

'One-Day-Wide' Canada: History, Geography, and Aerial Views at Trans Canada Air Lines, 1945-1955

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Article abstract

This article shows how Trans Canada Air Lines (now Air Canada) navigated celebrating Canada's geography while eliminating it using modern communications technologies in its midcentury public-facing material. TCA worked explicitly with modern and high-modern discourse of "space" and "time," manipulating the historical and geographic imaginary to position itself as a natural part of the Canadian envirotechnical landscape. In so doing, TCA also self-fashioned as the gatekeeper of geographic experiences in the form of aerial views. By embracing a new technological system—aviation—and a new type of environment—the geographic imaginary—this article pushes the boundaries of envirotech and argues that the Canadian tendency towards both geographic and technological nationalism is, at its center, an envirotechnical relationship.

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Résumé : *Cet article montre comment Trans Canada Air Lines (maintenant Air Canada) a opéré en célébrant la géographie du Canada tout en l'éliminant grâce aux technologies de communication modernes dans son matériel promotionnel du milieu du siècle. TCA exploitait explicitement avec le discours moderne de l'espace et du temps, manipulant l'imaginaire historique et géographique pour se positionner comme une partie naturelle du paysage environnemental canadien. Ce faisant, TCA s'est également façonnée comme le gardien des expériences géographiques sous la forme de vues aériennes. En associant un nouveau système technologique — l'aviation — et un nouveau type d'environnement — l'imaginaire géographique — cet article repousse les limites de l'analyse envirotechnique et soutient que la tendance canadienne au nationalisme géographique et technologique est, en son centre, une relation envirotechnique.*

Keywords: Trans Canada Airlines, aviation, advertising, technology, environment, modernity

IN EARLY MAY 1948, CBC human-interest reporter John Fisher received a puzzling telephone call from a representative of Trans Canada Air Lines. "How would you like a trip to Paris and London?" the TCA man asked. "It will only take you an hour." Fisher was shocked and "wondered whether he was dealing in some futuristic rocket chariot." He was not; the TCA man was referring to London and Paris, Ontario, and the inaugural flight of the airline's newest plane, the Canadair DC-4M2 "North Star." Once in the air, Fisher was immediately awed by the view of cars "crawling like ants" through Hamilton's "payrollish" streets, the "patchwork quilt of Ontario" farms—"solid, heavy, neat, prosperous, old, velveteen softness...blessed by geography"—and the "aqua blue of Lake Ontario," without which "Canada would not hold the world position she does today." The transcendence of the view and the speed, comfort, and power of

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the North Star caused him to reflect on technology in Canadian history and identity:

I thought to myself—what an age—what would the Fathers of Confederation say. Here they are, the two symbols of this age of speed—the babies of the twentieth century—up in the clouds the Airways of TCA—below the Airwaves of CBC—both working like giant needles, knitting this country together...closing the gaps which worried the Fathers.¹

Fisher's comments echo the twin concerns of settler Canadian national identity: environment—especially distances—and communications technologies. These two shaping forces are no surprise to settler Canadians, but how can Canadians celebrate the nation's size while at the same time celebrating modern technologies, such as railways, telephones, and airplanes, which obfuscate geographic distance as an obstacle to mobility? The process of assigning historical and cultural value to Canada's distances in order to use their erasure as a cornerstone of modern national identity is the subject of this paper.

I explore how TCA, as a state airline, navigated the challenges of Canada's envirotechnical identity in and around its 1947 decennial year. It simultaneously championed popular narratives of Canadian history and geography in its public-facing material while attempting to sell its space-shrinking services. In so doing, the airline engaged with modern and high-modern discourse, manipulating space and time to elide the tensions between environment and modern technology. High modernism, as James Scott has suggested, is associated with midcentury megaproject regimes: centralized state constructions of science and technology as a solution for society's ills and impositions of large technoscientific projects onto an oftentimes unaware or uncooperative populace.² Modern centralized governments relied on science and technology as stand-ins for state power and catch-alls for national belonging. Midcentury Canada saw its fair share of megaprojects imbued with these types of meanings, as Daniel Macfarlane, Tina Loo, and Joy Parr have shown.³ In his work on the St. Lawrence Seaway, Macfarlane has identified what he calls "*negotiated* high modernism," which takes into account the smaller-scale political and social negotiations of high-modern megaprojects. He suggests that this is a distinctly Canadian type of high modernism, especially because of how the Seaway became a "lightning rod" for different Canadian nationalisms.⁴ This study expands on this version of Canadian high modernism by emphasizing the delicate and deliberate work necessary to turn air travel into one of these "lightning rods." The high-modern "negotiations" at TCA did not result in a radical reshaping of the landscape as it did for the Seaway, but instead pointed towards a *discursive* reshaping of the Canadian envirotechnical imagination to make aviation in general, and air travel by TCA in particular, compatible with it.

In order to do this, state agents made use of modern technological rhetoric, emphasizing human triumphs over space and time, mobility, speed, and choice as modern technologies intruded into everyday life. TCA's advertising and promotional material placed airplanes as part of an established timeline

of transportation technologies, providing the machines themselves with a teleology connected to mythic Canadian distances. This had the added effect of turning TCA into the exclusive purveyor of what airline advertisers saw as an authentic Canadian geographic experience: viewing the nation from above. Just as Fisher was awed by the streets and farms of southern Ontario, passengers were sold a vision of Canadian geography that suggested that the only way to truly appreciate the scale and variability of the nation was to see it from an airplane window. As a Crown Corporation with a virtual monopoly on Canadian air travel, TCA was the dominant source of Canadian air travel discourse, and by extension articulated what might be seen as a state-supported rhetoric of nature, technology, and nation. By making discursive use of history and geography—time and space—TCA's public-facing materials reflect anxieties about establishing Canadian-ness in a modern and high-modern world.

The modern Canadian envirotechnical nation

Canada's geography, especially its size, has long been central to the construction of Canadian national identity. This is evident in the interrelated Staples and Laurentian theses of Canadian history. Harold Innis and Donald Creighton, writing in the 1930s, both suggested that the movement of natural resources across large spaces was key to economic development; Innis famously argued that the energy of early Canada was channeled directly and indirectly into the extraction, transportation, and production of raw materials, while Creighton saw the St. Lawrence River as a geographic axis for political and commercial development.⁵ Both of these theses have been challenged and even displaced in the twenty-first century as environmental historians have questioned the characterization of staples and complicated the value of the St. Lawrence river to Canadian-ness.⁶ However, the foundational idea that the land itself has made Canada and Canadians special remains in cultural discourse.⁷ Fisher even connected breadth of territory with magnanimity of spirit in his broadcasts, characterizing Canada as a “harmless giant,” performing well on the “test of bigness” set out by its founders.⁸

Of course, the Canadian culture of bigness, as this sea-to-sea-to-sea national vision might be called, could not be culturally resonant, let alone manageable by a centralized state, without a corresponding set of Canadian national myths about communications technologies. Maurice Charland has isolated the phenomenon of “technological nationalism,” relatively unique to English Canada, “which ascribes to technology the capacity to create a nation by enhancing communication.”⁹ Rail in particular is frequently analyzed this way, especially since the Canadian railway system developed alongside Confederation; railway boosters argued that east-west networks of communications and transportation were the only way that Canada could become a functioning settler nation.¹⁰ Recent works by Robert MacDougall, Liza Piper, and Caroline Desbiens have expanded the geographic and temporal scope of “technological nationalism,” showing how telephony, freighting, and power generation not only allowed

literal access to distant regions, but also helped develop a trans-national and sometimes regional connectedness in the Canadian imagination.¹¹

These two nationalisms are compatible; as Canada's imposing distances defined economic development, technological networks allowed that development to have a longer reach and encourage the conditions necessary for nationhood and communities of belonging. This is especially evident in Harold Innis' inclusion of natural and human-made transportations as "communications" technologies. As communications scholar Robert Babe has shown, "even the production or extraction of natural resources (or 'staples') constituted 'communication' for Innis. The extraction or production of staples creates environments, or ecosystems, that *mediate* human relations and otherwise affect a people's thoughts and actions."¹² By this token, human interactions with communications technologies and the distances they seek to transcend give those distances meaning. As perhaps Canada's greatest railway storyteller, Gordon Lightfoot, sings, "the green dark forest was *too silent to be real*" before settlers arrived with their wheels and railways.¹³

However, the experiences of modernity and high modernity had the potential to destabilize this balance between environmental and technological self-fashioning. This is especially evident in what scholars of technological modernity have called "time-space compression," where "by accelerating the velocities of people, goods, and information, the world is made to feel smaller even as interactions are stretched over larger physical distances."¹⁴ Put simply, modern communications technologies made a transcontinental Canada possible, but these new spatial regimes threatened Canada's identity as a nation existing just at the edge of geographic possibility. Writing in the 1970s, for example, Northrop Frye argued that Canada was especially prone to the "obliterated environment," as "jet planes, international hotels, and disappearing landmarks" exposed the incommensurability between unity on a national scale and more intimate place-based belonging; Canada's vulnerabilities lay in its "empty spaces, its largely unknown lakes and rivers and islands...[and] its dependence on immense railways to hold it physically together."¹⁵ More recently Edward Jones-Imhotep has argued that the realities of the early Cold War and hostile Canadian environments made certain components of technological orders appear unreliable, highlighting once again the limits of geography as a marker of national ability and subsequently allowing instability and unreliability to become part of high-modern "technological nationalism."¹⁶ Emerging technoscientific challenges, especially those in "new" environments such as the Arctic and upper atmosphere, made Canadian distances and Canadian communications more difficult to reconcile inside high-modern nationalist discourse and had to be therefore united by the rhetoric of technological failure.

