



Fig. 1. Plan of Vancouver Airport and Seaplane Harbour, 1947; Harland Batholomew. (*Royal Architectural Institute of Canada* [1947], 326)

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Grounding the New Perspectives of Modernism: Canadian Airports and the Reconfiguration of the Cultural and Political Territory

Aeronautical technology supplied conceptual and operational models as well as novel typologies for Modern Movement design.¹ Its interconnections with commercial and state policy disclose the complicated structuration and displacement of Modernism within the modern project.² Each shared a preoccupation with mobility and universality nonetheless grounded spatially.

The airport building, initially denominated aerodrome, became a figure for the late phase of modernity and the instrumental use of science as well as an icon of the Modern Movement endeavour to redirect that generally hierarchical and colonial practice to more equitable and humane social ends. The convergence of such diametrically opposed agendas in aeronautical technology and architecture is exemplified in a 1947 proposal for a land and sea plane airport on a reclaimed section of English Bay, close to downtown Vancouver (fig. 1). That was included in the revised version of the City Beautiful plan drawn up by the United States firm of Harland and Bartholomew and published in the July 1940 edition of the *Journal of the Royal Architectural Institute of Canada*. Their theory of design and technology diverged from the radical functionalism espoused by the majority of designers involved in the construction of Vancouver's first airport building, including the structurally innovative reinforced concrete aircraft hangar conceived by the architect-engineer Otto Safir in 1955³ (fig. 2). The spatial grounding of cultural change is especially evident in later 20th century Canada as it moved from imperial confederation to cosmopolitan constitutional independence.⁴ Moreover, during that period, Canadian scholars made significant contributions to the theorization of the spatial and socio-cultural impact of new communication systems and technologies.

In those processes, Modernist design, typified in the federal airport building program of the mid-1950s, acted as iconic and functional agent of supposedly unifying but ultimately contested collective identity. Yet the often mundane rather than elegant abstract functional articulation of the Canadian federal airports, generally bereft of the "whammo" stylistic formalism of some

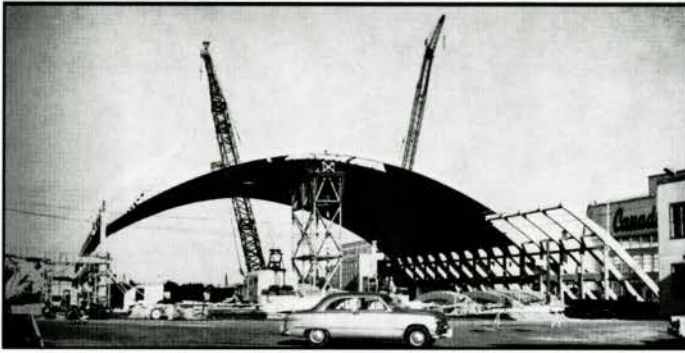
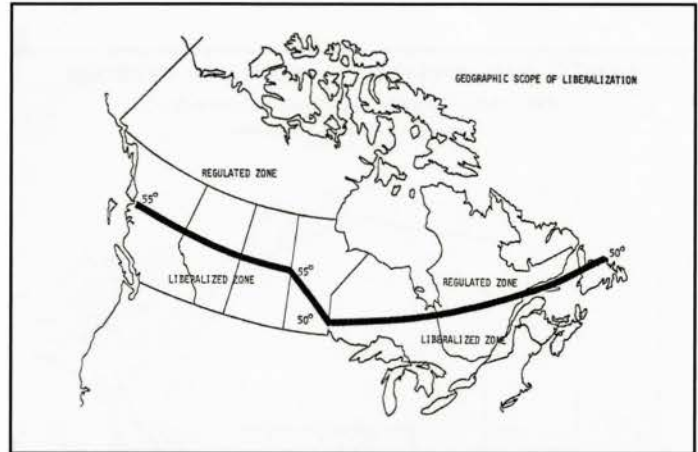


Fig. 2. Vancouver International Airport, View of CP Air Hangar, 1955; Otto Safir. (Royal Architectural Institute of Canada, 35, 4 [1958], 33)

Fig. 3. Map Canada: 20th century Geographic Scope of Liberalization for Air Transportation, 1984. (New Canadian Air Policy, 1984)



United States (and most recent airports), both simulate and challenge the stereotypical binaries within the Modernist-Postmodernist debate.⁵ They display a bland transparency and efficiency that, on the one hand, seems to illustrate Martin Heidegger's definition of the modern condition: "Everything gets lumped together into uniform distanceless" and "despite all conquest of distances the nearness of things remains absent."⁶ On the other hand, they act as containers of heightened societal and individual instability consequent upon air travel, which yet concretise a liminal arena somewhat equivalent to Homi Bhabha's third space.⁷ Indeed, from the late 1950s and the successful introduction of jet passenger aircraft, airports have become places of ritualistic transposition across geophysical no less than ethno-cultural boundaries, despite the capitalist-consumerist trappings of mass tourism and economic migration. Their Modernist fabrics demonstrate the heterogeneous ideology of the Movement, intermixing locality with intercontinentalism, high with popular culture and technology with aesthetic.⁸ That last intermixture is exemplified in the Canadian context by the artwork commissioned for the new federal airports and, most notably, B.C. Binning's mural for the Edmonton Airport (1958-1961).⁹ In addition, the Modernist airport enforced the confusion, even contamination of social classes at all the significant regulatory spaces of air travel and most especially pre-boarding, customs, and luggage areas.¹⁰ Besides thus anticipating attributes of the postmodern condition, the spatial anonymity of the first series of postwar Canadian (and international) airports embodied Modernism's original intent to disrupt the hierarchical controlling systems of modernity. They made conspicuously efficient rather than impressive places that corresponded with Marshall McLuhan's optimistically technocratic Global Village. In turn, those symbolically neutral spaces would accommodate the emergent late modern intersubjectivity regarded as potentially benign by Pico Iyer in the *Global Soul*.¹¹

The radically altered comprehension of space, and thereby place and form in the architectural sense, instilled by air travel is manifest in the total re-mapping of Canada to define the "Geographic Scope of Liberalization" formulated by the 1984 federal Air Policy¹² (fig. 3). Geography, society, commerce, technique and aesthetic were similarly redefined by the advent of aerial infrastructure. In the establishment of those generally invisible yet materially tangible lines of air transportation, and in the related development of air power, Canada assumed considerable

prominence. The first transatlantic flight by Alcock and Brown in 1919 began from Newfoundland (within forty years fully integrated into Confederation) using an adapted Vickers heavy bomber named in celebration of the famed Canadian capture in 1917 of Vimy [Ridge].¹³ A few months earlier the Dominion Government had signed both the Versailles Treaty and the 1919 International Convention for Air Navigation, itself preceding the first trans-Canada flight, 7th to 17th October 1920.¹⁴ The federal financing of policy for the new technology thus anticipated the formalization of Canada's diplomatic autonomy at the 1926 Imperial Conference. While aerial transport was then regarded by British and Canadian imperialists as promising a revitalized imperium surpassing its maritime-commercial origins—witness the rhetoric surrounding the reception at Montreal of the inaugural transatlantic flight by the R100 airship in 1930 or the 1935 transatlantic flying boat service agreement signed in Ottawa between the United Kingdom (Imperial Airways), the United States (Pan American Airways), and Canada—independence in air policy was guarded by the Federal Government.¹⁵

In 1937, just before the attempted inauguration of Imperial Airways transatlantic service, C.D. Howe, the Minister of Transport, won parliamentary approval for the Trans-Canada Airlines Bill "of immense value for national purposes"¹⁶ (figs. 4 and 5). The eventual commencement of service in 1939 was inscribed into Canadian progressive no less than popular culture through advertising. One example is the advertisement placed in the June 1939 issue of the *JRAIC*¹⁷ in which text and image played upon both imperialist and universalist narrative (fig. 6). From 1939 Canada supplied, as before and during the First World War, disproportionate numbers of airforce personnel, airfields for the Commonwealth Air Training Programme (CATC) and safe haven for substantial aircraft manufacture. That included the De

