Canadian North when their own Alaska was only a few sea miles from Siberia. But Alaska and Siberia are far from the heartlands of their respective countries. The shortest way to the steel mills of Chicago or the hydroelectric plants of the Donbas is over the pole. Thule, the farthest north American SAC (Strategic Air Command) base, is at 77.29 degrees north latitude, and Russia's Franz Josef Land is even closer to the pole.

Canada was a moderately reluctant participant in this "cold war" but realized it was as much part of U.S. defence as Panama or Hawaii and so became an active partner in the 1950s. The smoke had scarcely settled over ruined Berlin before the Americans and Canadians began to learn how to defend the Arctic. Working out of Churchill, Canada staged a large military exercise, "Operation Muskox," in 1946 on the assumption that the Soviets might drop paratroops on Canadian and American airfields. Muskox and an unsuccessful smaller exercise in 1950, "Operation Sweetbriar," showed that it was virtually impossible to either attack or defend the Arctic on the ground.

Muskox had other important effects. Baker Lake in the Keewatin became a staging base and a LORAN (Long Range Navigation) station was built at Cambridge Bay on Victoria Island. The LORAN tower remains the highest landmark in the central Arctic. Churchill became a key military installation for both Canada and the United States, and for a time there was talk of stationing 50,000 American troops permanently at the joint base at Goose Bay, once the biggest SAC base in the world.

When Russia exploded its atomic bomb in 1949, Washington became paranoid, and Canada responded cautiously by building the Pinetree Line and McGill Fence south of the NWT. It was not until the 1950s – after the triumph of Red China, the Korean War, and the Soviet H-bomb – that our Far North became a really major defence zone. Until then, many Canadians considered Americans in the North to be blundering clowns. There were countless stories about foolish American experiments: they were said to have developed explosive capsules for individual Arctic soldiers, which could be used to blast one-man latrines in the ice. Or, American scientists were freezing barrels of water, then chipping all the ice out, on the assumption that there always would be a cup of water left at the centre of the barrel. The tales were worthy of Jonathan Swift.

But the Canadians who worked with Americans found their allies highly adaptable. Working from Thule, the allies built the weather Select Language and Voice : 🕶

44 Before the Revolution

stations at Alert and Eureka on Ellesmere Island. The Americans wanted and got further stations at Isachsen on Ellef Ringness Island and Mould Bay on Prince Patrick Island. The countries also teamed up to build the important exploration station at Resolute on Cornwallis Island. Such tiny stations became outposts of Canadian sovereignty but soon were to be dwarfed by a major American presence stretching from Alaska to Greenland – the DEW Line. Over five years, it employed 25,000 workers, and vast quantities of equipment and supplies were flown in by Hercules and Globemaster transports, or shipped by barge during the short summer.

There were twenty-two DEW Line stations requiring small permanent staffs, airfields, support services, and fuel dumps. Between each two manned installations was an unmanned station. For most of the Cold War, the DEW Line stations were commanded by American officers, though at least token Canadian officers shared the duties. The stations were built at least five kilometres from civilian communities, and some Inuit were hired as construction workers or on a permanent basis. Building the DEW Line created the facilities that would make possible the social revolution and the nucleus of several new high-tech Inuit communities.

The Defence of the West

The NWT and the Yukon might have slipped completely out of Canadian consciousness during the Second World War if it hadn't been for President Franklin Roosevelt's determination to keep Britain in the fight against Hitler and his lesser fear that Japan might cut off Alaska from the rest of the United States. The United States was extremely isolationistic in the 1930s, but the president was alert to the Nazi threat to American security and well aware of Japan's expansionistic policy in the Far East. He feared Hitler more and made several overtures to Canada, seeking a defensive military relationship. At first, he was greeted with reluctance by Prime Minister Mackenzie King, who was not anxious to enter military alliances with either Britain or the United States because of his recollections of the conscription crisis in Quebec during the First World War.

In spite of King's hesitancy, Canada was drawn into the bigger military game. As Hitler's power grew, Canadian and American military planners began quietly to plan air and naval bases along the Atlantic and Arctic coasts. In the west, the question of Alaskan defence had been long on American military minds. In 1929 President Herbert Hoover proposed a military highway through Canada to Alaska. B.C. politicians welcomed the idea, but it was turned down by Mackenzie King. In 1934, with R.B. Bennett in office, Washington asked for permission to fly military aircraft over Canada to Alaska but was again refused.

In 1937 President Roosevelt paid a state visit to Victoria on a destroyer and once again brought up the idea of an Alaska highway. He got enthusiastic support from B.C. Premier T.D. Pattullo, who represented Prince Rupert and had spent ten years in the Yukon. Like his predecessor, S.F. Tolmie, and a successor, W.A.C. Bennett, Pattullo favoured almost anything that would open up northern British Columbia. Mackenzie King, back in power again, vetoed the idea.

FDR's overtures to western Canadian politicians were only a tiny part of his overall defence policy. Because of the economic crisis, his first term was overwhelmingly concerned with domestic matters, but in 1935 he proclaimed his "good neighbor policy" to the twenty Latin American republics. As soon as he was re-elected in 1936, he began to show alarm at the rise of Hitler. On 14 August 1936 Roosevelt said in Chautauqua, N.Y., "We can and will defend ourselves and defend our own neighborhood."

This declaration updated the Monroe Doctrine, which had established America's hemispheric dominance more than a century earlier. It also passed a pointed message to Canada. Mackenzie King felt Roosevelt's statement was a warning to Japan and noted in his diary that Canada could remain neutral in a U.S.-Japanese war. He was silent on FDR's greater fears of an aggressive Hitler.