Rail was able to escape the most obvious aspects of this irreconcilability because of its prominence before high modernity, but also because of the discursive focus on intimate technological body-work. The act of boring paths

through mountains and laying rails across the entirety of the Canadian nation has more cultural currency than actually travelling on the train. The technology itself, the landscapes onto which it was imposed, and the processes of building it therefore become wrapped up in what David Nye might call a “technological creation story,” where the land appeared to be specially laid out for settlers to apply their technology and industry.¹⁷ Canada-as-nation could only exist through the labour and power required to construct the railways, which in turn could only exist because of the specificities of Canadian geography.

Air travel, on the other hand, did essentially the same time-space compression as rail, but was missing all the intimate body-work that made rail special in Canada and emerged inside a high-modern paradigm of nature, technology, and nation. Certainly, modern airports have affected how cities grow, and the development patterns of Canada’s northern regions were partially dictated by air routes, but this is *nothing* compared to traversing the nation rail-spike by rail-spike.¹⁸ The rhetoric of struggle to overcome distance by industry and ingenuity that prevailed in railway boosterism was subsequently much harder to attach to air travel; compared to tunneling through the Rocky Mountains, the establishment of sea-to-sea radio communication necessary for transcontinental air travel seemed easy. Regular airline travel also threatened to stretch geographic reach *too far*, making Canada’s special distances irrelevant, or at least mundane. Rapidly expanding air-travel infrastructure through the immediate postwar years called for new Canadian envirotechnical paradigms that built on older narratives of “technological nationalism” but renegotiated them inside modern Canadian contexts. Canada had to be re-imagined as an “aviation nation” that made the virtual elimination of Canada’s mythical distances by high-modern systems as vital to national self-fashioning as the distances themselves.

Air travel’s influence on modern Canadian self-fashioning suggests that it can, and should, be examined as an envirotechnical system. Scholars have long associated technology with the human need to “modify, subdue, and control” their surroundings, but only relatively recently have environmental historians and historians of technology actively sought to open the black boxes of their field with the crowbars of the other.¹⁹ “Envirotech” as a discipline makes use of the constructivist and materialist tendencies of environmental history and the history of technology in order to examine “nature, technology, and their relationship *within* and *as* history,” as Sara Pritchard has argued in her book about the Rhône.²⁰ Pritchard identifies a quadripartite set of concerns for envirotech scholars—nature, culture, technology, and politics—and suggests that envirotech must engage with all four without placing them in opposition or resorting to determinism.²¹ Given these concerns, the majority of envirotech study has been devoted to large technological projects such as dams, nuclear power plants, and highways, which by their size require centralized state influence and have large-scale visible, measurable environmental impacts.²²

This study pushes the boundaries of envirotech by focusing air travel’s

impact on the *imagined* environment. Air travel might not have the same sort of footprint that popular envirotechnical subjects such as dams might, but instead alters perceptions of geography and nationhood. Canada *looks* different from above and *feels* different when travelling at five-miles-a-minute, and airliners are the mediators for these perceptions. Canadian landscapes may have been minimally altered by commercial air travel, but midcentury “imagined” Canada owes a great deal to traveling across and viewing the nation from above. TCA’s promotional material worked inside an established envirotechnical narrative that framed Canada as a “communication nation,” using the Canadian state’s long history of transcending distance to its advantage in order to turn Canada into an “aviation nation.” It also prioritized the visibility of travel, framing its flights as authentic Canadian geographic experiences. Taken together, these two strategies show airline advertisers’ emerging awareness of the high-modern frictions between Canadian environmental and geographic identities and the wholehearted, if unintentional, embrace of high-modern discursive techniques to sidestep them.

The acceleration of time and the manipulation of history

When TCA celebrated its tenth anniversary in April 1947, very little happened at the airline. Fisher made one of his characteristic “pride-builder” broadcasts on the subject, highlighting TCA’s new transatlantic routes, its new North Stars, and their overall impact on Canada:

You’ll never learn from TCA that the best record for flying in the world was made in a tough northern country of hard winters...Thursday is the Tenth Birthday. Greetings to the...men and women who have carried the Maple Leaf high and far. You have helped give Canada a feeling of nationhood.²³

Passengers on April-10th flights received what TCA’s employee newsletter called a “generous cut” of birthday cake “in a neat little silver box,” while a transport company in Saskatchewan invited TCA managers to a luncheon in their honour. Other than that, “the birthday passed almost like any other day,” with little public fanfare.²⁴ It is unsurprising that TCA public-relations executives did not capitalize on this major event as advertising and promotions were not a high priority at TCA until Battle-of-Britain hero Gordon R. McGregor replaced Manitoba-lawyer Herbert Symington as TCA President in 1948.

In his previous position as the airline’s traffic manager, McGregor pressed Symington and his staff for a renewed public relations focus, since “unquestionably, a sustained and comprehensive program of advertising would improve” passenger traffic and the attitude of the “average man” towards TCA.²⁵ Symington’s executive and public relations staff were generally hesitant. Vice President W. F. English expressed concern about the airline’s relationship to government and worried that self-promotion might cheapen the airline, since TCA’s story should not be told “through paid advertising or news releases accompanied by pictures of pretty girls.”²⁶ Once McGregor took office, he focused on transforming the commercial side of TCA “from an

"We like flying—all year 'round!"

TRANS-CANADA AIR LINES

FLY
TCA *the smooth way*
"above the weather"

Aboard a TCA aircraft, you leave winter far below 'til your journey's end. The warm, club-like atmosphere of a TCA Skyliner invites you to relax in comfort all the way. You'll enjoy the courteous service, the complimentary meals. Your pilots know that wintertime is *good* flying time. Your TCA Skyliner, specially developed for year 'round operation, is every day setting new records for *on-time performance*.

★ **SMOOTHEST ROUTES...**
TCA Flight Dispatchers analyze up-to-the-minute weather reports—advise TCA Captains on smoothest routes.

★ **IN CONSTANT TOUCH...**
In the air, continuing radio reports are received so the aircraft may proceed smoothly over the weather.

★ **CONSTANT COMFORT...**
With their pressurized cabins, TCA's great 40-passenger "North Stars" maintain constant "living room" comfort at all altitudes.

★ **VETERAN PILOTS...**
TCA crews possess an unsurpassed skill and experience in all-year-round flying. 95 pilots have flown over a million miles each with TCA.

★ **POWER...**
TCA Skyliners have the power and range that enable them to choose and fly routes where conditions are best.

★ **FAST, FREQUENT FLIGHTS...**
Making over 100 scheduled flights a day, TCA Skyliners are flying over 20 million miles a year. Last year more than 685,000 passengers flew with TCA.

Your next trip, plan to go by TCA. For full information on fares and schedules, call your Travel Agent or any TCA Office.

TRANS-CANADA *Air Lines*
International • Trans-Atlantic • Transcontinental

Figure 1: An early 1950 advertisement featuring "pretty girls" typical of McGregor's early tenure. Air Canada Collection, Canada Aviation and Space Museum (CASM).

order-taking department to a sales department actively stimulating business” through advertising (featuring lots of “pictures of pretty girls,”) promotions, and increased booking capacity (Figure 1).²⁷ By early 1949, TCA’s Advertising Department had expanded so much that it was separated from the airline’s Public Relations department.