Fig. 5. Lockheed 12-a CF-CCT, Vancouver, End of transcontinental flight, July 29, 1937.
(McGrath. *History of Canadian Airports*. Toronto: Lugas, 1992. 202)



Fig. 4. C.D. Howe, Minister of Transport, and crew, Vancouver, July 29, 1937.
(McGrath. *History of Canadian Airports*. Toronto: Lugas, 1992. 203)



Haviland Mosquito fighter-bomber, and the A.V. Roe (AVRO) Lancaster heavy bomber, which became mainstays of the later stages of the European air war; in addition, a modified version of the Lancaster initiated Trans-Canada Airways transatlantic service in 1943. Each company subsequently contributed to independent nationalist policy. De Haviland manufactured the Beaver bush plane, which assisted the resource development generated by postwar Reconstruction, and AVRO, the now mythic Arrow supersonic fight-bomber, which initially placed Canadian aeronautical technology at the forefront of international development.¹⁸

The link between what the MacKenzie King Liberal Government called "Canadianism" and the emergent aerial world order had been manifested in the grounding of the bureaucratic machinery for the 1944 International Air Services Transit Agreement in Montreal; appropriately the International Civil Aviation Organization and International Air Transport Association remain headquartered in a Modernist skyscraping tower block on Sherbrooke Street. Despite, or due to, recent collaboration through the 1939-1945 conflict, Canada in 1944 spurned British attempts to forge a Commonwealth Air Policy constructed around British controlled aircraft manufacture and economic interests.¹⁹ Nonetheless, Trans Canada Airlines and Canadian Pacific Airlines (actually formed earlier than T.C.A. in 1930) bought British aircraft, notably the Vickers Viscount and Bristol Britannia. The Viscount and Britannia respectively enabled daily cross-continental transit and the first transpolar flights out of Vancouver from 1955; C.P.A. and T.C.A. also planned on flying the pure jet De Haviland Comet that opened rapid transcontinental travel in 1952. The jet era would, moreover, reposition Canada centrally in

the late modern globalized "network of places" constructed by those multifarious dynamics Heidegger justifiably attributed to "the logic of capitalist development."²⁰

There is another dimension to those restructurations, a dimension closer to the processes of internationalisation and of architectural design. The paradigmatic images of Modern Movement reformed urbanism are almost always represented as if from an aerial perspective, one more technically authentic than the traditional "bird's-eye view." Moreover, these either include provision for air transport or allude to its civil or military agency.²¹ Tony Garnier's *cit  industrielle* was drawn concurrently with the Wright Brother's pioneering flights at Kitty Hawk (1903-1905). Clearly, the aerial perspective was not his invention, but it is employed to support a more insistent concept of physical and communal relationship that became normalized with the advent of regular flight. In that respect, the air trope operates akin to the idealized utopian project of comprehensive town planning. Each simultaneously confronted real deficiencies while delineating solutions increasingly capable of implementation through the technologies glamorized in aircraft. Hence the compounding contraction between the imaginary and attainable in Sant Elia's confluence of aerial and ground transportation system in the Citta Nuova (c. 1912-1914), or Le Corbusier's Contemporary City plan for Paris (1920-1922), which was subsequently named for the French aircraft manufacturer Voisin. In the same way, the technophilia cherished by most proponents of the Modern Movement design led Richard Neutra in his Rush City scheme (1924-1926) to de-problematize the impact of the automobile on urban community, partly by situating the visual locus and thereby the predominant mental frame aerially.²² The everyday experience of flying supported such removal of the complex material contingency of city living to an abstract and aesthetically appealing mechanistic imagery. Le Corbusier furthered that conflicted vision of humanizing technology in the *Ville Verte* and Radiant City plans (1930-1935). One sheet of elevations even claimed the invincibility of reinforced concrete apartments against aerial bombardment²³ (fig 6). The strict orthogonal disposition of residential, manufacturing, commercial, transit, and recreational facility in that benign disruption of modernity would be displaced by his second visit to Rio de Janeiro. In 1929, he flew aboard the Zeppelin airship to South

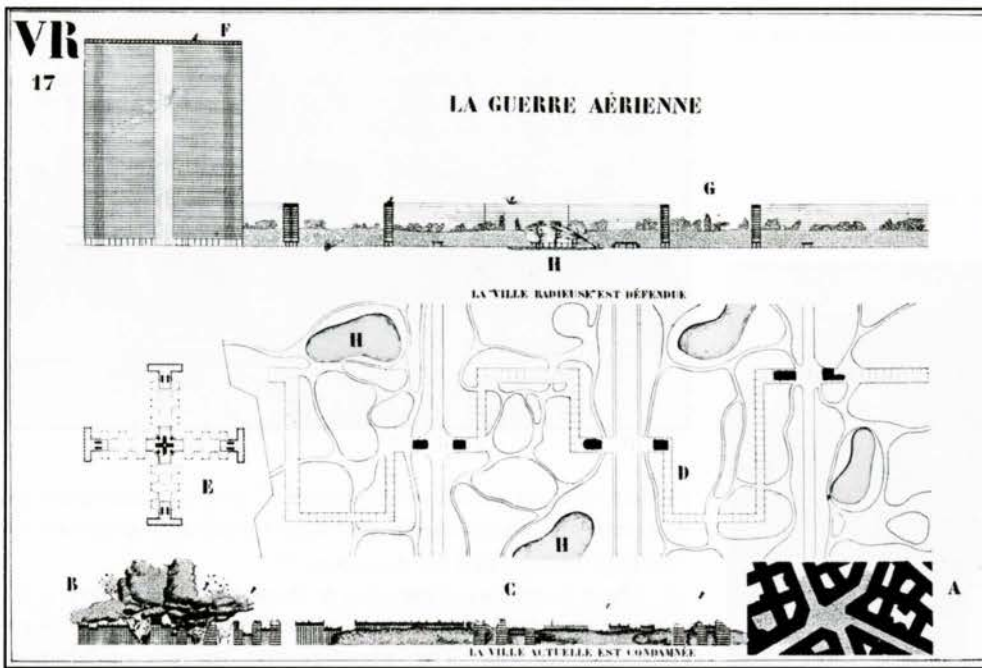


Fig. 6. Aerial Warfare, *Radiant City*, 1930; Le Corbusier. (Le Corbusier. *La ville radieuse*. Paris: Vincent, 1964 (1933), 171)

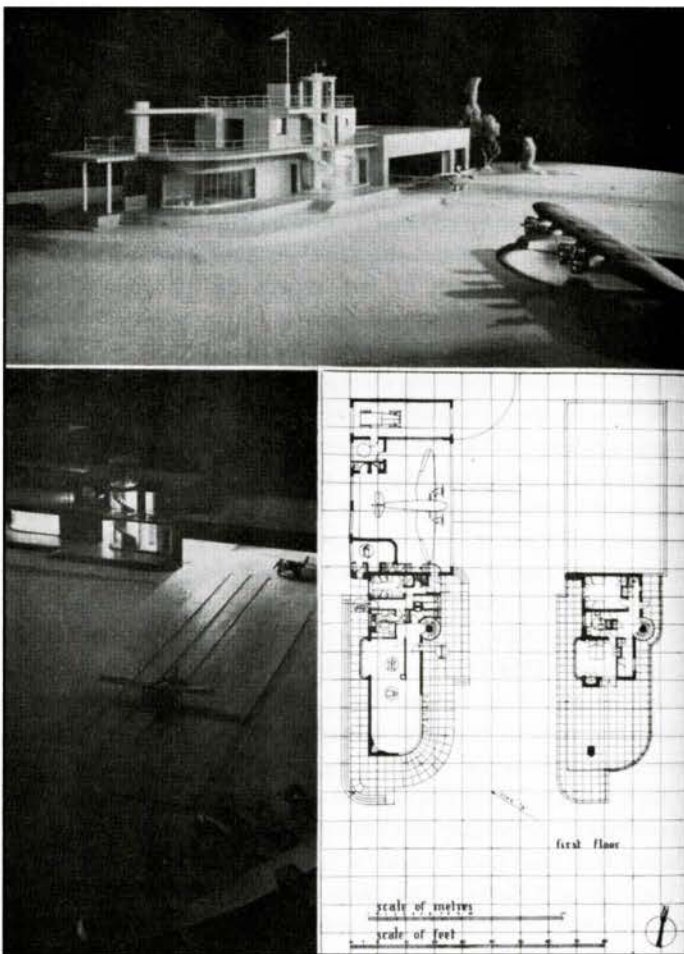


Fig. 7. Rudderbar, Hanworth Airplane Field, Feltham, View of the South-east and air-view of the runway to the airplane house, 1932; Raymond McGrath (London) (McGrath. *Twentieth-Century Houses*. London: Faber and Faber, 1934, 22)