With American isolationism as strong as the British and French desire for appeasement, Roosevelt's policies were often tortuous and confusing, and Hitler completely misinterpreted them. Roosevelt failed to get Congress to expand the army and army air force but in 1938 managed to win congressional support for a two-ocean navy.

In August 1938 Roosevelt and King met at Kingston, Ontario, and the president said: "The people of the U.S. will not stand idly by if domination of Canadian soil is threatened by any other empire."

"We recognize our obligations as a good, friendly neighbour," replied King with his usual extreme caution.

One year later, with war about to break out, FDR took one of his celebrated ocean vacations — aboard a cruiser. It just happened to

take him along the Labrador coast, where he looked over potential naval bases. At that time, Newfoundland was a colony of the United Kingdom not subject to Canadian influence, although Canada, like the United States, was aware of Newfoundland's strategic importance in the Gulf of St. Lawrence. As early as 1935, Canada joined with Newfoundland to build the great transatlantic airport at Gander. It opened in 1938 and was one of the keys to the Royal Air Force Ferry Command's vital route to Britain during the war.

In 1940, eighteen months before the United States entered the war, FDR signed an agreement with Britain to create a huge new naval base at Argentia, on Newfoundland's south coast, and military air bases at Torbay, near St. John's, and Stephenville, in western Newfoundland. At the same time, Roosevelt persuaded Canada to permit a joint military survey of Labrador and the waters around Hudson Bay and Greenland. This resulted in a large number of American-built and manned weather stations and military airports on Canadian soil. Another joint venture was the gigantic air base at Goose Bay, Labrador, which was also valuable in Ferry Command's flights of bombers and transports to Britain and later became, for a time, the United States' number one SAC bomber base.

When Denmark was occupied by Germany in 1940, FDR sent troops into Greenland on the basis of an agreement with the marooned Danish embassy in Washington. German weathermen were already in Greenland when the Americans arrived, and it took until 1943 to drive them out. After the war, the great American SAC base at Thule became one of the most important U.S. defences of the Cold War.

On 17 August 1940 FDR met King at Ogdensburg, New York, and proposed a Canada-U.S. permanent joint board on defence. This time King agreed. The board wasted no time. In October 1940 it recommended that the military take over a string of rudimentary civilian airports linking Edmonton with the Yukon: Grande Prairie, Alberta; Fort St. John and Fort Nelson, B.C.; and Watson Lake and Whitehorse in the Yukon. The Royal Canadian Air Force was to upgrade the fields and supply radio links for what was called the Northwest Staging Route (NWSR). The U.S. military would be allowed to use the route to supply Alaska. The five stations were opened in September 1941, four months before the attack on Pearl Harbor.

Here was an example of "nick of time" foresightedness, but the military facilities were inadequate. Shortly after the U.S. was

attacked by Japan, it rushed squadrons of bombers north. Many crashed in the mountains because of poor radio facilities and inexperienced air crews. The Americans bitterly criticized Canadian equipment and demanded the right to take over the airfields. In typical Canadian style, Ottawa allowed the Americans to rebuild the fields, then took over the refurbished stations and ran them.

Alaskan defence was still far from secure after the Japanese attacked the Aleutians early in 1942. It was clear that there must be a military highway as well. The airfields themselves would be supplied by the road, while ammunition, fuel, and troops could be trucked all the way to Alaska. Above all, there was need for a new supply of petroleum to keep the warplanes flying and the trucks rolling.

So the oft-rejected American plan for an Alaska highway was back, and even Mackenzie King was silent this time. As he saw it now, his job was to maintain Canadian sovereignty while persuading the Americans to pay most of the costs and do most of the work. Even though he considered himself a close and trusted friend of FDR, his misgivings about Washington never faltered.

When the Americans proposed a joint study of territory being opened up by the highway, King told the cabinet's war committee that he was against it and darkly predicted in his diary that "efforts will be made by the Americans to control developments in our country after the war." He was so determined to make sure that impatient U.S. officers should respect Canadian rights that he made Brigadier-General W.W. Foster special commissioner for defence projects in the NWT. Foster made Edmonton his headquarters and got along fine with the Americans.

CANOL

There were three parts to the defence of Canada's northwest: the air route, the military highway, and the CANOL (Canadian Oil) Project. The last part was the most controversial.

Lieutenant-General Brehon Sommervell was head of U.S. Army Services and Supply, and he was in charge of the Alaska highway and the expansion phase of the NWSR (along with hundreds of other schemes, including the Manhattan Project, which built the atomic bomb). He was concerned about finding a new source of petroleum and learned of the Norman Wells field. On 1 May 1942, Sommervell telephoned Imperial Oil in Toronto and found that only four holes had

been drilled, of which one was in production. Imperial expressed modest confidence that the field could be expanded and on Sommervell's insistence agreed to a new exploration program.

To Sommervell, the deal was a natural: after all, Imperial had been owned and controlled by Standard (New Jersey) since 1898 and thus was an American firm. The American-born Canadian minister of supply, C.D. Howe, announced the Norman Wells expansion program to the House of Commons several days after it had gone into effect. One month after Sommervell cut his deal, the Japanese attacked Dutch Harbor, Alaska, and invaded the Aleutian islands of Kiska and Attu. Already, more than 15,000 U.S. troops were stationed in the Yukon and NWT, many of them engineer troops working on the Alaska Highway and the RCAF airfields. A year later there were 33,000.