As McGregor assumed his new role, two other TCA initiatives that marked its decennial year received promotional attention: the debut of both regular passenger service between Canada and the United Kingdom and the Canadair DC-4M “North Star,” TCA’s first new postwar airliner. The North Star’s recognizable image and evocative name featured heavily in promotional material, especially as it was used on TCA’s new routes. Built at the Canadair plant in Cartierville, Quebec, it combined the American Douglas DC-4 fuselage with four British Rolls-Royce “Merlin” engines and featured a number of wartime technologies such as cabin pressurization, long-range navigation, and electric de-icing.²⁸ Its Canadian manufacture, in particular, was celebrated as symbolic of national engineering prowess, industry, and “airmindedness.”²⁹ “This is no astral body in the usual sense,” a brochure about the North Star claimed. “It is a great airliner, the first of its kind. Built in Canada, the North Star represents the skills of a nation long-famed for aviation achievement in peace and war.”³⁰

TCA’s transatlantic service merits a bit more attention, largely because promotions for this service incorporated many of the history-and-geography themes that carried through TCA’s public-facing material in this period. During the war, TCA had been mobilized as the Canadian Government Trans-Atlantic Air Service, shuttling personnel and supplies across the North Atlantic on repurposed Lancaster bombers. “Lancastrians,” as they were known, were noisy, uncomfortable, and lacked climate control and restroom facilities, and TCA had little hope of incorporating them successfully into postwar civilian service.³¹ The North Star was the solution to that problem, and TCA began regular commercial flights to London and Prestwick on non-pressurized North Stars in 1947.³² Promotions for the new service invoked a deep history of transatlantic travel, leaning especially heavily on symbols of exploration and discovery. In flying to and from Britain, the North Star represented the future of oceanic travel and the final step in a progress narrative that began with “the Vikings...in their little dragon ships,” as they were called in 1947 promotional copy, followed by “the coming of Cabot” and Jacques Cartier, the steamship *Royal William* “and her queer cargo,” and John Alcock and Arthur Brown’s 1919 transatlantic flight in a “tiny biplane” that looked “like a frail box-kite.” TCA’s “great new aircraft, the North Star,” was imagined as the heir to these exploratory traditions. Like its stellar namesake, it was tasked with guiding future generations of oceanic travellers, since “after a thousand years, the wide ocean has been reduced to a narrow pool.”³³

Promotions such as these made the modern compression of space and time central to technological and historical progress. Not only did trans-Atlantic

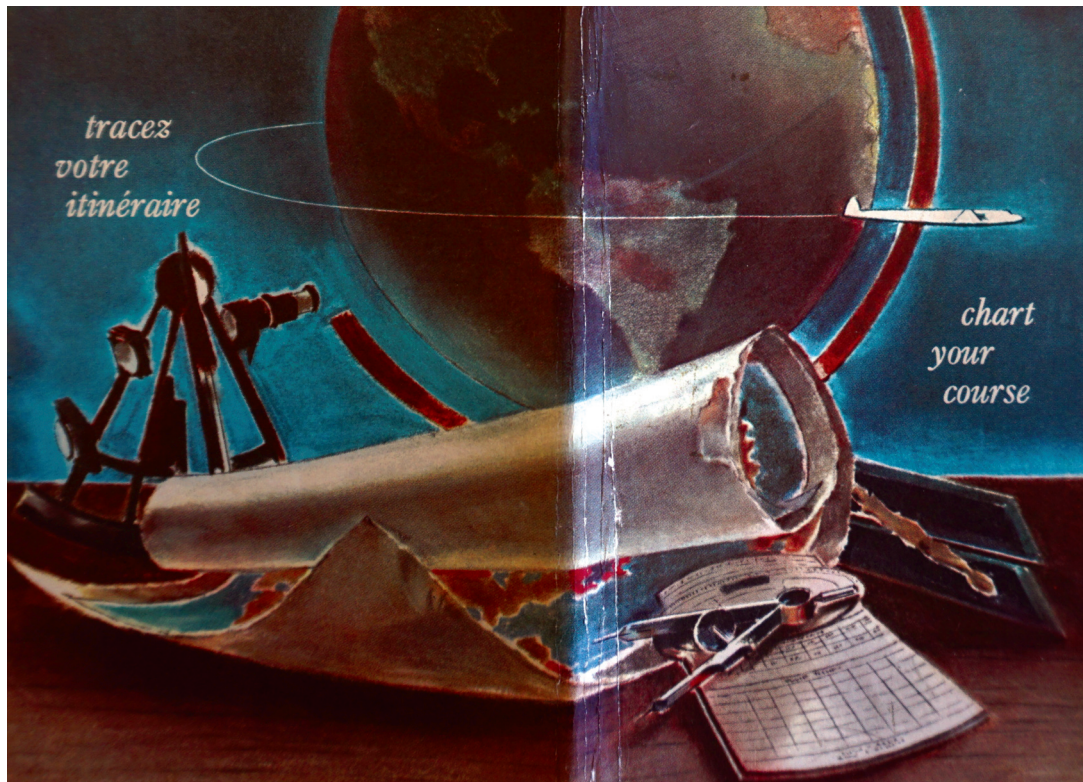


Figure 2: Detail from a 1956 brochure juxtaposing early modern navigational instruments with airplanes. Air Canada Collection, CASM.

travel times reduce with each technological system—from Cabot’s seven weeks to the *Royal William*’s 25 days to the North Star’s 14 hours—but the time between each transportation also accelerated. Approximately five hundred years passed between the Vikings and early modern explorers, three centuries between Cartier and the *Royal William*, and 86 years between the first steamship and air crossing. “In a millennium, eighty-six years is little more than the tick of the clock,” making the three decades between Alcock and Brown and the North Star even more impressive.³⁴ This double-acceleration made time appear especially elastic, placing the Vikings, great explorers, and aviation pioneers both very near to and very distant from TCA and its North Stars. It also provided airplanes with a history, which they lacked as a quintessentially modern technology. As Bernhard Rieger has shown for nineteenth- and early-twentieth-century Europe, many anxieties about modern technologies were rooted in their relative complexity and how they appeared to “burst into the present from nowhere.”³⁵ Airplanes had the dual problem of being so complex that their manufacturing processes were black-boxed to the average consumer and appearing to go against the forces of nature by flying.³⁶ Constructing transatlantic travel as a continuum of multiple time-space compressions offset some of these problems by tying airplanes to the great transports of history while suggesting that those great transports had the same time-space effect as an airliner.

These themes were made obvious by the juxtaposition of easily-recognizable symbols of exploration, such as compass roses, astrolabes, and sailing ships, and ultra-modern aircraft in both images and copy. A widely-circulated informational booklet from 1949 showed an image of colourfully dressed voyagers on an early-modern sailing ship pointing excitedly at an airplane in the distance, claiming “TCA flies the Atlantic on a schedule that would have filled the voyaging Norsemen with awe.”³⁷ An air-route map from the mid-1950s featured an illustration of an airliner flying past a sextant, since “the land beyond the horizon has always held a fascination for adventurers armed with a parchment map, a dream of discovery—and often very little else... Today...air travel is a certain, scientifically controlled excursion, but should the pioneer spirit of adventure still spark within you, TCA invites you to chart your course...beyond the horizon.”³⁸ Advertising manager Jack McGee highlighted the “Chart Your Course” slogan and “art treatment” as particularly likely to “arouse the interest of the reader.”³⁹ Perhaps the most popular example of this was TCA’s 1952 corporate Christmas card (Figure 2), which was “met with such favourable comment,” according to the Advertising Department, that it was re-printed as seat-back material the following year, with a total circulation in the hundreds of thousands.⁴⁰ Designed as a stylized early modern “seafaring mappe,” the card manipulated space and time by showing geographic features of the Atlantic and the paths of various voyages of exploration, from Eric the Red to the North Stars that “flieth” across the ocean. Time here appeared so compressed by advances in transportation that history happened all at once.

Even in TCA’s advertisements for Canadian destinations and “system” campaigns designed to inspire general brand-awareness and loyalty, TCA’s aircraft were discursively and pictorially placed along a transportation trajectory that traversed dogsleds, canoes, oxcarts, and railways. “Does it seem like a miracle?” an early brochure asked. “To speed across Canada on the wings of the wind[?] It will, if you give a fleeting thought to the past” when settlers crawled “across the prairies in ox-carts that squealed complaint with every turn of the wheel.”⁴¹ This progression had been long entrenched in Canadian technological mythmaking, especially in terms of the ill-defined “northland.” Indigenous technologies, such as dogsleds, snowshoes, and canoes hold a great deal of significance to settler Canadian paradigms of mobility. As Bruce Erickson has shown in his work on canoeing, the settler use of canoes for leisure created a performative “natural” Canadian-ness which decontextualized settler colonialism, Canadian history, and the value of the canoe to indigenous Canadians by suggesting that canoeing presented an “allure of openness” that placed “the birth of the nation in the landscape itself.”⁴²

Inside aviation discourse in particular, canoes, dogsleds, and other indigenous transports came to stand in for old “backward” ways of travel, as Johnathan Vance suggests in his work on early Canadian aviation culture.⁴³ Comparing airliners to other geographically appropriate transportation technologies made them seem even more modern, quick, and reliable. This was a common