America. He experienced the visual integration of large-scale geography with human settlement, and simultaneous visibility of site and situation, more than likely prompted the integration of topography and even the Picturesque into his subsequent town planning schemes especially for Algiers.²⁴ In company with Frank Lloyd Wright, whose 1930 perspective rendering for the Grouped Towers project in Chicago includes a Zeppelin-like dirigible, Le Corbusier

regarded advanced aircraft as visual symbols and actual models of the social potential of technical system notably in its 1935 book *Aircraft*.²⁵ That justifying and expository rôle is evident in the autogyro transport ("Aerotors") Wright conceived for Broadacre City (1934-1935), or within a divergent political context, the airview rendering, including the latest Fiat bombers, of a scheme for the Palazzo Littorio, entered in the 1934 competition for a new Fascist headquarters in Rome by a group including Luigi Figini and Ernesto Rogers.²⁶ It also underlines the polemic intent of the illustration of a Short Kent Flying Boat operated by Imperial Airways in F.R.S. Yorke's important Modernist tract, *The Modern House* (1936); or of Le Corbusier's decision to suspend a full-size model monoplane in the Bata Pavilion at the 1937 Paris World's Exposition as an allegory for global commerce.²⁷

The Modernist argument from the air almost attained durable form in Raymond McGrath's design for Rudderbar (1934)²⁸ (fig. 7). An *aviatrix* commissioned him to design a combined house and transport hub. An aircraft hangar and a garage were to be built alongside domestic quarters surmounted by an observation/control tower. Building was to have commenced with the patron dropping a foundation block after takeoff at the onset of an attempt on the flight endurance record to be terminated coincident with the completed structure. A less arcane alliance of Modernist practice and theory with aeronautics occurred in 1947. That formed part of the endeavours to revive the Congrès internationaux de l'architecture moderne (CIAM) and its centrality to Modernist design and urbanism. The delegates to the 6th CIAM at Bridgewater in the West of England, including the young Canadian architect-planner H. Peter Oberlander representing Central [Canada] Mortgage and Housing Corporation, visited the Bristol Aeroplane Company²⁹ (fig. 8). At the company's factory in Filton, they observed the mass-production of prefabricated housing units using surplus

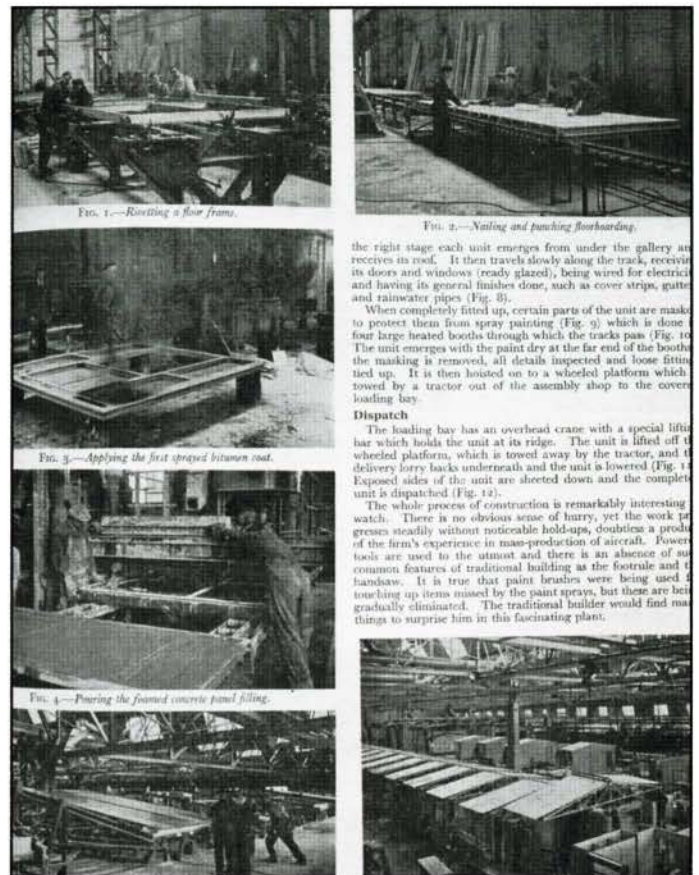
Fig. 9. Prefabricated Houses, Production at the Bristol Aeroplane Company, 1946.
(File Types, Royal Institute of British Architects [1945-46], 403)

Fig. 8. CIAM VI, Bridgwater, 1947. Meeting at Bristol Aeroplane Company.
(Gold. *The experience of modernism: modern architects and the future city, 1928-53*. London: E & F N Spon, 1997, 8.7)



military material, especially aluminium and steel: a functioning metaphor for Modernism's ideal of reconstructing society by redirecting industrialist and technology to universal human need (fig. 9). Yet—and symptomatic of the limited analytic and of the conservative collusions of Modernism—the chief concurrent productions of the Bristol Aeroplane Company were high-performance sports cars, gas turbine engines, and freight and passenger aircrafts. Of these latter, the Brabazon airliner was aimed at the elite transatlantic traveler³⁰ (fig. 10). A later project would be the engines for the Concorde, which originated at the Royal Aircraft Establishment as a vehicle for rapid travel to the distant Commonwealth, with the objective of maintaining British transoceanic economic influence.

That imbrication of the radical with the traditional in Modernism applies to the establishment of the Canadian air transport system and airline industry. The bureaucratic model and commercial impetus derived from Canadian railway policy and companies with their heritage of imperial, neo-colonial and expansionist *praxis*.³¹ As indicated, the national legislation, beginning with the 1919 Air Board Act, emerged out of the agreement signed by the British Empire with its allies as part of the Versailles Treaty. The Act, again paralleling Modernist attempts to exploit the latest technology in the enactment of ethos, was “for the regulation of a service essentially important in itself as touching closely the national life and interests but also of the necessity of making provision for performing the obligations of Canada, in part of the British Empire and the Convention relating to the regulation of Aerial Navigation [...] signed by the representatives of 21 of the Allied and Associated Powers including Canada.”³² Reading such contemporary policy documents back into Modernism underscores the formative dynamic of the First World War in collectivizing disparate groups and ideology around more universalizing projects. The assumptions underlying the 1919 Act also resonate with those material



the right stage each unit emerges from under the gallery and receives its roof. It then travels slowly along the track, receiving its doors and windows (ready glazed), being wired for electric and having its general finishes done, such as cover strips, gables and rainwater pipes (Fig. 8).

When completely fitted up, certain parts of the unit are masked to protect them from spray painting (Fig. 9) which is done in four large heated booths through which the tracks pass (Fig. 10). The unit emerges with the paint dry at the far end of the booths the masking is removed, all details inspected and loose fitting tied up. It is then hoisted on to a wheeled platform which is towed by a tractor out of the assembly shop to the covers loading bay.

Dispatch

The loading bay has an overhead crane with a special lift bar which holds the unit at its ridge. The unit is lifted off the wheeled platform, which is towed away by the tractor, and the delivery lorry backs underneath and the unit is lowered (Fig. 11). Exposed sides of the unit are sheeted down and the complete unit is dispatched (Fig. 12).