Sommervell rushed 3,000 black engineer troops by rail to Fort McMurray Waterways in northern Alberta and prepared to ship them to Norman Wells by boat. The CANOL Project was under way. It included plans for a major oil field at Norman Wells and a three-inch pipeline 1,700 kilometres across the Mackenzie Mountains to Whitehorse in the Yukon. There the crude oil would be refined and sent by tanker truck to Alaska. Earl Harcourt of Yellowknife Transport was hired as a consultant, and the Americans stormed north over muskeg, rock, and rapids. Canol Camp on the banks of the Mackenzie was about to be born.

The various northwestern projects were started secretly in late 1941 and early 1942, but they soon had an impact on northern Alberta and a much greater one on the environment and peoples of the NWT and Yukon. Many far-reaching effects came about casually, as a byproduct of global strategies which seemed to dwarf the local problems of the Canadian North.

For instance, military considerations changed the way that airplanes were used. Up to 1941, business on the frontier could be handled by float or ski planes, and all-weather landing strips were not necessary. However, fighters, bombers, and big transports could not be effectively converted to floats and skis, especially when they had to be put to use immediately on arrival at their destinations. Second, military pilots had to have dependable weather forecasts and radio reports. So networks of all-weather airports with long, solid runways and twenty-four-hour radio stations were built. The Northwest Staging Route thus provided a pattern for the whole of the North: airports were soon being built along the Mackenzie, the Slave, and the

Athabaska in the northwest and at many locations in the eastern Arctic. The first Canadian public awareness of American troops occurred in Edmonton, jumping-off place for Alaska and the CANOL Project. Jasper Avenue soon was full of American uniforms, and many of these young soldiers had little awareness of where they were. One teenage private was asked if he would like to "go overseas" and replied in bewilderment, "But I am overseas!"

It was entertaining in those days to go to the Edmonton airport (then the city's only such facility but today the downtown industrial airport, largely supplanted by the international airport south of Edmonton) and watch planes coming in from Great Falls, Montana: clusters of fighters escorted by four-engined Liberator bombers acting as mother ships. It was for all the world like a goose teaching goslings to fly. Each Liberator carried spare parts and mechanics. Flights from airstrip to airstrip were short because the fighters' range was limited and they had primitive navigational equipment. Even so, many crashed, and so did B-25 medium bombers headed for Russia's battlefields. Dawson Creek, B.C., was mile zero on the Alcan military highway, and its streets were knee-deep in dust or mud, depending on the season, as hundreds of trucks roared northwest.

There were two aerial workhorses – the twin-engined C-47, which was the military counterpart of the DC-3, and the single-engined Noorduyn Norseman, the legendary bush plane that could go anywhere and carry amazing amounts of freight. Such planes took men and supplies everywhere along the northern supply routes. Soon many places had two airports – an old seaplane base and a new all-weather strip with a met tower. For the first time, large-scale civilian air service became feasible. Edmonton and Vancouver grew much closer. The military installations, many of which remained long after the war, ranged from the U.S. bomber refuelling base at Frobisher Bay to remote strips in the High Arctic and along the Mackenzie.*

^{*}The American intrusion into Canada early in 1942 frightened Prime Minister Mackenzie King, and he may have been aware of the dreadful lack of planning that was involved in the U.S. military's precipitate moves. It has only recently been revealed (by history professor Shelagh Grant of Trent University, an authority on Canadian sovereignty in the Arctic) that General Sommervell ordered the Alaska Highway, the CANOL pipeline, and a working refinery all completed by the end of 1942. This showed a stunning lack of knowledge of the climate and terrain involved. The preliminary survey of the CANOL route through the Mackenzie and Selwyn mountain ranges wasn't finished by the end of 1942, and completion of the highway and the pipeline didn't come until 1944.

The CANOL Project was different from anything that ever had been attempted in either the Canadian or the American North. The nearest practical railway ended at Fort McMurray, Alberta, and the bush trails of YK Transport had to be vastly expanded. A visitor to Fort McMurray in 1942 had to be sharp-eyed to detect any sign of activity. Here was the old transportation and fur-trading post of the Nor'Westers and the HBC, and it remained a sleepy bush community. Bush planes on floats landed and took off from the Athabaska River, and an occasional canoe carried an Indian or Métis trapper.

Visitors were taken to a tiny Rube Goldberg machine on the banks of the river, where a professor of geology was boiling up black sand. He said the sand was full of oil and that one day millions of barrels would be produced in the area. It seemed most unlikely. Unless visitors scurried around the river to nearby Waterways, they might miss seeing hundreds of black American troops waiting to go north by boat. They arrived by train from Edmonton, along with mountains of equipment and supplies earmarked for far-off Norman Wells.

In Fort Smith on the Slave, the story was similar. The major sign of change was a brand-new airport with a hard black tarmac. The reason for the airport was obvious to a discerning visitor. Hadn't Canadian Pacific Airlines just been formed? Wasn't CPA using modern airliners that needed smooth, well-maintained runways? Such aircraft would be flying into the long-established airports at Winnipeg and Edmonton as well as the new fields in the NWT. One had only to talk to CPA's general manager, Grant McConachie, to realize that he was dedicated to opening up the North to Bay Street brokers and California tourists. The wheeled, twin-engined CP airliner sitting on the Fort Smith airfield was the symbol of the North's future.

In that summer of 1942, the NWT and the Yukon were poised on the brink of enormous change. A visitor might fly over hundreds of square kilometres of silent forests, but at the end would descend at Norman Wells on the turmoil of the mighty Mackenzie – the river sprinkled with islands, full of barges, tugs, and water taxis, all carrying soldiers and civilians from the airfield on the east bank above the original town to the sprawling military base on the west bank. No troops or civilian workers were housed in town: the U.S. Army built its own town on the west bank and another one at Dodo Canyon, far to the west across the Carcajou Flats in the first range of mountains. To Canadians, Indians or whites, the most astonishing thing was the mass of black faces: there were several thousand U.S. Army Engineer

Corps soldiers, and in America's segregated forces that meant black. All the officers were white, of course.