Dominion couldn't have been, but they were not enough. They still had their part to play, and always will have, but...Canada, too, must have wings.”⁴⁷

Most of Canada's interwar “wings” were attached to bush planes, the public and private enterprises that engaged in surveying, mapping, fire-fighting, and the transportation of people, goods, and mail to Canada's widely distributed Northern communities. Bush flying emerged as what historian Don Thompson has called “a peculiar Canadian phenomenon” in the interwar period.⁴⁸ Bush pilots – largely former military pilots – were cast as home-grown heroes who, along with bush planes (which were increasingly purpose-built through the 1930s) came to represent what an Edmonton newspaper called in the 1929 “the romance of transportation.”⁴⁹ Bush flying served several discursive functions in TCA's public-facing material: it emphasized the airline's connection to national development, reinforcing the role of aviation and the nation's mythic geography in the Canadian imagination, while also providing the airline with an origin story loaded with adventure, heroism, and romance. The airline rearranged Canadian history to make what McGregor called the “lusty development of civil aviation” seem like the expected conclusion to national progress, especially as the “North” re-emerged in national mythmaking through the middle part of the twentieth century.⁵⁰ Promotional materials suggested that Canadians were active in aviation “when the Wright brothers were unfledged youngsters.” Canadian pilots returning from the First World War took to “northland flying,” as it was frequently called, and “began pioneering in forestry surveys and fire protection from the sky, in aerial photography and mapping.” Eventually, as one 1946 institutional history claimed, “Canadians began to realize the value of wings in reaching the outposts of their vast northern wilderness.” It made sense that the state should control, even at arm's length, the trajectory of aviation in Canada because “it was bush flying that put Canada into the front rank of world aviation...TCA grew out of the need for a swift, modern system of transportation between communities scattered across an area of more than 3,000 miles, out of a vision of a more closely integrated nation.”⁵¹ And there was a direct lineage from Canada's adventurous bush-flying heroes to regular reliable airline travel, since TCA was founded to operate on the Trans Canada Airway, the Canadian government's project through the 1930s to construct Canadian aviation infrastructure by consolidating private bush flying routes and establishing airfields and radio communications.⁵² TCA's advertising personnel made frequent use of this pedigree, highlighting the “northland flying” experience of their personnel and suggesting that airline travel did the same national unity work that bush flying had done decades before.⁵³

TCA's early public-facing materials feature several sorts of time-manipulations. TCA, for example, used a compressed historical perspective of Atlantic history, one that stretched back centuries, to naturalize its operations. Materials that juxtaposed caravels with sleek airliners made air travel less intimidating because it gave the machines and routes a teleology that invoked both adventure and routine. They also echoed the “speed-up,” as David Harvey has called it, of

modernity by making transportation development appear to accelerate.⁵⁴ Similar techniques in TCA's system advertisements worked on a slightly smaller scale—Euro-Canadian settlement—to make airplanes and a state airline a natural, necessary part of national progress that could help modernize the nation.

The collapse of Canadian distances and the aerial view

These time-manipulations were accompanied by a set of space-manipulations that used airplanes to discursively shrink the nation without completely interrupting the mythology of Canadian distances necessary to make that “shrinking” resonant. “Canada has often been referred to as a land of magnificent distances,” a 1947 air route map claimed. “That was before the coming of Trans-Canada Air Lines. [Now] east and west coasts are less than 24 hours apart.”⁵⁵ If Canada was only a land of “magnificent distances” *before* air travel, how could those distances remain foundational to Canadian national identity as TCA? Constructions of Canada as a nation with distances only human ingenuity could overcome were artifacts of nineteenth- and early-twentieth-century rail and other communications paradigms, but with an added level of high-modern technoscientific rhetoric that suggested that rail was inadequate to the needs of the twentieth century. Airlines in general, and TCA in particular, appeared to be natural and necessary, since, as one wartime public-relations packet claimed “it had become evident that something more was needed; that a nation so vast in its distances and so various in its economic divisions could not afford to do without the fullest time and distance-destroying advantages of aviation. So Trans-Canada Air Lines was designed to meet a great Canadian need.” TCA's public-facing institutional histories frequently claimed that commercial aviation in the guise of a state airline was vital to Canadian success on a national and international scale, especially in wartime. That same public-relations packet pointed out that “it was a fortunate circumstance for Canada that the very moment her geographic immensity most threatened her efficiency the distance-destroying power of transport aviation should have come newly to hand.”⁵⁶ Canadian geography was a double-edged sword, threatening national security and unity while at the same time supporting discursive constructions of nation.

TCA partially avoided those sharp edges by making distance necessary to the *establishment* of Canadian aviation, which kept geography as part of foundational myths while still removing it in the present. TCA's public-facing material suggested that Canada, which McGregor called “by census...a small country, and by Atlas a very big one,” was environmentally primed for a successful space-shrinking civil aviation industry.⁵⁷ Geography's role as a barrier for Canadians to overcome with ingenuity is what gave it its value; a mid-1950s pamphlet pointed out how it was “understandable in a country of great distances” that “Canadians are among the world's most air-minded travellers” and were “among the first to put the airplane to practical use.”⁵⁸ Air travel's time-space compression could

be a detriment to Canadian environmental identity because it made character-building geographic features, such as what McGregor called the “great natural barriers” of the Rockies and “Precambrian Shield,” disappear, but also a benefit because it extended travelers’ geographic reach towards those features, increasing accessibility to a diversity of Canadian vacation experiences.⁵⁹ Shrinking the nation by air allowed access to “all Canada’s famed vacation lands...the Rockies—the Prairies—the holiday resorts of Ontario, Quebec, and the Maritimes,” as one 1947 advertisement suggested, because “T.C.A. takes you there in hours instead of days.”⁶⁰ The Canadian culture of bigness was supported and dismantled in the same breath; the Rockies were no longer an obstacle to mobility, but more Canadians could visit them, helping them to appreciate what it meant to nationhood to overcome those same obstacles.

The other way TCA negotiated with its removal of distance from Canadian-ness was discursively substituting time for space. Canada’s “magnificent distances” were subtly transformed into magnificently long travel times; time-space compression and time-space conflation went hand-in-hand. This allowed Canada’s size to remain the same, but highlighted TCA’s role in making that size less overwhelming to the popular imagination as well as addressing more tangible concerns such as freighting and air mail. Thanks to TCA, the Canadian businessman “can now fashion his activities and ambitions...secure in the knowledge that Canada is only twenty hours wide and that time of travel has ceased to be a major obstacle.”⁶¹ In so doing, TCA explicitly used the rhetoric of space and time, arguing frequently that, as one of the airline’s first newspaper advertisements claimed, “a people of vision and enterprise could not be held back by the barriers of time and space. Trans-Canada Air Lines came into being, and now the Dominion is no wider than a single day!”⁶² This was a visual metaphor as well; the 1948 TCA promotional film “A New Map for Canada” opens with a boy drawing a map of Canada as a homework assignment, “but it proves a task too large and too overwhelming.” He asks a family friend, a TCA Captain, for help and is taken on an imaginary coast-to-coast air journey along TCA’s routes to learn “that the Dominion is not the wide expanse of past generations but the ‘one-day-wide’ Canada of today.”⁶³ A 1949 trans-Atlantic newspaper advertising campaign literally juxtaposed time and space, replacing the hands of clocks and watches with a North Star flying over maps of Europe.⁶⁴ Promotional material frequently also used violent language when discussing TCA’s role in transforming space into time; North Stars, for example, “will scatter our old concepts of distance...by slashing” travel times, and “so effective has been the attack of TCA upon Canadian distances that already they have lost much of their old significance.”⁶⁵ It was with great force, apparently, that TCA and its machines eliminated distances in Canada, but it still maintained the value of those distances by making time and space interchangeable and turning distance into a foundational myth.