The whole process of construction is remarkably interesting to watch. There is no obvious sense of hurry, yet the work progresses steadily without noticeable hold-ups, doubtless a product of the firm's experience in mass-production of aircraft. Fewer tools are used to the utmost and there is an absence of such common features of traditional building as the footrule and the hand saw. It is true that paint brushes were being used to touch up items missed by the paint sprays, but these are being gradually eliminated. The traditional builder would find many things to surprise him in this fascinating plant.



Fig. 10. Aviation, the Bristol Brabazon, 1949.
(Graves. *Achievements. Land Sea and Air: A Century of Conquest*. London: Bloomsbury Publishing, 1998, 127)

processes charted by one Canadian theorist of social-cultural development, Harold Innis.³³ Those assumptions also engage with the technophilia celebrated by McLuhan, who comprehended the profound realignments of physical and psychological space wrought by the technologies of the Jet Age.³⁴ Just as McLuhan's



Ottawa: General view of building showing porte-cochere and main entrance

ilities exist in the Halifax Terminal for foreign passengers enroute to other parts of the country who are not required to pass through Customs but do have to be examined by Health and Immigration officials. Air passengers as well as sight-seers are further accommodated by cafeteria restaurant and spectators decks which, by the way, draw considerable revenue for the Department of Transport. Air traffic control in the form of the Control Tower, Radar Rooms, Meteorology, Airport Management, Air Lines offices and Department of Transport offices occupy the balance of the accommodation. The Ottawa Terminal contains two further facilities; one is a permanent Aircraft Museum housing Canada's achievements in this Air Age, which are considerable. The

other is an exhibition space in front of the main entrance, where government departments and industry may display current and topical displays of interest to people entering the capital.

Structurally, both buildings are similar, being of steel frame enclosed with an aluminum curtain wall. A great number of studies were made in conjunction with the Robertson Irwin Company Ltd. to devise a floor slab system which would flexibly accommodate the power, telephone and communication systems which are vital to the operation of Air Traffic Control. The choice of interior finish materials was studied at great length with appropriateness to location and the community each served as well as specific functional re-

View of main lobby, sunken garden and spectator deck

Fig. 11. Ottawa, International Airport, General View of Building, showing main entrance; Gilliland and Strutt, 1960.

(Royal Architectural Institute of Canada, 37, 12 [1960], 510)

centres, causing a contributor to *Saturday Night* as late as 1958 to describe Canadian aerodromes as "undoubtedly among the world's worst."³⁶ Consequently, they were not an irritant presence of distant disciplining authority in the Foucauldian sense. Not at least until civic, provincial, and federal pride seemed threatened as when, in a 1954 issue, the *Montreal Gazette* denounced Dorval as "cheap, cramped and makeshift." The collectivist and socialist modification of Canadian liberalism effected by the Depression and World War II privileged a populist notion of progress that embraced an amalgam of post-imperialist, nationalist, continentalist, and internationalist thoughts. The alliance of Government with corporate capital in pursuit of a financially if also socially profitable reconstruction during the two postwar decades enabled the implementation of the 1937 Trans-Canada Airlines Act. Air transportation, C.D. Howe had then declared, could be of "immense value for national purposes [...] the people living at the extremes of the country would be able to travel more frequently to the centres of government, business and industry, and the interrelations of the country would thereby be facilitated."³⁷ The rhetoric was reinforced in the 1944 Air Transport Act and in subsequent legislation clarifying the responsibilities of the Air Transport Board. The phraseology of both Bills reveals the increasing folding of radical and comprehensive societal aims into conservative and pragmatic operative means comparable to the corporatization and pedagogical conventionalisation of Modernism during the 1950s. Prime Minister St. Laurent voiced the commercialistic reconstitution of democratic socialist reform when announcing the beginnings of privatization in 1952: "airlines like other transport facilities are the arteries through which the economic life blood of the country flow."³⁸ The body politic was regarded as a financial rather than cultural construct, in the manner summarized by William Hughes in the opening paragraph of his doctoral thesis, *Public Policy and Airline competition in Canada*: the "prime objective of public policy has been, and still is, the tying together of the extremities with economic and cultural bonds. A nation must have, if it is to be so called, a transportation system connecting communities the central government authority."³⁹

Similar constructs underpin the architectural articulation of the airports built under the auspices of the Department of Trade (DOT) from 1954-1955 and through the Liberal and Conservative administrations of Lester Pearson and John Diefenbaker.⁴⁰ Indicative of the collusion between technology and status quo, the airport building programme perpetuated established political hierarchy. Topping the list were the *international* terminals at Halifax, Montreal, Winnipeg, and Ottawa (fig. 11). The

celebrated phrase, the Global Village problematizes almost as much as it defines, so also the 1919 Act aroused tensions within the Canadian fabric. These took flight in 1927, the year Le Corbusier's *Vers une architecture* (1923) gained international authority in the English translation by Frederic Etchells (*Towards a New Architecture*). At the November Premier's conference "the representatives of Quebec raised a question as to the legislative authority of the Parliament of Canada to sanction regulations for the control of aerial navigation generally within Canada." The quote comes from the pamphlet prepared by the solicitor for the Attorney-General of Canada in the case brought before the Supreme Court of Canada, "As to the Respective Legislative Powers under the British North America Act, 1867, of the Parliament of Canada and the Legislatures of the Provinces in Relation to the Regulation and control of Aeronautics in Canada."³⁵ The pamphlet was printed in 1929, the year not only of the stock market crash, but also of Charles Lindbergh's solo transatlantic flight.

The Federal Government won that case. And the relatively modest developments in air transportation and consequently airport construction up to the early 1950s contained that aspect of regional and ethno-cultural resistance to federalism. Airport buildings were modest and generally removed from major

Fig. 14. Winnipeg, International Airport, plan and drawing, 1960; Green and Blankstein, Russell, et al., (The Canadian Architect, 06 [1960], 70)

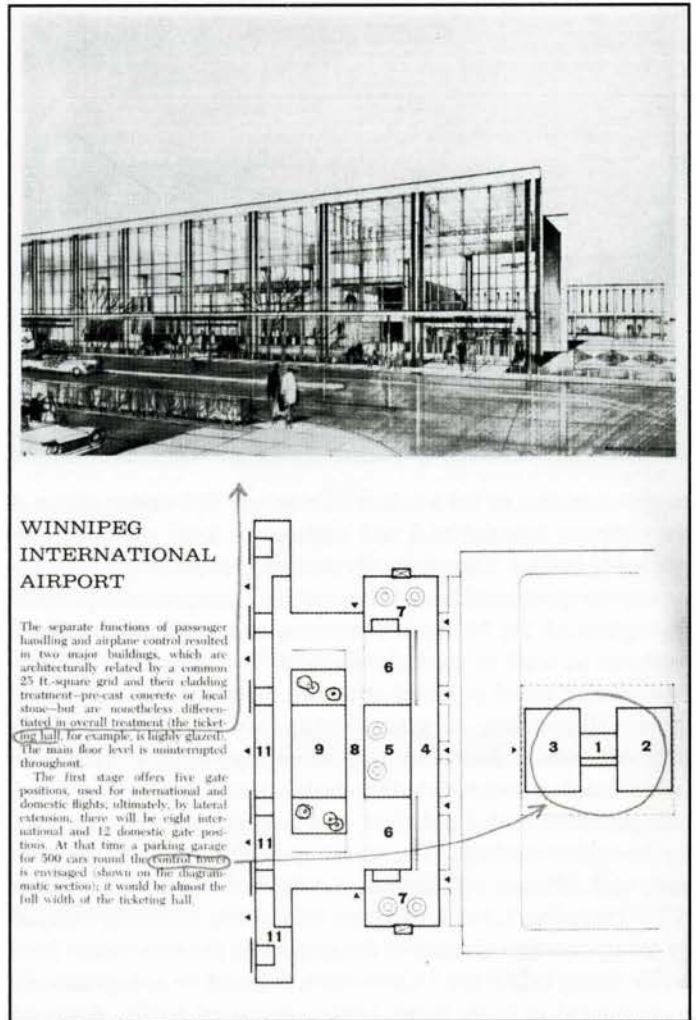


Fig. 12. Halifax, International Airport, General View, External views, 1960; Gilleland and Strutt, (Royal Architectural Institute of Canada, 37, 12 [1960], 516)