The new tote road stretched west across the flood plain to Dodo Canyon, a spacious pass that provided a level gravel beach for the big staging camp. Ten-ton trucks loaded with lumber, generators, culverts, pipe, gas drums, and food roared across the flats, and everyone was in a hurry. Barges were unloaded on the Mackenzie's west bank, then were pushed upriver to the supply base at Hay River.

The Hay River terminus showed what could be done with a lot of money and plenty of men and machines. After one look at portages, rapids, and muskeg, the Americans decided to improve the existing overland road considerably. Some rapids were blasted out in the terrible stretch between Fort Fitzgerald and Fort Smith. A rough but serviceable road was cut through the swamps and rocks to Hay River, where wharfs, harbour facilities, and shipyards were built. In summer, tugs pushed barges across Great Slave Lake to the start of the Mackenzie, then along the river to the Wells. In the early stages, the Americans imported tugs that weren't up to the job, so a bustling shipbuilding industry developed in Hay River. At freeze-up, essential supplies were hauled across the lake and river ice by tractor train or truck. Other supplies were stored in warehouses awaiting break-up.

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The achievements of the soldiers and civilians have never been adequately recognized. In the first year, 35,000 tonnes of supplies were moved through Hay River. Simultaneously, thousands of troops and civilians were driving the Alaska Highway northwest from Dawson Creek, B.C. Another supply base was built at Johnson's Crossing in the Yukon, and from it a third army worked northeast through the Ross River country to link up with the Norman Wells crew. Surveyors on snowshoes laid out the pipeline route across the Mackenzie Mountains in the winter of 1942–43.

All the projects were staggering. At Norman Wells there ultimately were 5,000 black soldiers without winter uniforms or roadside shelters. Their truck cabs were unheated. Bulldozer blades shattered like glass in -50° temperatures. In summer the land turned into a fly-and mosquito-infested swamp. The white officers were good engineers and competent soldiers, but they had learned their trade in Hawaii, the Panama Canal Zone, and the Philippines. They simply could not cope with the North.

In that first terrible winter, the bases were built and the route picked. But it was clear that white civilian workers must replace the blacks. Working in unbearable conditions, the engineering troops were near mutiny. Yet finding civilian workers was almost impossible. Most able-bodied young men were already in the military, and draft-proof construction workers were working overtime in the defence industry.

Recruiting a workforce big enough for the Alaska Highway, the airfields, shipyards and staging bases, and the CANOL pipeline was far beyond the capacity of any individual company. A consortium of three of the biggest U.S. construction firms – Bechtel-Price-Callahan – was formed. It scoured the United States for workers willing to go into the frozen wilderness. Not a few ex-cons and fugitives found a temporary haven there.

The changeover to civilian labour involved a disgraceful episode when the black troops were shipped out in the summer of 1943, packed into the holds of barges as their ancestors had been packed into slave ships. Because of wartime censorship, no one in southern Canada or the United States knew anything about it.

Censorship hid more than the problems of the U.S. Army. Canadian civilians were not permitted to work on the pipeline because Ottawa feared that if the consortium paid Canadians at the same rate as it paid Americans, inflation would ensue and Canadians in the south might become discontented with their low wages. Censorship conveniently covered up discrimination in employment policy as well as racial discrimination.*

To their credit, the U.S. Army and the American contractors made a considerable effort to protect the indigenous population from their presence. Some Métis and a few Indians got jobs in the transportation

^{*}In 1942 most Canadians had their minds focused on the dramatic events in Europe, Africa, and the Pacific, and not one in a hundred had any idea of what was happening north of the 60th parallel. For instance, two young reporters for British United Press were stationed temporarily in Winnipeg. Looking for a feature story, Jim Maclean speculated that it seemed all too easy for an enemy to sail into Hudson Bay and thus reach the heart of the continent. The other suggested that HBC traders and Inuit trappers might be effective spotters for the Canadian government. Maclean thereupon "casually" suggested the idea to an HBC official in Winnipeg, and the story that this sort of thing had actually been going on poured out. Maclean wrote it up and by a fluke it was passed by the military censors and created a minor sensation in newspapers from Florida to California. Neither reporter knew anything about the Alaska Highway or the CANOL Project. I was one of the reporters and about to stumble on the story in Fort McMurray. Such fumbling revelations and casual discoveries were typical of the times.

and supply end, but as with southern white Canadians, almost none were hired for the pipeline and tote road crews. The Americans, military and civilian, were kept under tight discipline and lived in compounds far from the native communities. Liquor was rationed, and workers were encouraged to save their recreational energies and money for their return to Edmonton or San Francisco.

The astonishing thing was that the projects succeeded brilliantly in spite of many mistakes. American engineers ignored Canadian advice against laying the pipeline on the bed of the Mackenzie: in the spring, the ice took the pipeline out, and it had to be replaced in a protected trench laid beneath the river bed.

Similarly, Canadians pointed out the need for corduroy roads across the *taiga*. The Americans went ahead and ripped off the peatmoss that covered the permafrost, then laid a conventional road on top. When trucks drove over it, the friction caused heat and the permafrost melted, precipitating the trucks into the muskeg. In B.C., along the Alaska Highway, hundreds of trucks were parked on a low bench of the Peace River. A freshet rushed down from the mountains, flooding over the trucks, then freezing them in for the winter.