This tendency to replace distance with time—“Canada is now one day wide”—was a symptom of modern time-space compression as well as the modern

obsession with speed. Speed was TCA's most obvious benefit over rail, but speed could be scary. Even as late as 1961, the advertising department labelled "FARE and FEAR" as "the main barriers against flying."⁶⁶ Evoking speed in promotional material meant dealing with passengers' greatest anxieties about the air travel experience, as Rick Popp has recently shown for the United States. Just as railway accidents in the nineteenth century exposed the hubris of speed, "puncturing the veil of the ordinary that such technologies needed to pass as natural fixtures of the modernizing landscape," so too did airlines struggle with routinization.⁶⁷ Popp suggests that midcentury air travel was one of the only instances where advertisers' goals were "to allay fears, rather than amplify them," and they developed a core set of themes and techniques to accomplish this goal, such as reducing advertising after a crash received a great deal of media attention.⁶⁸ TCA faced similar obstacles, perhaps amplified by its public ownership; McGregor complained in 1950 of the "blinding light of publicity which is turned upon all [TCA's] activities...with the astonishing result that even a blown tire at an airport 10,000 miles away is faithfully reported by press."⁶⁹

Marketing the experience of flying in general, and aerial views in particular, helped TCA reduce public anxieties about both the speed and altitude of air travel. Aerial views, especially views of cities, and the production of vertical spaces in general are hallmarks of the modern experience, as Nathalie Roseau, Thomas Campanella, and art historians and geographers Denis Cosgrove and William Fox have suggested.⁷⁰ In his landmark book on high modernism, James Scott has argued that "it would be hard to exaggerate the importance of the airplane for modernist thought and planning;" verticality and the "God's-eye view" transformed city planning and megaprojects such as the Great Lakes-St. Lawrence Seaway.⁷¹ Although Scott and other scholars of modernism have argued that the "God's-eye-view" eliminated local and regional texture, Jason Weems has recently claimed that aerial views actually *created* a regional identity for "the prairie landscape, with its vast and undifferentiated topography and its rigidly imposed cadastral grid" of the American Midwest by making "it possible to see the region as a unified whole and to understand the relationships that shaped regional life."⁷² The view from above, it seems, has been a conduit for the creation, maintenance, and disruption of modern communities of belonging and difference on a variety of scales.

Passenger aviation has received relatively little attention from scholars interested in these themes, despite it being one of the few channels through which everyday consumers could experience these unique views. Other sorts of "democratic" modern technological views have been analyzed as symptomatic of modernity and high modernity: Krista Thompson and Bernhard Rieger have both examined cameras and photography as conduits for modern communities of belonging, and David Louter and Ben Bradley have used car windshields as focal points for their studies of North American parks.⁷³ Commercial air travel touches on many of these gazes, as passengers frequently looked through windshields and cameras, sometimes at the same time. TCA estimated in the

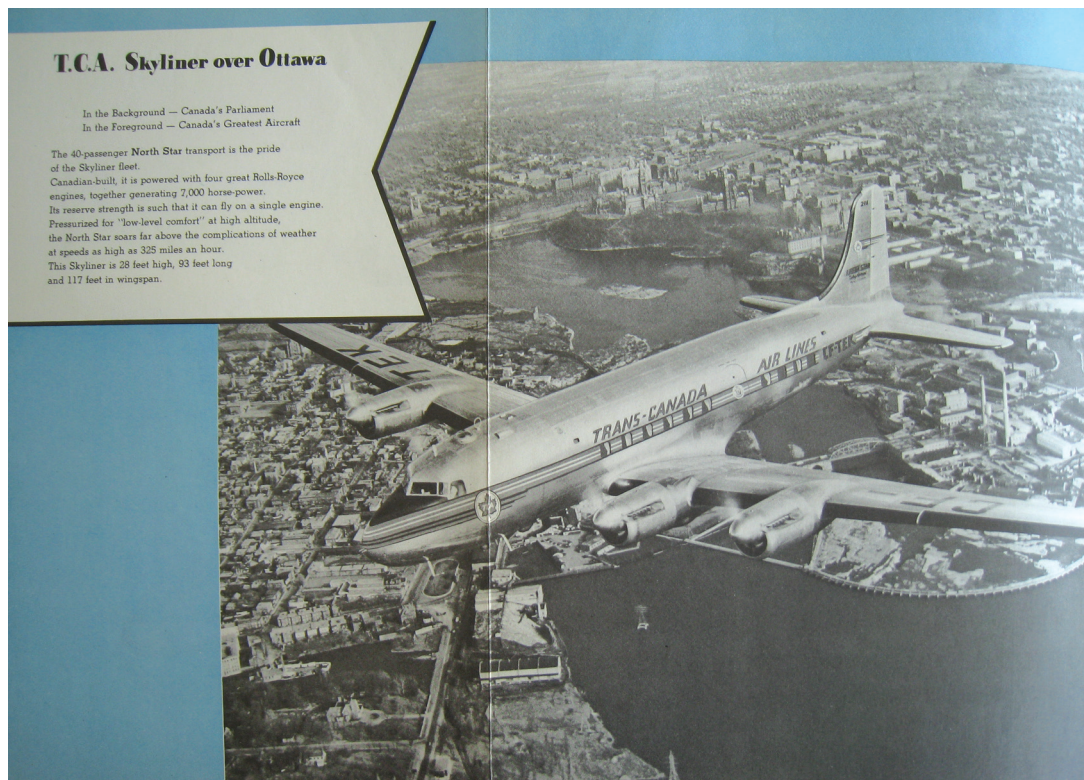


Figure 4: The centerfold of a popular late-1940s TCA brochure featuring aerial photography. Air Canada Collection, CASM.

early 1950s that up to 75% of passengers brought cameras on board and provided travel agents with information on how “to get the best results from in-flight photography...through Skyliner windows,” including how to hold the camera to avoid vibration—“well braced against the body”—and glare.⁷⁴ Furthermore, *any* gaze from an airplane was a modern technological gaze; TCA’s airliners acted as mediators between Canadians and their surroundings, providing them with a concrete experience of time-space compression.

Aerial photography as a technological gaze has a special currency in Canada, as it developed as part of the bush-flying industry. Viewing Canada from above was necessary to make Canada legible, and making Canada legible was necessary to making Canadian governance possible, resulting in what Marianne Cronin has identified as a geographic *and* cultural co-construction of bush planes.⁷⁵ This made aerial views of Canada easy to fit into TCA’s public-facing material as a comfort and a corrective to air-travel-related ills, rather than a cause of them (Figure 4). “There’s no boredom in air travel,” a 1947 brochure claimed. “The miles pass too quickly for that. Forest and farm land, wide prairies, rolling foothills and the majesty of the Canadian Rockies...the landscape is always changing.”⁷⁶ Canada’s geographic variability worked to break up the perceived monotony of air travel while representing Canadian technoscientific ingenuity, invoking the conditions that made air travel part

of the Canadian environmental imagination. Passengers were told that “from your skyliner window the world below is a fascinating display of our resources and the way we use them,” and the airplane itself was “an illustration of science at work on these same resources to overcome time and space. We hope you feel by now that ‘flight-seeing’ adds measurably to the pleasure of your trip.”⁷⁷ More importantly, TCA’s supply of altitude made looking at Canada from above an authentic Canadian geographic experience that only it could provide. Aerial photography and illustration featured heavily in TCA’s public-facing material, appearing everywhere from airmail envelopes to the “not in any way promotional...[and] purely functional” passenger comment cards.⁷⁸ Postcards showing aerial views of TCA’s destinations, and often meta-views of the aircraft flying above a destination, were provided in seat-back portfolios through the late 1940s and early 1950s. Exhibition displays also emphasized passengers’ access to aerial perspectives: visitors to the TCA booth at the 1949 Canadian National Exhibition were greeted by “eight large window frames through each of which will be shown as series of 30 coloured slides” of aerial views of TCA’s destinations, which the advertising department considered “one of the most extensive showings of photographs of this type ever brought together.”⁷⁹ This was not an uncommon strategy at other airlines, as aerial photography was still relatively novel. At TCA, aerial views echoed the “romance” of bush-flying-era aerial surveying and photography, making air travel an organic extension of the Canadian transportation pantheon, one that gave passengers a visual experience they could not get with train travel.

This seemed to work. Passengers came to expect a view and complained when they did not get what was promised, as one passenger did in 1948: “our only disappointment was the weather. We couldn’t see New Brunswick from the air.”⁸⁰ The “dirty state of windows” upset “camera fiends” on a different 1948 flight.⁸¹ A Lethbridge “land lover” on a flight to Winnipeg was left uneasy because “it was necessary for the plane to fly above the clouds and the earth was not visible” and a couple’s trip from Saskatoon “was largely reduced from a holiday trip to mere transportation” when “a line of men pushed in and took all the window seats.”⁸² Passengers asked for more windows, larger windows, tinted windows, for the glass to be removed from the windows to “see that much more,” and that the “wings be painted a drab black” to reduce glare.⁸³ One even asked, tongue-in-cheek, for “deck chairs on the wings. Of course, tied down.”⁸⁴ Historians of advertising have pointed out the problems of identifying if advertisements “worked,” but the volume of passenger requests for more or better views suggests that TCA’s public relations priorities resonated with at least some of its passengers.⁸⁵

Some of them may have resonated too much, as passengers sometimes wondered why their views didn’t look like what they expected from high-modern aerial photographs or maps. One 1953 passenger was surprised that “that the Stewardess could not tell me anything about the geographic nature of the country over which we flew,” and suggested educating the cabin crew in geography and

cartography.⁸⁶ Usually, though, passengers wanted detailed topographic maps, which TCA eventually released in the mid-1950s; announcements of landmarks by the pilot; or that “the names of larger places over which the plane passes [be] given by flashing on a screen or similar device.”⁸⁷ They also occasionally asked for access to the same altitude, airspeed, and positional information the pilots had, generally in the form of “flight instruments” displayed in the cabin, which would help passengers identify their views while at the same time giving them a glimpse into the inner workings of the aircraft.⁸⁸ Passengers seemed to want the same kind of legibility that the state got from aerial surveys, but their suggestions for flight aids also implied that demystifying their views might also help demystify the aircraft itself.

