze (re)designed studios and stations for the Columbia Broadcasting System in New York, Chicago, and Los Angeles in the mid- to late-1930s.
19. Waters, Mackenzie, 1938, "Broadcasting Stations," *Journal of the Royal Architectural Institute of Canada*, vol. 15, no. 10, p. 215-218.
20. AVRO is the Dutch public radio association, *Algemene Vereniging Radio Omroep* [General Association of Radio Broadcasting].
21. *Id.* : 218.
22. *Ibid.*
23. "Opening of Station CBL," Plaunt Papers, box 17.
24. "Plan Hornby C.B.C. Station as most Modern in World," *Toronto Daily Star*, May 22, 1937, p. 33.
25. *Id.*
26. "Power of New CBL Exceeds Many Canadian Stations," *Toronto Daily Star*, September 11, 1937, p. 3; "New Transmitters Mark Opening of New Era in Canada's Broadcast," *Drummondville Spokesman*, October 1st, 1937, p. 5.
27. "Power of new CBL…" : 3.
28. "New Transmitters…," *op. cit.*; "Sky-Slitting Dagger Unsheathed at New Broadcasting Station," *Toronto Daily Star*, November 20, 1937, p. 6.
29. "New Era in Canadian Broadcasting," *Buckingham Post*, December 24, 1937, n.p.
30. "Power of new CBL…," *op. cit.*
31. *Id.*
32. "New Transmitters…," *op. cit.* A similar map was included in the decorative scheme at Watrous, Saskatchewan. The station is included in Flaman, Bernard, 2004, *Character and Controversy: The Mendel Art Gallery and Modernist Architecture in Saskatchewan*, Saskatoon, Mendel Art Gallery, p. 38-39.
33. See "Sky-Slitting Dagger…," *op. cit.*, and "CBL is to Open Officially at 9:30 Christmas Morning," *Toronto Daily Star*, December 24, 1937, p. 20.
34. Harkness, Ross, 1948 "Hornby Dishpans Sing Now All Due to Radio Station," *Toronto Daily Star*, September 11, p. 15.
35. "New Transmitters…," *op. cit.*
36. The station was attacked on the evening of August 31, 1939, and Poland was invaded the following day.
37. Media historian Anne MacLennan's work has shown that the fears of Americanization may have been slightly overblown by proponents of a publicly-owned system and that many Canadians actually tuned in to Canadian stations in the 1930s. See her 2001 PhD dissertation, *Circumstances Beyond Our Control: Canadian Radio Program Schedule Evolution During the 1930s*, Department of History, Concordia University, Montreal.
38. Peers : 19.
39. This was mentioned in C.D. Howe's speech on the opening of CBL.