Yet the Americans learned quickly and corrected their mistakes. In less than two years, the Alcan Highway* was crowded with trucks heading for Alaska; the skies were swarming with fighters heading for the USSR, and Norman Wells oil was flowing through the CANOL pipeline to the refinery that had been assembled in Whitehorse.

In other epochs, the projects might have been remembered as among the great engineering achievements of history, ranking with Xerxes' crossing of the Hellespont. Instead, the CANOL Project was abandoned as soon as the war ended, and it was many years before the Alaska Highway became a major tourist artery. The airfields of the NWSR were reduced to way stations for local airlines.**

The Japanese did not attack mainland Alaska; they abandoned

^{*}The Alcan (Alaska-Canada) Highway was the original name of the Alaska Highway.

^{**}Ultimately, the military airports were taken over by the Ministry of Transport and were essential in the building of new civilian communities made up of Indians and Inuit living off the land, white bureaucrats from Ottawa, and a polyglot mass of white and Métis settlers seeking new jobs and new lifestyles in the mines and other new enterprises.

Attu and were driven out of Kiska. The CANOL pipeline, which cost a quarter of a billion dollars, was left to the caribou and grizzly. The Whitehorse refinery was dismantled and shipped to Alberta, where it helped to launch the new Leduc field in 1947. In a few years, there were hardly any signs of the supply roads and bridges spanning the Mackenzie Mountains. The 10,000 workers of the Yukon and the NWT departed. Norman Wells returned to being a little oil well community dozing along the Mackenzie River.

Part Two

REVOLUTION UNDER WAY

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Chapter Four

The Revolution Begins

Nineteen hundred and fifty-three was the year when President Dwight D. Eisenhower stopped the fighting in Korea by threatening to drop the atomic bomb on Red China. It was the year when the USSR detonated its first hydrogen bomb, thus ensuring the United States would build a radar fence in the Canadian Arctic. It marked the beginning of diplomacy termed "the balance of terror."

It was also the year when Prime Minister Louis St. Laurent launched a new and sweeping policy for the development of the Canadian North. The Department of Resources and Development became the Department of Northern Affairs and National Resources. The minister was Jean Lesage; his deputy was Gordon Robertson from the Privy Council Office. Robertson had an executive assistant, Ben Sivertz, who was to have a vital role in changing the Arctic.

St. Laurent told the House of Commons on 8 December 1953 that "Canada has governed the NWT in an almost complete state of absent-mindedness for ninety years," adding that "the centre of gravity is being moved north." There was widening public interest in the North. Yellowknife was one of the world's great gold producers, and it was booming again after being a virtual ghost town during the war. Prospectors were everywhere in the NWT, following a Canadian tradition that had been going on for a century.

It didn't take a genius to tell the Ottawa mandarins that the rules had to be changed to make it easier to develop northern resources. This would involve wider political and taxation rights for whites already in Yellowknife, and there might have to be new rules for the indigenes. And something had to be done to protect Canadian Arctic sovereignty from the Americans, who were pressing for military bases.

Considering that there were no government administrators in residence – just the HBC, the missionaries, and the Mounties – the mandarins had to fly by the seats of their pin-stripe pants. They had foreign

examples, of course, but these were mostly to be avoided. The country with by far the most Arctic experience was Russia: it had conquered and colonized Siberia in the 17th century. Archangel, at 64 degrees, north latitude, had been a seaport since 1553; Murmansk (69 degrees, 33 minutes) was a famous Arctic seaport during the Second World War.

The problem with using Siberia as an example was that it differs so much from the Canadian North. Proportionally, it has far more boreal forest and grazing land because the Ob, the Yenisei, the Lena, and several other considerable rivers flow into the Arctic Ocean and provide drainage basins in which plant and animal life flourish. Canada, on the other hand, has only one great north-flowing river in the NWT, the Mackenzie. Siberia, which extends as far south as Canada does, today has a population of 25 million people and a generation ago had 15 million. In the USSR, more than 100,000 lived north of the Arctic Circle in the 1950s, and the number has increased steadily. By the 1980s there were several hundred thousand industrial workers, most of them working in vast mineral, gas, and oil projects. Several sizable cities are mushrooming north of the Arctic Circle.

The Russian example showed what could be done, but Ottawa had somewhat different objectives and, anyway, was in a hurry. The truth was that when the prime minister rose in Parliament, there was a human emergency in the Arctic, postwar entrepreneurs were impatiently waiting for Ottawa to open the mineral resources of the North to them, Washington was pressing Canada for new military defences in the Arctic, and white residents of Yellowknife were demanding the equivalent of provincial rights.

The most dramatic and most immediately pressing of these concerns – though probably not the most important in the eyes of most cabinet ministers and Bay Street and St. James Street businessmen – was the plight of the indigenes of the North. Hundreds of Inuit in the Barren Lands and in Ungava were starving because of the failure of the caribou migrations.

In another time, the plight of the aboriginals might have gone unnoticed, but this was the right period for humanitarian action. As with other people around the world, the war had taught Canadians to share and work cooperatively and to make sacrifices for great causes. In the postwar period, voters had agreed there must be better social and medical services for all Canadians. Family allowances – the

"baby bonus" – had started in 1944, and there was growing concern for the poor and unfortunate.

It was during this mood of humane desire for improvement that the northern equation was drastically altered by the entrance of a brand-new player: Dr. Hugh Keenleyside, a professional diplomat who was asked by Prime Minister Mackenzie King to succeed Charles Camsell as NWT commissioner and deputy minister. Many businessmen inside or close to the Liberal government saw the Arctic as a treasure chest ripe for looting, but Dr. Keenleyside was largely concerned with the welfare of the aboriginal peoples.