In general, passengers were receptive to TCA’s aerial visual priorities, and they found viewing Canada from above as transcendent as the airline wanted it to appear. The fact that they wished for a “plane made of transparent material” as well as “a map handy with plenty of topographic information” shows that they wanted their air travel experience to be as visually rich as possible.⁸⁹ And, as a handful of passengers suggested, it was that they were *flying over Canada in particular* that made air travel worthwhile. An American passenger flying to Canada for the first time thought that “God planted the most beautiful landscape directly beneath TCA’s routes.”⁹⁰ A 1950 passenger praised the “perfect visibility” on their flight from Calgary to Vancouver that allowed them to enjoy the “clear skies above and snow and glacier covered mountains below.”⁹¹ Still another, from the summer of 1948, “wondered if your publicity department has played up” how beautiful flying was compared to ground transportation—“not even a Winston Churchill could properly describe the allure of it all.”⁹² Clearly the publicity department had. Promoting the views afforded by air travel was not unique to Canada, but Canada’s overwhelming size, and the already-established role of bush flying in reducing that size, made the manipulation of geography by airplane especially evocative. It also involved an appeal to technological history, discursively opening the airplane’s intimidating black boxes and making it seem as organically connected to the Canadian landscape as rail appeared to be. Rail may have been responsible for coast-to-coast connections and the confederation of the Canadian state, but flying made those connections visible and legible to everyday Canadians. One 1950 passenger brought these themes together by claiming that only a “poet-scientist” could properly describe the power of flying over Canada in a TCA aircraft:

Riding a TCA North Star is the closest you can get to Heaven—It’s an experience that no human being should miss. Besides, it gives one a new and unusual sense of the oneness of Canada. As you watch the provinces slip beneath your eyes in all their colorful beauty—the breath-taking magnificence of the Rockies, rich-chequered Prairies, small lonely farms, brilliant welcoming cities—you discover with a freshness and impact never achieved by history books or geographies that this is **one** country, our own.⁹³



Figure 5: A brochure advertising the debut of TCA's Vickers Viscount, 1954. Air Canada Collection, CASM.

The rhetoric of air travel visibility persisted beyond the decennial years and the launch of the North Star. In 1955, TCA debuted North America's first turbine-powered airliner: the turbo-prop British-built Vickers "Viscount" powered by Rolls Royce "Dart" engines. The powerplant was sufficient cause for celebration, but TCA had slightly different priorities. The logo for the rollout was a stylized aircraft window, and documents for travel agents suggested they tell clients about how "the large elliptical windows—26" high, 19" wide give an opportunity for visual enjoyment of flight unequalled by any other transport aircraft. Yes, even the passenger on the aisle can enjoy an uninterrupted view."⁹⁴ These windows were allegedly the industry's largest, complete with special anti-fog coatings to allow "unrivalled flight-seeing."⁹⁵ Despite flying even faster than the North Star, and having a higher operational ceiling, the Viscount's design appeared to support and sustain TCA's discourse of aerial views and the modern legibility of Canada by air.

Conclusion

In the public-facing material released in and around its decennial year, TCA worked with the rhetoric of postwar high modernity, centralizing human technoscientific triumphs over the natural world while delicately maintaining

the value of the natural world to Canadian national identity. As a government airline, its growing focus on public relations through the late 1940s and early 1950s meant that TCA represented what appeared to be a state narrative of technology, environment, and nation. However, this state narrative needed to be deliberately constructed to create compatibilities between modern time-space compression and older paradigms of the Canadian envirotechnical imaginary. The airline's decennial provided a unique opportunity to highlight the history of transportation, including the first transatlantic Norse voyages, indigenous Canadian transports, and pioneer aviators, and to retroactively make air travel appear to be the natural conclusion to this transport teleology. This teleology, in turn, was framed as responsible for the modern Canadian relationship between communications networks and mythic distances. TCA discursively built a new "one-day-wide" Canada whose modern width was only made possible by civilian aviation, itself a product of the much wider Canada of the past.

In what remains really the only cultural history of Canadian aviation, Jonathan Vance argues that Canada was "a nation tailor-made to be exploited by air."⁹⁶ This wasn't just because of Canada's sheer size and geographic variability, but also because it was a nation clamoring for new, modern technological creation stories of its own. Aviation, especially commercial aviation, was easy to fold into a recognizable sea-to-sea technological nationalism established around Confederation as well as environmental constructions of Canada as uniquely confronted by geographic and climatic obstacles to mobility and unity. But the successful dissemination of an aviation creation story had the potential to threaten this envirotechnical imaginary by displacing those obstacles. This study of TCA's public-facing material from the 1940s and early 1950s reveals the uses of, contradictions in, and anxieties about *making* Canada "one-day wide," and how TCA navigated that construction as it promoted civil aviation and the experience of flying.

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Endnotes

- 1 Script, "John Fisher Reports: Up and Down," 2 May 1948, Air Canada fonds, RG 70, vol. 254, Library and Archives Canada, Ottawa. Hereafter LAC.
- 2 I refer to "modern" as a cultural category and "high-modern" as a political and temporal category, as James Scott might in *Seeing Like a State* (New Haven: Yale University Press, 1998).
- 3 Daniel Macfarlane, *Negotiating a River: Canada, the US, and the Creation of the St. Lawrence Seaway* (Vancouver: UBC Press, 2014); Tina Loo, "People in the Way: Environment, Modernity, and Society on the Arrow Lakes," *BC Studies* 142:3 (2004): 161-196; Joy Parr, *Sensing Changes: Technologies, Environments, and the Everyday, 1953-2003* (Vancouver: UBC Press, 2010).

- 4 Macfarlane, 17-18; 228-229.
- 5 Harold Innis, *The Fur Trade in Canada* (New Haven: Yale University Press, 1930); Donald Creighton, *The Commercial Empire of the St. Lawrence, 1760-1850* (Toronto: Ryerson Press, 1937).
- 6 On the Laurentian thesis, see Daniel Macfarlane, especially 13-15. On “staples” see Eric W. Sager, “Wind Power: Sails, Mills, Pumps, and Turbines” in *Powering Up Canada: A History of Power, Fuel, and Energy from 1600*, ed. R. W. Sandwell (Montreal and Kingston: McGill-Queen’s University Press, 2016), 162-185.
- 7 See, for example, Ryan Edwardson, *Canuck Rock: A History of Canadian Popular Music* (Toronto: University of Toronto Press, 2009). For an excellent summary of historiographic, cultural, and pedagogical approaches to Canada’s culture of “big,” see Alan MacEachern, “A Little Essay on Big: Towards a History of Canada’s Size,” in “Big Country, Big Issues: Canada’s Environment, Culture, and History,” eds. Nadine Klopfer and Christof Mauch, *Rachel Carson Center Perspectives* 2011, no. 4, 6–15.
- 8 John Fisher, *John Fisher Reports* (Hamilton: Niagara Editorial Bureau, 1949), 3-5.
- 9 Maurice Charland, “Technological Nationalism,” *Canadian Journal of Political and Social Theory* 10 (1986): 197. See also Marco Adria, *Technology and Nationalism* (Montreal and Kingston: McGill-Queen’s University Press, 2009), especially 33-71.
- 10 A. A. Den Otter, *The Philosophy of Railways* (Toronto: University of Toronto Press, 1997), R. Douglas Francis, *The Technological Imperative in Canada: An Intellectual History* (Vancouver: UBC Press, 2009).
- 11 Macfarlane, *Negotiating a River*; Robert MacDougall, “The All-Red Dream: Technological Nationalism and the Trans-Canada Telephone System,” in *Canadas of the Mind: The Making and Unmaking of Canadian Nationalisms in the Twentieth Century* eds. Norman Hillmer and Adam Chapnick (Montreal and Kingston: McGill-Queen’s University Press, 2007), 46-62; Liza Piper, *The Industrial Transformation of Subarctic Canada* (Vancouver: UBC Press, 2010); Caroline Desbiens, *Power From the North: Territory, Identity, and the Culture of Hydroelectricity in Quebec* (Vancouver: UBC Press, 2013).
- 12 Emphasis added. Robert Babe, *Canadian Communication Thought: Ten Foundational Writers* (Toronto: University of Toronto Press, 2000), 59.
- 13 This, of course, ignores millennia of indigenous occupation and their very “real” envirotechnical ways of knowing.
- 14 Barney Warf, *Time-Space Compression: Historical Geographies* (London: Routledge, 2008), 6. This particular term is largely attributed to David Harvey, whose book *The Condition of Postmodernity* (Oxford: Blackwell, 1989), suggests that time-space compression is not just a result of technological change, but also new forms of capitalism and economic cycles.
- 15 Northrop Frye, “Preface to *The Bush Garden*,” in *Northrop Frye on Canada Volume 12*, eds. Jean O’Grady and David Staines (Toronto: University of Toronto Press, 2003), 414. See also Edward Jones-Imhotep, *The Unreliable Nation: Hostile Nature and Technological Failure in the Cold War* (Cambridge: MIT Press, 2017), 4.
- 16 Jones-Imhotep, 6-10.
- 17 For a list of features necessary for a “technological creation story,” see David Nye, *America as Second Creation: Technology and New Beginnings* (Cambridge: MIT Press, 2004), 12-15
- 18 See Christopher Shaberg, *The Textual Life of Airports: Reading the Culture of Flight* (New York: Continuum, 2012) and Drew Whitelegg, “Keeping their eyes on the skies: Jet aviation, Delta Air Lines and the growth of Atlanta,” *Journal of Transportation History* 21 (March 2000): 73–91. Jennifer Van Vleck has also shown how air route maps manipulated political borders to reflect American nationalism and globalism in *Empire of the Air: Aviation and the American Ascendancy* (Cambridge: Harvard University Press, 2013), especially 113-115.
- 19 Jeffrey Stine and Joel Tarr, “Technology and the Environment: The Historians’ Challenge,” *Environmental History Review* 18:1 (Spring 1994): 1. For more recent historiographic analysis of the technology-environment nexus, see Hugh Gorman and Betsey Mendelsohn, “Where does Nature