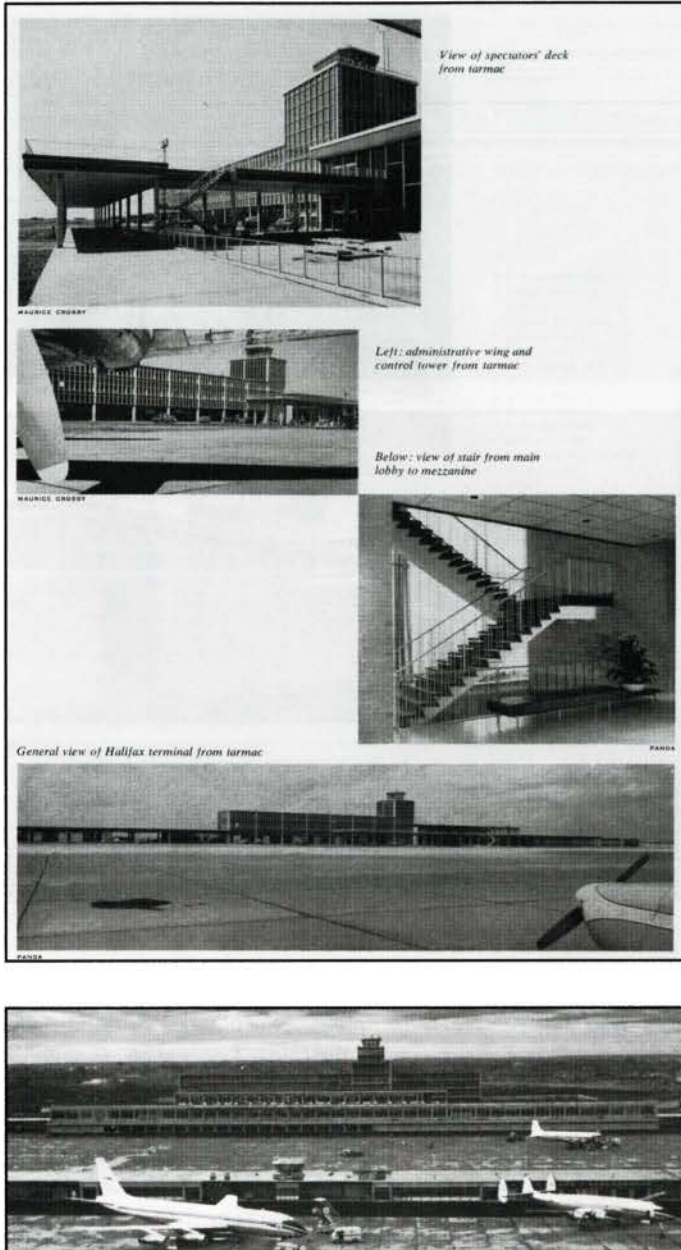


Fig. 13. Montreal, International Airport, General View, 1960; Illsey, Templeton, Archibald, (Royal Architectural Institute of Canada, 37, 12 [1960], 518)

rebuilding of Toronto's facility at Malton followed at the end of the decade in grudging recognition of the transfer of financial paramouncy from Montreal. The two other cities at the centre of new regional economies then altering the Canadian political fabric, Vancouver and Calgary, enlarged their airports predominantly under civic plebiscite. The DOT, however, had exclusive authority for the remainder that fulfilled older Canadian political agendas of the distribution of subsidiary economic power: Comox, Edmonton, Kenora, North Bay, Prince Rupert, Port Hardy, Regina, Saskatoon, St. John's, Sept-Îles, Sault-Sainte-Marie, Stephenville, Quebec City, Victoria, and Windsor. Their construction should also be linked to a substantial military programme motivated by the Cold War together with the strategic and neo-colonialist appropriation of the North. Another factor was realignment away from Britain, after the 1956 Suez Crisis, toward closer but problematic alliance with the United States as enacted by NORAD (North American Aerospace Defence Command), and cancellation of the AVRO Arrow in favour of the Bomarc missile.⁴¹

The defining architectural characteristic of Canadian airport building from that era is a cautious internationalism, vectored toward the United States consumerist and mechanistic



Fig. 15. Vancouver, Vancouver International Airport, exterior, Main entrance, McCarter and Nairne.
(*The Canadian Architect*, 01 [1959], 47)

Fig. 16. Calgary, Calgary Airport terminal, exterior, view of east side of building/observation area. Clayton, Band and Mogridge.
(*The Canadian Architect*, 10 [1956], 36)



Fig. 17. Calgary, Calgary Municipal Airport, Interior, cafeteria; Clayton, Band and Mogridge
(*The Canadian Architect*, 10 [1956], 37)

re-appropriation of the Modern Movement. The design idiom at the different international and regional or local airports is remarkably similar. That similarity derives to some extent from the functional specification but is here argued to represent a political inscription of the Modernist preoccupation with essentialized aesthetic as well as formal statement. The simplified trabeated-concrete, metal or wood-structure, standardized and modular in-fill/paneling or glass curtain walls, clear volumetric differentiation of functional operations, rigorous avoidance of ornamentation counteracted by contemporary artworks and furnishing reflect both a policy of, and popular cultural preference for interconnectedness. The severe geometry could be monotonous and diffused in Gilleland and Strutt's schemes for Halifax (1957-1960) (fig. 12) or for Ottawa (1955-1960, ironically delayed by the destruction of much of the glazing by the sonic boom from a low flying RCAF jet).⁴² Conversely, it could be surreptitiously monumental as in the large, triple component facility designed for the Montreal International Airport at Dorval by Illsley, Templeton and Archibald working with Larose and Larose (1954-1959)⁴³ (fig. 13). When less directly policed by W.A. Ramsay, Chief Architect at DOT, the typical Modernist formula was adapted with greater architectural distinction. It attained elegance of proportion and of articulation in Green Blankstein Russell and Associates Winnipeg International Airport (1959-1961)⁴⁴ (fig. 14). There is even a hint of critical regionalism in the deployment of glulam post-and-beam construction by McCarter Nairne and Partners for the temporary Air Terminal at Vancouver (1957-1958)⁴⁵ (fig. 15). Another factor was relative scale. The smaller traffic alike pertaining to Calgary allowed its architects, J.C. Clayton and Allan Mogridge, to introduce more domestic spaces and effects (fig. 16). Those were reinforced by the commissioning of furnishings from Robin Bush who espoused the late Romantic humanist and craft veins also harboured within Modernist lore⁴⁶ (fig. 17).

That series of Canadian airports thus represents the broad preference for greater cultural homogeneity and part of the search for a new political and economic synthesis. The Modernist design codes, while becoming increasingly conventionalized during that decade, still seemed capable of resolving different iterations of the transformation of the customary into an efficient

and desirable future environment. The alliance of Modernist iconography and practice with the Quiet Revolution, as well as with growing regionalist and even ethnic consciousness, marked the extent of incommensurability coincidentally tolerated by Modernism's egalitarian redirection of the modern project.⁴⁷ The attainment of chiefly materialist objectives, embracing in Modernism both low cost public and private suburban housing, corresponded with the functionalist specification of aeronautical architecture typified by John R. Baldwin's "Airports and Terminals in Canada" published in the October 1956 issue of *The Canadian Architect (TCA)*.⁴⁸ Illustrated by aerial view renderings that exaggerated aesthetic comparability, Baldwin read airports as attributes, operations, and problems: speed, access, noise, circulation, and safety. In the review of Canadian airports *TCA* printed

Fig. 18. Toronto, Toronto International Airport, Windsor Airport drawing. (*The Canadian Architect*, 01 [1959], 38)

almost three years later (in January 1959), statistics predominated.⁴⁹ The relapse into conformity was manifest in the cryptic allusion to growing Quebecois Separation in the caption on Dorval: "For a city of part French and part English, a collaborative of English and French architects brings the dichotomy right into the building."