He completely reorganized the NWT administration between 1947 and 1950 and made a modest start in improving health facilities and introducing public education in the Mackenzie District. Ultimately, he clashed with the business-oriented Robert Winters, who became minister in 1950. Keenleyside went to a high post in the United Nations, while many of his NWT reforms were put on hold until the era of Jean Lesage. Winters was primarily concerned with resources – there was good reason for the ministry now being called the Department of Resources and Development. However, Keenleyside's reorganization and his fledgling social program made the St. Laurent-Lesage-Robertson revolution of the 1950s much easier to accomplish.

For instance, it paved the way for Ottawa's intervention when the long-developing famine emergency reached a head in the Keewatin District in 1953. The Caribou Inuit desperately needed help. They had recently become visible to southerners, but only after a whole series of blood-chilling incidents.

The supply of game had been declining from about 1910 onward, and traders had reported changes in caribou migration patterns during the 1920s. To make matters worse, the fur market collapsed in the 1930s, wiping out the only source of cash money for both Inuit and Indians. (Ironically, the Inuit had only just accepted the trapline as a way of life.)

There were many grim tragedies, though at first few of them were heard about in the south. How many knew the fate of the man who played the hero in Robert J. Flaherty's great documentary film, *Nanook of the North*? Nanook's face was familiar to the thousands who saw it on a movie screen in 1921, and he was guest of honour at the movie's opening in New York. A year later Nanook and his family starved to death in Ungava.

Another Inuk, Nuligak, wrote a beautiful book about his life in which he described how, one winter, he found himself with eleven 22-calibre rifle bullets – and no way of buying more. He killed ten meat animals and only missed once. His written account expressed great pride at his success in keeping his family alive. Ironically, Nuligak wrote the book while dying of tuberculosis in Camsell Hospital in Edmonton.

In the mid-1920s a trader for Révillon Frères, the French fur company, travelled across the Barrens with two Indian guides. They came upon an Inuit band of about twenty people, men, women, and children. An Inuk hunter told them he had missed the caribou migration. He asked for nothing, but the white man gave him as much as he safely could – enough to feed the Inuit group for a few days. The hunter said he believed there were caribou two days' walk to the northwest and started after them. The trader and his guides went on to Baker Lake.

A year later, the trader and the Indians were in the same area and decided to see whether they could find any trace of the Inuit. The trail was pitifully easy to follow – discarded belongings as people became too weak to carry them, then bodies: the old first, then the babies, then the children. At last there were only two sets of tracks left, and soon the Indians discovered the picked-clean bones of the hunter. He had no rifle. Casting about, the Indians found another trail and followed it for a few hours. At the end of it were the remains of a twelve-year-old girl. She was carrying the rifle, which had one bullet left.

These true tales of the Arctic were far from unusual at any time, but in the early 1950s they reached a climax that could no longer be ignored by Ottawa. In the winter of 1949–50, four Canadian soldiers were manning a Signal Corps radio station at Ennadai Lake at the edge of the tree line just north of the Manitoba border. One day, members of the Kazan Lake Inuit band staggered into the army camp in an advanced stage of starvation. There were forty-five in the group, and the soldiers managed to save all of their lives. They asked the RCMP at Churchill for help, and after a while the Inuit were airlifted to Churchill, then on to Nueltin Lake below the tree line and in Chipewyan territory. The Inuit were given arms, ammunition, and fishing equipment.

Unfortunately, the transfer didn't work out, and the Inuit returned to the Barrens. In the spring of 1954, the soldiers nursed the band through a bout with influenza. The Mounties complained to Ottawa that the problems of starvation and relocation were beyond them. For

once, someone heard and was ready to do something. What happened then was the most dramatic part of the Arctic revolution.

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Considering the massive changes that have happened in the last generation, it's hard to believe how little attention was paid to NWT aboriginals before 1953. The first federal administrative office opened in 1921 at Fort Smith to serve white, not aboriginal, needs. The main reason for its existence was the oil strike at Norman Wells, but it was also a response to the growing activities of trappers, traders, missionaries, and miners.

In 1923 the Department of the Interior set up a division of its NWT branch called Eskimo Affairs to provide "basic health care and supervision of medical health officers; education; sanitation; arts and crafts; support for mission schools and hospitals, and study of Inuit needs and habits."

But the government never got around to doing anything about these concerns in the 1920s. In 1936 the entire Interior Department ceased to exist, a casualty of the Depression. Its functions – a few of them – were taken over by Mines and Resources, which in 1950 became Resources and Development.

Hugh Keenleyside wrote in his memoirs:

The awakening general interest in the Arctic was in part the result of political and defence considerations that marked the period of the Cold War. But additional recognition of its importance came also from a new appreciation of the economic possibilities of that region. And the more admirable aspect of humanity's split personality was illustrated by a growing appreciation of the social responsibility of those living in a more favourable environment for the welfare of others of our common destiny who had been existing in half-forgotten isolation beyond the horizon of the North.

Alvin Hamilton, who was minister of northern affairs and national resources from 1957 to 1960, put it more tersely: "The atmosphere of the country and the world was toward hospitals, nurses, schools and co-ops." Under Keenleyside and his successors up to 1967, Ottawa remained the headquarters of the NWT: all decisions were made there. In a conversation with me, Ben Sivertz, who was an assistant to Keenleyside, Major-General Hugh Young, and Gordon

Robertson before he became a leading administrator, defended Ottawa as the NWT capital:

In those days problems of travel were incredible. Single-engine planes on floats in summer and skis in winter had neither radar nor gyro compasses. Few people realize how difficult it is to navigate with a magnetic compass in the bumpy and swinging cockpit of a small plane near the North Magnetic Pole which makes astonishing angles of variation. Such planes are on visual flight rules which means the pilot must be able to see the ground, and as soon as he is away from lakes and rivers a map is essential for safe flying over the million-and-a-quarter square miles.