- End and Culture Begin?" in *The Illusory Boundary: Environment and Technology in History*, edited by Martin Reuss and Stephen H. Cutcliffe (Charlottesville: University of Virginia Press, 2010), 265-290.
- 20 Sara Pritchard, *Confluence: The Nature of Technology and the Remaking of the Rhône* (Cambridge: Harvard University Press, 2011), 2-3.
 - 21 Pritchard, 17. See also Pritchard, "Joining Environmental History with Science and Technology Studies," in *New Natures: Joining Environmental History with Science and Technology Studies*, edited by Dolly Jørgensen, Finn Arne Jørgenson, and Sara Pritchard (Pittsburgh: University of Pittsburgh Press, 2013), 1-17.
 - 22 For example, David Biggs, *Quagmire: Nation-Building and Nature in the Mekong Delta* (Seattle: University of Washington Press, 2012); Christopher Jones, *Routes of Power: Energy and Modern America* (Cambridge, MA: Harvard University Press, 2014); Chandra Mukerji, *Impossible Engineering: Technology and Territoriality on the Canal du Midi* (Princeton: Princeton University Press, 2009); Thomas Zeller, *Driving Germany: The Landscape of the German Autobahn, 1930-1970* (New York: Berghahn, 2007).
 - 23 "John Fisher Reports," 6 April 1947, C. D. Howe Fonds, MG 27 B20, vol. 94, LAC.
 - 24 The cake was cut by the "smallest and the largest passengers leaving Montreal:" a seven-year-old girl and a famous wrestler. "Tenth Birthday Celebrations," *Between Ourselves*, May 1947, 4.
 - 25 Letter from Gordon R. McGregor to W. F. English, "Decline in Volume of Passenger Traffic," 7 December 1946, Air Canada Fonds, RG 70, vol. 5, LAC.
 - 26 Report by W. F. English, "Financial Outlook and Company Organization," 12 November 1946, Office of the President papers, Air Canada fonds, RG 70, vol. 5, LAC.
 - 27 Gordon McGregor, *Adolescence of an Airline* (Montreal: Air Canada, 1970), 36.
 - 28 For more on the North Star's de-icing systems, see Renald Fortier, *Propellers* (Ottawa: National Aviation Museum, 1996), 22-24.
 - 29 To be "airminded," a term popular in the interwar years, was to follow aeronautical developments and embrace the potential of aviation to better human life, a sort of part-technological part-spiritual aviation boosterism. See in particular Joseph Corn, *The Winged Gospel: America's Romance with Aviation* (Oxford: Oxford University Press, 1983), 51-70.
 - 30 Card "Some North Star Facts," c. 1947, Air Canada Collection 005.003, Canada Aviation and Space Museum, Ottawa. Hereafter CASM.
 - 31 Ferry command and TCA pilot George Lothian recalled in his memoirs "a din that could only be compared to a boiler factory," a heating system that either fried or froze the crew, and makeshift urinals. George Lothian, *Flight Deck: Memoirs of an Airline Pilot* (Toronto: McGraw-Hill Ryerson, 1979), 110.
 - 32 The first North Stars in service at TCA in April 1947 were not pressurized, as the project had to be rushed; by mid-1948, they had been replaced by pressurized versions. Larry Milberry, *The Canadair North Star* (Toronto: CanAv Books, 1982), 42-46.
 - 33 Brochure, "North Star over the Atlantic," 1947, Air Canada Collection 005.003, CASM.
 - 34 Ibid.
 - 35 Bernhard Rieger, *Technology and the Culture of Modernity in Britain and Germany, 1890-1945* (Cambridge: Cambridge University Press, 2005), 34.
 - 36 Like the speed of railways and steamships through the nineteenth century, flight seemed to go against the natural order. On rail see Wolfgang Schivelbusch, *The Railway Journey* (Berkeley: University of California Press, 1986) and John Tomlinson, *The Culture of Speed: The Coming of Immediacy* (London: Sage, 2007), especially 14-17. See also note 67.

- 37 Booklet, "Horizons Unlimited," 1949, Air Canada Collection 005.003, CASM.
- 38 Brochure ADV. 41603-11-56-250M, "Chart Your Course," 1956, Air Canada Collection 005.003, CASM.
- 39 Memorandum by J. A. McGee, "'Chart Your Course'—Route Map Booklet," 18 January 1957. Air Canada Collection 005.005 Box 07, CASM.
- 40 Memorandum by J. A. McGee, "Advertising—Souvenir Flight Portfolio," 26 June 1953, Air Canada Collection, CASM.
- 41 Brochure, "Flying Across Canada," c. 1939, Air Canada Collection 005.003, CASM.
- 42 Bruce Erickson, *Canoe Nation: Nature, Race, and the Making of a Canadian Icon* (Vancouver: UBC Press, 2013), 37. Daniel Francis has argued that the twentieth-century surge in canoeing and kayaking was connected to nostalgia and "discontent with the fruits of progress." Settlers saw these "native" activities as harkening to an earlier, purer form of interacting with Canadian wilderness. Daniel Francis, *National Dreams: Myth, Memory, and Canadian History* (Vancouver: Arsenal Pulp Press, 1997), 147-148. Sport historian Gillian Poulter has also written on snowshoes and toboggans in nineteenth-century settler culture in *Becoming Native in a Foreign Land: Sport, Visual Culture, and Identity in Montreal, 1840-85* (Vancouver, UBC Press, 2009).
- 43 Jonathan Vance, *High Flight: Aviation and the Canadian Imagination* (Toronto: Penguin Canada, 2002), 154.
- 44 For some air travel histories that deal with advertising, see Daniel Rust, *Flying Across America: The Airline Passenger Experience* (Norman: University of Oklahoma Press, 2009); A. Bowdoin Van Riper, *Imagining Flight: Aviation and Popular Culture* (College Station: Texas A&M University Press, 2004), especially 83-108; and Guillaume de Syon, "Lufthansa Welcomes You: Air Travel and Tourism in the Adenauer Era" in *Selling Modernity: Advertising in Twentieth-Century Germany* eds. Pamela Swett et. al (Durham: Duke University Press, 2007), 182-201.
- 45 Booklet, "Horizons Unlimited," 1949, Air Canada Collection 005.003, CASM.
- 46 Rob MacDougall has similarly argued that for early long-distance telephony in Canada, transcontinentality was more symbolic than practical, since Canadians were generally not terribly interested in calling the opposite coast. MacDougall, 53-55.
- 47 Brochure, "Flying Across Canada," c. 1939, Air Canada Collection 005.003, CASM.
- 48 Don W. Thomson, *Skyview Canada: A story of Aerial Photography in Canada* (Ottawa: Energy, Mines, and Resources Canada, 1975), 29.
- 49 "Air Service From Waterways Links Simpson to Steel," *Edmonton Journal*, 8 January 1929.
- 50 Address by Gordon R. McGregor to the Royal Canadian Flying Clubs Association, 25 January 1949, Gordon R. McGregor fonds, MG 30 E283, vol. 13, LAC. "North" emerged in the 19th century as a way for Canadian settlers to differentiate themselves climatically from the British and Americans as Carl Berger argues in "The True North, Strong and Free," in *Nationalism in Canada*, edited by Peter Russell (Toronto, McGraw-Hill, 1966), 3-26. See also Berger, *The Sense of Power: Studies in the Ideas of Canadian Imperialism* (Toronto: University of Toronto Press, 1970) and Sherrill Grace, *Canada and the Idea of North* (Montreal: McGill-Queen's University Press, 2001).
- 51 Robert H. Ayre, "TCA Wins Place Among World Air Lines," *Canadian Geographical Journal*, July 1946, Air Canada Collection 005.003, CASM.
- 52 On attempts to make bush flying "mundane," see Vance, *High Flight*, 108-132.
- 53 Advertisement, "The Men 'Up Front,'" 1949, Air Canada Collection, CASM.
- 54 Harvey, 265-266. For more on the connections between the modern acceleration of time and increasing transportation speeds, see Chandra Bhimull, "Empire in the Air: Speed, Perception, and Airline Travel in the Atlantic World" (PhD Diss., University of Michigan, 2007), 41-51.