Modernism was still presumed capable of successfully reconfiguring traditional values or expectations through its concentration on analysis of need, efficiency of form, and embrace of technology.⁵⁰ The idea that aesthetic derived from satisfaction of function, baldly stated by Bruno Taut in *Modern Architecture* (1924), clearly influenced the architectural critic James H. Acland as concerns the Toronto International Airport.⁵¹ He opined that the two innovative "aeroquays" and new facilities for the jet age built at Malton to the designs of John B. Parkin Associates (1960-1964) surpassed all Canadian, and most American or European, air terminals in architectural quality, technological relevance, and critical reception. The Parkin design team had invented a unique structuration of Modernist mobility (fig. 18). The aeroquays comprised independent units that combined purist geometrical composition with a purposeful formal organization: the outer circular aircraft access and service building surrounding a central rectangular parkade linked by tunnels beneath the flight apron to ground transportation communicating with Toronto and its economic region. Acland foresaw the inadequacy of Toronto's road and rail transit, but not the exponential growth in passenger traffic that would render the Malton solution obsolete. Thus he commended the complex as an "effective and prestigious monument" and a "stunning and admirable spatial and visual image [achieved] by concentration upon tightly knit circulation and care of passenger access." No other airport had "more effective interlock visually between the mechanism of flight and the public passenger areas." And "the puritanical and restrained detail of arrival and departure concourse" instilled an appropriate psychological ambience and context for artwork.

That habit of mind where Modernism could negotiate social and aesthetic consensus proved as transient as the arresting fixity of imagery in two illustrations to Acland's article. Both are night photographs of the Toronto aeroquay: one shows a Viscount airliner being prepared for a transcanadian flight, and the other the facility unencumbered by either aircraft or passengers⁵² (fig. 19). The technologies reified in the image would soon become obsolescent and contribute to the ruptures in universalist ethos that would outdate both the fabric and federalist message of the late 1950s Canadian airports. By 1968, the positivist rheto-

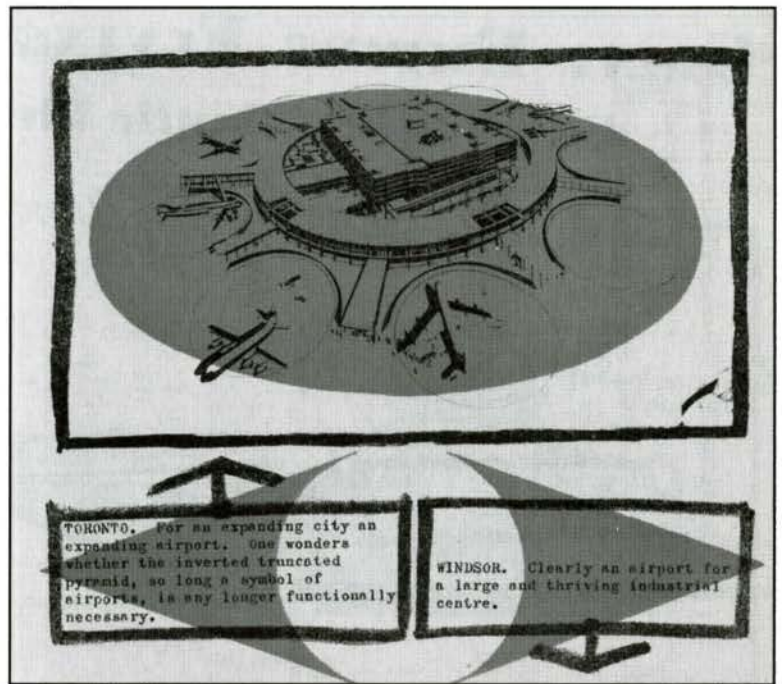
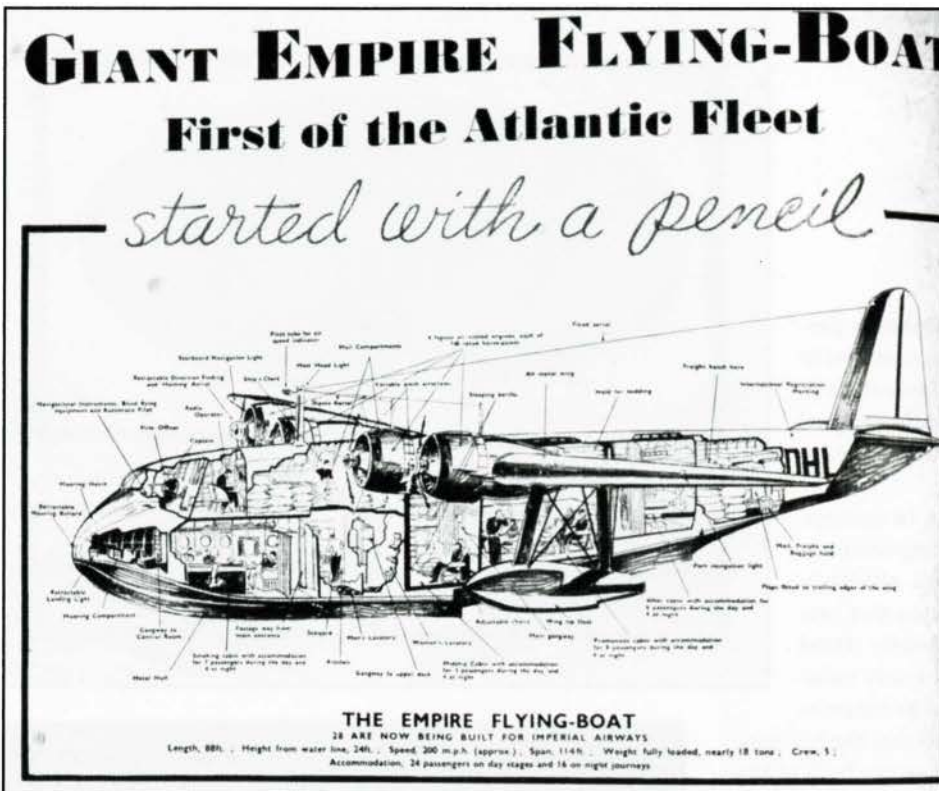


Fig. 19. Toronto, Toronto International Airport, Exterior, view of aeroquay and plane at night, 1964; Parkin and Associates. (*The Canadian Architect*, 02 [1964], 47-48)

ric of many speeches delivered at the Symposium on the Future of World Air Transport organized by the Montreal-based International Air Transport Association carried less conviction, especially in light of the deployment of United States air power in the Vietnam conflict. "The airplane," Alan Boyd of the U.S. Department of Transportation ironically declared, quoting President Lyndon B. Johnson, "has done most to bring individual peoples of the world together in friendship... [and] widespread understanding among people that banishes ignorance."⁵³ The functions of architectural form include the successive redefinition of those values and factors it is supposed to constitute through construction.

Fig. 20. Great Empire Flying Boat, Venus Boat co., 1939. (Royal Architectural Institute of Canada, 15, 4)



Notes

1. This paper extends research on the intersection between later British imperialism and Modern Movement architecture and town planning supported by grants from the Social Science and Humanities Research Council of Canada and a John Simon Guggenheim Fellowship.

2. The divergence between Modern Movement theory and practice, and modernity and its anticipation of postmodern affects has been insufficiently recognized in the major literature exemplified by Harvey, David, 1989, *The Condition of Post Modernity*, Oxford, Oxford University Press; Habermas, Jurgen, 1982, « Modern and Postmodern Architecture », 9H, no. 4, p. 9-14; Heynen, Hilde, 1999, *Architecture and Modernity*, Cambridge, Mass., M.I.T. Press; Jameson, Fredric, 1991, *Postmodernism, or the Cultural Logic of Late Capitalism*, London, Verso, an important section of which is reprinted in Leach, Neil (ed.), 1997, *Rethinking Architecture: A Reader in Cultural Theory*, London, Routledge, p. 128-

169; and Klotz, Heinrich, 1988, *The History of Post Modern Architecture*, Cambridge Mass. M.I.T. Press.