Until there were better planes, gyro compasses, and aerial maps, NWT travel between east and west was just not feasible. Ottawa remained the hub from which the Mackenzie Valley and the Arctic were administered: the two parts had almost nothing to do with one another.

Up to 1951, the NWT was run (as much as government had anything to do with running it) by a handful of Ottawa mandarins in their spare time. The commissioner still was deputy minister of whatever department had been given responsibility for the NWT, and the four members of the NWT Council were appointed from the mandarinate except for one or two token white northerners. The council met occasionally, never in the Territories.

When Mines and Resources became Resources and Development in 1950, it was given a Lands Division to look after federal lands, minerals, and timber, and a Northern Administration Service divided into an Arctic Division and a Yukon-Mackenzie River Division. There were promises that something would be done about hospitals, schools, public health, law and order, and so on. There were new regional offices in Smith, Hay River, Yellowknife, and Aklavik – but none in the eastern Arctic.

In 1951 the NWT Council was expanded to eight members, three of whom were elected, all from the Mackenzie District and all white. For the first time, the council was ordered to meet in the Territories once a year, with a second meeting in Ottawa. The first meeting outside Ottawa was in Yellowknife in December 1951.

Until 1948 the deputy minister/commissioner administered the NWT with the advice of his NWT Council and also with regular advice from the RCMP, the Anglican primate of Canada, the Roman

Catholic archbishop for the North, and the HBC. But in 1948 the Advisory Committee on Northern Development (ACND) was set up. According to Gordon Robertson, "its mandate related to the North and especially to the coordination of the activities of the various departments and agencies there." Robertson added: "The committee did not deal with the policies of defence, or of transportation, or of foreign relations (in the sense of 'policy'), but only with the fallout of ministerial policies decided by ministers elsewhere. It also dealt with the plans and activities of the departments and agencies in the North."

Historian Donald Creighton said the ACND was to advise the government on "policy relating to civilian and military undertakings in northern Canada and to provide for the effective coordination of all government activities in that area." There appears to be some conflict between Robertson's and Creighton's view of the committee's functions, and it must be noted that Robertson spoke from the absolute authority of being commissioner at the time. However, considering that some of the main activities of the federal government in the North involved defence, sovereignty, and relations with the United States during the 1940s and 1950s, it must have been hard to keep the ACND deliberations separate from those areas. Robertson says today:

The minister of northern affairs and national resources as a member of the cabinet would be able to say his piece about policy in any proposal that he thought would be of importance to the North when another minister brought it to cabinet for consideration, but one has to recognize that northern implications would, in most cases, not be seen as decisive or major.

This may explain why Ben Sivertz, in conversations with me, denied that there was any connection between his Arctic program for helping the Inuit and the defence and sovereignty programs that were affecting most of the Arctic during the 1940s and 1950s. Today, more than thirty years later, it is still difficult to disentangle the interlocking mazes along which the mandarins tripped so easily. "The government became aware that the North was in a strategic location," Robertson said in the briefest – and clearest – summation on record.*

^{*}Asked about the relationships among the departments during his three years in office, Alvin Hamilton told me: "The [Defence Department] used to lie to us a lot." He was, of course, referring to a department presided over by a fellow Conservative in the Diefenbaker government.

The pitfalls were not only in the possibly conflicting policies of various government departments: there were difficulties in deciding what policies suited the indigenous populations. "We had been charged to look into what should be done about the North," Robertson said of the 1953 instructions he received from his minister, Jean Lesage. "There was not one officer of the department north of the tree line, and no government schools."

In those days, Ottawa had about a score of employees at Smith, but they were only concerned with the Mackenzie Valley. The few schools were run by the Anglicans and Roman Catholics until, in the late 1940s, Keenleyside started building secular day schools. They were all concentrated in the Delta or south of Great Slave Lake, and the program had hardly begun when Keenleyside left. The only educational effort among the Inuit was a residential school run by the Catholics at Chesterfield Inlet.

Robertson had no previous experience in the North and was the purest of Ottawa mandarins. A native of Saskatchewan, he studied at Oxford and Toronto before joining External Affairs. He served the Privy Council from 1945 to 1953 and, by reputation, was eminently qualified to understand the changes in the machinery of northern administration that had been put in place by his predecessors, Dr. Keenleyside and Major-General Hugh Young.

The new department and the new commissioner faced an emergency that had to be dealt with immediately. Reports of Inuit starvation and epidemics had been frequent for thirty years, but now they were getting so bad that serious measures had to be taken at once: human beings were starving at Palai ... Baker Lake ... Garry Lake ... the Thelon River ... on the lower Kazan ... in Quebec Ungava.

The caribou population was declining; proper housing was non-existent for people dying of measles, diphtheria, meningitis, tuberculosis, or influenza in snow houses and skin tents, without medicine or sanitation. "And we were instructed to do something about transportation and communications," Robertson added drily. His summary of the disasters facing the new department was capped by infant mortality: higher than 300 per thousand for the Inuit and 200 per thousand for Indians, compared to 40 per thousand for Canadians as a whole.

Sivertz and Hunt

Robertson's chief administrator in the Mackenzie District, with headquarters in Smith, was L.A.C.O. Hunt, who had long experience along the Mackenzie, especially in the Delta. Hunt's principal duties involved whites: supervising mining permits, registering claims, issuing business licences, and so on. The Indians were not in nearly as serious a crisis as the Inuit, though health care was almost non-existent, economic conditions were very bad, and secular schools had not nearly fully replaced the missionary schools. While there was poverty, there was no starvation.