- 55 Brochure, "Air Lines Map of Trans-Canada Air Lines and Connections in Canada & United States," 1947, Air Canada Collection 005.003, CASM.
- 56 Draft, "Trans-Canada Air Lines: Questions and Answers," 29 November 1945, Air Canada fonds, RG70 vol. 5, LAC.
- 57 Address by Gordon McGregor to the Royal Canadian Flying Club, 25 January 1949, Gordon R. McGregor fonds, MG 30 E283, vol. 94, LAC.
- 58 Brochure, "Winged Facts about TCA," c. 1955, Air Canada Collection 005.003, CASM.
- 59 Address by Gordon R. McGregor, 1 June 1948, Gordon R. McGregor fonds, MG30 E283, vol. 13, LAC.
- 60 Advertisement, "T.C.A. Makes ALL CANADA Your Vacation Land," 1946, Air Canada fonds RG 70, vol. 11, LAC.
- 61 Draft, "Trans-Canada Air Lines: Questions and Answers," 29 November 1945, Air Canada fonds RG 70, vol. 5, LAC.
- 62 Advertisement, "TCA Speeds the Nation's Business," c. 1942, Air Canada Collection 005.003, CASM.
- 63 "A New Map for Canada" script, c. 1948, Air Canada Collection 005.005 Box 1, CASM.
- 64 Advertisements M-49-23-A and M-49-24-A, 1949, Air Canada Collection 005.001.003, CASM.
- 65 "North Stars Across the Continent," *Between Ourselves*, December 1947, 16-17. "Doing a Job for Canada," *Between Ourselves*, March 1947, 12.
- 66 Memorandum by J. A. McGee, "North American Services – Canada," 12 April 1961, Air Canada Collection, CASM.
- 67 Richard Popp, "Commercial pacification: Airline advertising, fear of flight, and the shaping of popular emotion," *Journal of Consumer Culture* 16:1 (2016), 65. See also David Courtwright, "The Routine Stuff: How Flying Became a Form of Mass Transportation," in *Reconsidering a Century of Flight*, eds. Roger Launius and Janet R. Daly Bednarek (Chapel Hill: University of North Carolina Press, 2003), 209-222.
- 68 Popp, 62.
- 69 Address by Gordon McGregor to the Canadian Railway Club, 13 February 1950, Gordon R. McGregor fonds, MG 30 E283, vol. 13, LAC.
- 70 Nathalie Roseau, "The City Seen from the Aeroplane: Distorted Reflections and Urban Futures," in *Seeing from Above: The Aerial View in Visual Culture* eds. Mark Dorrian and Frédéric Pousin (London: I.B. Tauris, 2013), 210-227; Thomas Campanella, *Cities from the Sky: An Aerial Portrait of America* (Princeton: Princeton Architectural Press, 2001); Denis Cosgrove and William L. Fox, *Photography and Flight* (London, Reaktion Books, 2010).
- 71 Scott, 57-58. On city planning, see Jeanne Haffner, *The View From Above: The Science of Social Space* (Cambridge: MIT Press, 2013). John van der Veen's "Megaproject's New Media Series," companion to Joy Parr, *Sensing Changes: Technologies, Environments, and the Everyday 1953-2003* (Vancouver: UBC Press, 2009), relies heavily on historical and contemporary aerial photographs. <megaprojects.uwo.ca>
- 72 Jason Weems, *Barnstorming the Prairies: How Aerial Vision Shaped the Midwest* (Minneapolis: University of Minnesota Press), xi.
- 73 Krista Thompson, *An Eye for the Tropics: Tourism, Photography, and Framing the Caribbean Picturesque* (Durham: Duke University Press, 2006); David Louter, *Windshield Wilderness: Cars, Roads, and Nature in Washington's National Parks* (Seattle: University of Washington Press, 2006); Ben Bradley, *British Columbia by the Road: Car Culture and the Making of a Modern Landscape* (Vancouver: University of British Columbia Press, 2017).
- 74 Memorandum by R. E. Deyman, "SALES PROMOTION – 60-Day Summer Excursion Fares," 22 March 1951, Air Canada Collection, CASM.

- 75 Marionne Cronin, "Flying the Northern Frontier: The Mackenzie River District and the Emergence of the Canadian Bush Plane, 1929-1937" (PhD diss., University of Toronto, 2006), 17-22. See also "Northern Visions: Aerial Surveying and the Canadian Mining Industry, 1919-1929," *Technology and Culture* 48:2 (2007): 305-306 and "Shaped by the Land: An Envirotechnical History of a Canadian Bush Plane," in *Ice Blink: Navigating Northern Environmental History*, edited by Stephen Bocking and Brad Martin (Calgary: University of Calgary Press, 2017), 103-130.
- 76 Leaflet, "In a Hurry? Fly TCA!" 1947, Air Canada Collection 005.003, CASM.
- 77 Booklet, "Horizons," 1949, Air Canada Collection, CASM.
- 78 Memorandum by D. C. Bythell, "'Comments and Suggestions' Folder," 29 November 1949, Air Canada Collection 005.005 Box 1, CASM.
- 79 Memorandum from D. C. Bythell, "T.C.A. Exhibit Canadian National Exhibition," 24 August 1949, Air Canada Collection 005.005 Box 1, CASM. The slides were replaced with stationary picture panels at the 1950 exhibition.
- 80 Selected comments were printed in TCA's employee newsletter, *Between Ourselves*. "From a Sussex, N.B., Passenger," *Between Ourselves*, January 1948, 3.
- 81 "From an East Kelowna Passenger," *Between Ourselves*, February 1948, 3.
- 82 "From a Lethbridge Passenger," *Between Ourselves*, February 1948, 3. "Broken Up Two-Some," *Between Ourselves*, February 1951.
- 83 "Seeing is Believing," *Between Ourselves*, August 1951, 3; "Crow's Wing," *Between Ourselves*, January 1953, 3.
- 84 "Department of Optimism," *Between Ourselves*, October 1950, 3.
- 85 Liz McFall's "persuasiveness thesis" is more-or-less the dominant model for measuring historical advertising effectiveness. She argues that advertising has become more persuasive over time, but even "persuasiveness" is hard to define. This becomes even more difficult when judging the effectiveness of a *particular* advertisement rather than advertising *in general*. Liz McFall, *Advertising: A Cultural Economy* (London: Sage, 2004), 35-60.
- 86 "Where are We?" *Between Ourselves*, December 1953, 10.
- 87 The "moving map" currently used by Air Canada is the heir to this request. "Again—Where are We?" *Between Ourselves*, May 1951, 3.
- 88 "Where are We?" *Between Ourselves*, May 1951, 3.
- 89 "So the Birds Could Look In?," *Between Ourselves*, December 1950. "Where am I?" *Between Ourselves*, Midsummer 1952, 3.
- 90 "From a Westchester, Ill., Passenger," *Between Ourselves*, April 1948, 7.
- 91 "From a San Pedro Passenger," *Between Ourselves*, January 1950, 13.
- 92 "From a London, England, Passenger," *Between Ourselves*, September 1948, 6.
- 93 "First Flight" *Between Ourselves*, September 1950, 15.
- 94 "TCA's *Viscount*—A New Standard of Flight: Passenger Sales Promotion," March 1955, Air Canada Fonds, RG 70, Vol 113, LAC.
- 95 Brochure ADV. 42406-12-54-150M, "Fly the Incomparable Viscount," 1954, Air Canada Collection 005.003, CASM.
- 96 Vance, 134.