3. For the European and British training and early practice as well as information on his Canadian work, see Liscombe, R. Windsor, 1997, *The New Spirit; Modern Architecture in Vancouver 1938-1963*, Montreal and Vancouver, Canadian Centre for Architecture/Douglas & McIntyre/M.I.T.

4. That period in Canadian history is summarized in McNaught, Kenneth (rev. ed.), 1988, *The Penguin History of Canada*, London, Penguin, and examined by others: Bothwell, Robert (rev. ed.), 1989, *Canada Since 1945: Power, Politics and Provincialism*, Toronto, University of Toronto Press; Cohodos, Robert, 1990, *The Unmaking of Canada; the Hidden Theme in Canadian History Since 1945*, Toronto, J. Lorimer; Creighton, Donald, 1976, *The Forked Road: Canada 1939-1957*, Toronto McClelland and Stewart; and Granatstein, J.L., 1986, *Canada 1957-1967; the Years of Uncertainty and Innovation*, Toronto, McClelland and Stewart.

5. Scully, Vincent, 1969, *American Architecture and Urbanism*, New York, Praeger, p. 198, with reference to Eero Saarinen's Trans World Airways terminal at Idlewild, later John F. Kennedy Airport, New York, 1956-1962.

6. Martin Heidegger quoted by David Harvey "From Space to Place and back again", p. 10 in Bird, J, B. Curtis, T. Putnam et al. (eds.), 1993, *Mapping the Futures: Local Cultures, Global Change*, London, Routledge; see also Jameson, F., 1992, *The geopolitical aesthetic. Cinema and space in the world system*, Bloomington Ind., Indiana University Press.

7. Bhabha's, Homi, 1994, *The Location of Culture*, London, Routledge.

8. In addition to Heynen (1999), see also Frampton, Kenneth, 1991 (rev. ed.), *Modern Architecture. A Critical History*, Toronto, Oxford University Press; and St. John Wilson, Colin, 1995, *The Other Tradition of Modern Architecture. The Uncompleted Project*, London, Academy Editions.

9. For Binning's Edmonton mural, see B.C. Binning. *A Classical*

Spirit, 1985, Victoria, Art Gallery of Victoria; and Flaman, Bernard, « The Airport as City Square », paper presented at the 2000 DOCOMOMO International Conference, forthcoming in the *Journal of the Society for the Study of Architecture in Canada-JSSAC*.

10. The vocabulary of contamination borrows from an analysis of more contemporary socio-cultural interchange both incommensurable and inevitable, resulting from late modern conditions presented by Fernando de Toro in the paper entitled « The Culture of Displacement and the Question of Identity » delivered at Green College, University of British Columbia, 26 March 2002.

11. McLuhan, Marshall, 1989, *The Global Village: Transformations in World Life and Media in the 21st Century*, New York, O.U.P.; Iyer, Pico, 2000, *The Global Soul. Jet Lag, Shopping Malls and the Search for Home*, New York, Alfred A. Knopf. See also Arefi, Mahyr, 1999, « Non-Place and Placelessness in Narratives of Loss - Rethinking the Notion of Place », *Journal of Urban Design*, vol. 4, June, p. 2; Arefi, Mahyr, 1999, *Citizen*

- Nowhere: The Search for Self in a Shifting World*, New York, Alfred Knopf; Walker, Ruth, 2001, « Meet the New Airport: Temple, Mall, Design Hub », *Christian Science Monitor*, vol. 92, no. 23 August, p. 189; and Pascoe, David, 2001, *Airspaces*, London, Reaktion.
12. « New Canadian Air Policy », 10 May 1984, pamphlet published by the then Minister of Transport, Lloyd Axworthy, continuing the “liberalization of airline regulation... [so as to] promote a healthy, innovative and competitive airline industry... [leading to] increase in domestic air travel and industry’s new competitive advantage in the international forum” (p. 1), and to “promote national integration through increased domestic air travel” (p. 5). See also Sealy, K.R., 1957, *Geography of Air Transport*, London, Hutchinson; and for the socially ordering power of such infrastructure, Starr, Susan L., 1999, *Sorting Things Out. Classification and Its Consequences*, Cambridge, Mass., M.I.T. Press.
13. Smith, H. Gibbs (2nd ed.) 1985, *Aviation: An Historical Survey from its Origins to the End of World War II*, London, Her Majesty’s Stationery Office.
14. The early legislature history is reviewed in the pamphlet published by the federal Attorney General as *In the Supreme court of Canada. In the matter of a Reference As to the Respective Legislative Powers... of the Parliament of Canada and the Legislatures of the Provinces in Relation to their Regulation and Control of Aeronautics*, Ottawa, Government Printer, 1929.
15. The luncheon organized by the Montreal Royal Empire Society to celebrate the arrival of the R100, and presided over by Lord Shaughnessy, was reported in 1930 in the *United Empire* (vol. 21, no. 8, p. 502-504), in which the flight was described as giving “a great impetus towards the ultimate unity of the Empire. While each dominion has its own individual problems, we all have one great problem in common—the consolidation and growth of our Empire for the betterment of the world in Moral Health, in Mental Outlook and in Physical Well-being.” In 1924, the journal had printed Commander F.L.M. Boothby’s article “Airships for the Empire” with this warning: “Fail to get the air sense as we have the sea sense, fail to rear a race of airmen in the future as we reared a race of seamen... and the British Empire will crumble at the challenge of the first nation capable of defeating us in this new element” (vol. 15, no. 3, p. 154-165).
16. Hughes, William, 1961, *Public Policy and Airline competition in Canada*, doctoral thesis, Indiana University, p. 99.
17. *Journal of the Royal Architectural Institute of Canada*.
18. Rossiter, Sean, 1990, *Legends of the Air: Aircraft, Pilots and Planemakers*, Seattle, Sasquatch Books; and Rossiter, Sean, 1999, *The Immortal Beaver*, Vancouver, Douglas & McIntyre. The Arrow incident is reviewed in Dow, James, 1979, *The Arrow*, Toronto, J. Lorimer; and Stewart, Greig, 1988, *Shutting Down the National Dream: A.V.Roe and the Tragedy of the Avro Arrow*, Scarborough, Ontario, McGraw-Hill Ryerson. It also was the subject of a 1998 feature film produced by the Canadian Broadcasting Corporation and National Film Board.
19. MacKenzie, David, 1993, « The Rise and Fall of the Commonwealth Air Transport Council. A Canadian Perspective », *The Journal of Imperial and Commonwealth History*, January, vol. 21, no. 1, p. 105-125. The abortive cooperative policy was proposed by Lord Halifax at the inaugural meeting of the CATC prior to the United Nations sponsored International Civil Aviation Conference in September at Chicago.
20. Heidegger, quoted in Harvey (1993 : 13). A positivist, regionalist view appears in Johns, B. (ed.), 1995, *Jet Dreams: Art of the Fifties in the Northwest*, Seattle, University of Washington Press.
21. That idea was partially stated by Charles Jencks with regard to Le Corbusier’s town plans in 1973 (*Le Corbusier and the Tragic View of Architecture*, London, Allen Lane, p. 125). See also Gutkind, E.A., 1952, *Our World From the Air*, New York, Doubleday; and Pascoe, David, 2001, *Airspaces*, London, Reaktion.
22. Hines, Thomas, 1982, *Richard Neutra and the Search for Modern Architecture*, New York, Oxford University Press.
23. Illustrated in the 1937 English translation of his 1935 *La Ville Radiieuse, The Radiant City*, London, Faber and Faber, p. 171. The chiefly military aspect of aircraft development had become a significant aspect in fictional literature well before the Spanish Civil War (1935-1937) exemplified by Wells, H.G., 1898, *The War of the Worlds*; and Warner, Rex, 1944, *The Aerodrome*; see also Beer, Gillian, 1990, « The island and the aeroplane: the case of Virginia Woolf », in Bhabha, Homi (ed.), *Nation and Narration*, London, Routledge p. 265-290.
24. Loach, Judy (ed.), 1987, *Le Corbusier: Architect of the Century*, London [Hayward Gallery] Arts Council of Great Britain; Curtis, William, 1995, *Le Corbusier: Ideas and Forms*, London, Phaidon; and Perez Oyarzun, Fernando, 2000, *Le Corbusier in South America*, Department of History, Cambridge University, October.
25. Wright’s scheme is illustrated in Riley, Terence (ed.) 1994, *Frank Lloyd Architect*, New York, Museum of Modern Art, p. 215. Corbusier’s book *Aircraft* was published by the London journal *The Studio*, reprinted 1988, New York, Universe Books; the argument is summarized in the following sentences from the introduction (p. 13), “The airplane, in the sky, carries our hearts above mediocre things. The airplane has given us the birds-eye view. When the eye sees clearly, the mind makes a clear decision.”
26. Illustrated in Etlin, Richard, 1991, *Modernism in Italian Architecture, 1890-1940*, Cambridge, Mass., M.I.T. Press, figure 273 on p. 731. Among other valuable references, Etlin notes the propagandist significance of the transatlantic flight by the Fascist Airforce to the 1932 Chicago International Exposition, *A Century of Progress*, esp. p. xxii.
27. Respectively, Yorke, F.R.S. (1944 ed.), *Modern House*, London, Architectural Press (p. 9) above text defining the watchword of “Modern” architecture “new functional plan,” and illustrated in Tafuri, Manfredo, 1968, *Teorie e storia dell’architettura*, Bari, Laterza, p. 113 and reproduced by Tournikiotis, T., 1999, *The Historiography of Modern Architecture*, Cambridge, Mass., M.I.T. Press (p. 196).
28. McGrath, 1932, *Twentieth Century Houses*, London, example 22, p. 87-88.
29. Gold, John R., 1997, *The Experience of Modernism. Modern Architects and the Future City 1928-1953*, London, E. & F.N. Spon, p. 202, fig. 8.7.
30. A photograph of the inaugural test flight of the Brabizon appears in Graves, Richard, 1998, *Achievements. Land Sea & Air: A Century of Conquest*, London, Bloomsbury Publishing, p. 127; see