In the Arctic, Robertson picked as his chief administrator Ben Sivertz, an assistant to both Keenleyside and Young. Sivertz was from Victoria, a former schoolteacher, merchant marine officer, and navy commander who had been in Ottawa since the end of the war.

"I created the Arctic Division," Sivertz told me in 1989. "We hired six northern service officers and created six divisions. We hired social workers, writers, and Inuktitut language teachers. When there was a report of starvation we sent help: sometimes one of our people chartered a plane and went in with food and equipment; sometimes the police were asked to go by dogsled. No two cases were the same. Health was always part of it, either as cause or effect. Accident or illness to the principal hunter sometimes began a food shortage. Some people would have to be taken to hospital."

Looking back, Gordon Robertson described the scene:

What has to be remembered is that the Eskimos were, with very few exceptions, hardly removed at all from their aboriginal condition in the 1950s and less so in the 1940s. Almost everyone who had anything to do with the policies that were designed to prepare them for the sort of world they would have to face in twenty, forty, or fifty years was desperately concerned that our western life should not crash in on the Eskimos in a way that would be destructive. The Anglican and Roman Catholic churches were strongly of the view that the aboriginal people of the North, both Indian and Eskimo, had a way of life and structure of society that were well suited to the conditions of land and climate. These clergymen agreed that change had to come but they wanted it to be as little destructive of these basic things as possible. Because of these considerations, a deliberate effort was made to keep defence stations, airfields, and weather

stations separate from existing or planned communities of Eskimos. When the DEW Line was built, this policy meant that the various facilities, with their airfields and staff accommodations, were located in uninhabited places as much as possible.

While this may have been policy when the DEW Line stations were built, communities often did grow up around them. In Cambridge Bay in the 1980s, for instance, some of the DEW Line staff actually lived in the civilian town and drove out to their duties daily. The commander, or civilian manager, of the station was an important patron of community events, and his staff socialized with local residents, both Inuit and white.

Robertson expressed a comprehensive and far-sighted theory of development. But it was sometimes overwhelmed by uncontrollable events such as the actual building of the DEW Line and the new civilian communities, requiring as they did very considerable semi-permanent facilities for the construction workers. Some of these workers got involved with the indigenous population and even settled down to raise mixed-blood families. The influx of southern teachers, doctors and nurses, and administration employees further complicated the noble goals of the mandarins and the bishops.

It must never be forgotten that the headlong defence program was plunging ahead at exactly the same time that Sivertz and his men were making an equally urgent effort to save the Inuit from starvation and disease. The official history of the hamlet of Broughton Island, on the east coast of Baffin Island nearest to Greenland, tells the story of several communities: Broughton Island did not become a settlement site until 1956–57 when Inuit families moved there from Pangnirtung and Padloping Island to help build the DEW Line station.

In the case of Hall Beach, on the coast of the Melville Peninsula, there were no Inuit camps in the immediate vicinity of the Foxe Main DEW Line station. Construction, as elsewhere, caused a mini-boom, which attracted Inuit to the area and raised the level of employment and income to unprecedented levels. Government installations followed, and even after the construction boom was over, the community retained a relatively high dependence on wage employment. As the *NWT Data Book* for 1986–87 says: "Inuit continued to migrate from the outcamps until, by 1968, the last family had left the land."

While this was happening, administration and policy-making for both the defence/sovereignty and social development programs

remained in far-off Ottawa. Robertson said: "We did look ahead. There were serious debates. Some people opposed education on the basis that it would destroy Eskimo culture and character. We had long debates over this. I disagreed because I thought this view was based on keeping the native population down to a level which could live off the land."

The dilemma was not new. At times it had involved the Mackenzie Basin Indians. The oldest trading post on the lower Mackenzie was Fort Good Hope, and the Sah'tu began living around the post in the early part of the 19th century. There were too many of them for the game supply, and soon they became dependent on supplies from the HBC store. In 1844 many starved while waiting for a delayed supply ship.

This was exactly the same problem facing the Inuit who began moving into the white trading posts in the 1940s and 1950s – sometimes even earlier. As early as 1916, the "free" white trader, Charles Klengenberg, reported that the caribou herds were declining around Coppermine on Coronation Gulf. In 1927 half the people of Bernard Harbour north of Coppermine died of influenza. The rest fled to Coppermine. Baker Lake also became a centre to which starving and ill Inuit were brought in the 1940s and 1950s. Whale Cove, on the shore of Hudson Bay between Eskimo Point and Rankin Inlet, was created when 199 inland Inuit were relocated from both the northern and the southern Keewatin. That was in 1959 after a 1957–58 famine. At Garry Lake in 1958, fifty-three people starved to death before the remaining thirty-one were rushed to Baker Lake.

Perhaps the most pathetic catalogue of Job's afflictions occurred at the old whaling station of Lake Harbour. From 1946 to the 1960s, Lake Harbour suffered from plagues of botulism, tuberculosis, and pneumonia. But it wasn't until 1960 that the Inuit were driven to town-living by an outbreak of distemper that killed 80 percent of their dogs and made traditional hunting impossible. The same outbreak killed most of the dogs in Pangnirtung on Cumberland Sound.

Before the Robertson regime, the Mounties (who were the only federal officials in the Arctic) faced other puzzling problems. In 1944 the federal government began paying family allowances to all Canadian mothers with children under sixteen who were in school. But what did one do about the Yukon and NWT Indians and the NWT Inuit, who had no schools?

The situation was handled in a typically paternalistic way. In both