- also Graves, Richard, 1953, *The Wonder Book of Aircraft*, London, Ward Lock, p. 64, 72-73, and 75.
31. Grose, Fred P., 1955, *The Air Transport Board and the Regulation of Commercial Air Services*, M.A. Thesis, Carleton College, Ottawa.
32. *In the Supreme Court...* (op. cit.).
33. Innis's major work is: 1951, *The Bias of Communication*, Toronto, University of Toronto Press.
34. Notably in 1951, *The Mechanical Bride: Folklore of Industrial Man*, New York, Vanguard Press; or 1967, *The Medium is the Message*, New York, Bantam Books. McLuhan's thought and influence is examined in Cavell, Richard, 2002, *McLuhan in Space: a Cultural Geography*, Toronto, University of Toronto Press, which also includes analyses of Innis and of the different spatial framing of Canadian identity by Northrop Frye.
35. *In the Supreme Court...* (op. cit.); interestingly with regard to the universalizing role within the Modern Movement project, and international transportation, Section III (p. 85) sets out a "Universal system of Ground Marks."
36. Quoted in: 1959, « Canadian Airports. A Review », *The Canadian Architect*, vol. 4 January p. 32-40; see also p. 33, the source for the press reports cited below in the text.
37. Hughes : 99.
38. Grose : 45.
39. Hughes : 1.
40. The main documentary resource remains articles in TCA and the *Journal of the Royal Architectural Institute of Canada (JRAIC)*, beginning with an historical review together with an analysis of technical requirements written by Ramsay, W.A., 1956, « Air Terminal Buildings in Canada », *JRAIC*, April, vol. 33, no. 4, p. 110-117. There are some references in Kalman, Harold, 1994, *A History of Canadian Architecture*, Toronto, Oxford University Press, esp. vol. 2. See also Zukowsky, John, and Koos Bosma, 1996, *Building for Air Travel: Architecture and Design for Commercial Aviation*, Munich/New York, Prestel; and Binney, Marcus, 1999, *Airports Builders*, London, Academy Editions, mainly reviewing recent international airport architecture but noting how air terminals are "key national construction projects around the world," p. 9.
41. See note 3, and Haydon, Peter, 1993, *The 1962 Cuban Missile Crisis: Canadian Involvement Reconsidered*, Toronto, Canadian Institute of Strategic Studies.
42. 1960, « Three International Air Terminals », *JRAIC*, December, vol. 37, no. 12, p. 509-526.
43. The *JRAIC* (December 1960) article noted the "monumental staircase" in the main building which had "the great dining room and bar," providing a grand space to observe the spectacle of air transportation and "a luxury suite with bar and dining room," which once again sounded the underlying symbolic political purpose: "Where hospitality can be extended to important visitors entering or leaving Canada" (p. 518). That theme also recurred with regard to the innovative luggage conveyor belt and carousel system, which had "attracted the attention of our American friends who are considering using it for their Washington [D.C.] air terminal [Eero Saarinen, 1958-61]." See also 1968, *Into the Jet Age*, Ottawa, Department of Air Transport, on the Vancouver airport as extended and rebuilt by Thompson Berwick Pratt and Associates commending its superb topographical setting: "And in the midst, is the functional beautiful Vancouver International Airport."
44. 1960, TCA, June, vol. 5, no. 6, p. 69-71, comparing its design with the work of Mies van der Rohe, Skidmore Owings, and Merrill and J.B. Parkin and Associates, and commending the fact that, "The main floor level is uninterrupted throughout" (p. 70).
45. 1959, TCA, July vol. 4, no. 7, p. 41-47. The idea of critical regionalism within later Modernist practice was argued by Frampton, Kenneth, 1983, « Towards a Critical Regionalism: Six Points for an Architecture of Resistance », in Foster, Hal (ed.), *The Anti-Aesthetic: Essays on Post-modern Culture*, London, Pluto Press, p. 16-30.
46. 1956, TCA, October vol. 5, no. 10, p. 38-39.
47. Leclere, D., 1992, *The Crisis of Abstraction in Canada: The 1950s*, Ottawa, National Gallery of Canada.
48. 1956, TCA, October, vol. 1, no. 10, p. 30-36.
49. 1959, TCA, January, vol. 4, no. 1, p. 32-40; the Department of Transport then estimated an expenditure of approximately \$600 million in airport facilities by 1968.
50. Exemplified by Siegfried Giedion, 1948, *Mechanisation Takes Command: A Contribution to Anonymous History*, New York, Oxford University Press.
51. 1924, *Modern Architecture*, London, Architectural Press, p. 9 Introduction; James H. Acland's review in 1964, TCA, February, vol. 9, no. 2, p. 41-44, citing Stephen Spender's poem *The Landscape Near an Aerodrome* and remarking on the manner in which the "monumental hall is secondary to the movement of people, baggage service trucks and people." Acland also compared the Malton facilities favourably with Saarinen's T.W.A. Terminal and Charles Luckman's Los Angeles terminal (1958-1959). In that regard, the following statement in a report on the opening of the new Vancouver terminal in April 1996 in the Province is interesting: "It's a Canadian experience, instead of passing through a 'junkyard' of unfathomable modern art."
52. The phrase "habit of mind," and its implied inclusion of subjective convention with rational cognition, derives from Margolis, Howard, 1993, *Paradigms and Barriers: How Habits of Mind Govern Scientific Beliefs*, Chicago, University of Chicago Press.
53. 1968, *Aviation's Role in Future Transportation. A Symposium on the Future of World Air Transport*, Munich, p. 94.