Moving Amid the Mountains, 1870-1930

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From the explorations of Mackenzie, Fraser and Thompson to the present, British Columbia has embodied a problem of movement that externally has been a function of distance, and internally of rugged terrain.[1] Means of transportation easily imposed on gentler, more proximate lands penetrated this wilderness at enormous cost. Yet, as white settlement overrode Indian, new means of transportation were adapted to new needs. Some did not require mechanical power: the canoe brigades and packhorse trains of the fur companies, the stage coaches on the Cariboo Road, the ox teams that hauled logs a mile or two to tidewater along greased corduroy roads (skid roads), the horse or mule trains that rawhided ore down steep mountainsides. Important locally, such transportation was insufficient when an advanced industrial technology began to penetrate the Cordillera in the last third of the nineteenth century. With it came agglomeration and scale economies that depended on relatively frictionless movement. Bulky goods, services and people would have to be moved rapidly and cheaply over considerable distances. Otherwise, resources would remain undeveloped, towns would not grow, and urban systems would hardly emerge. British Columbia would neither participate vigorously in the world economy nor rationalize its internal spatial economy.

The construction of such a system was an engineering challange of the first order and a continuing political dilemma. After two expeditions (Fraser's in 1808 and Simpson's in 1828) had established that the Fraser canyon was not a feasible canoe route, the vast territory from the lower Columbia to the upper Fraser had been linked in a single trading system by a packhorse trail through the Okanagan Valley. The border agreement of 1846 bifurcated this system and inaugurated a continuing effort north of the international border to maintain a port that was connected

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to the interior across the north-south topographic grain. The Hudson's Bay Company's brigade trails from the lower Fraser River to Kamloops, the Dewdney trail, the Cariboo wagon road, the Canadian Pacific Railway, the Kettle Valley Line and the trans-Canada Highway all sought to counteract the tendency, reinforced by American trails, steamboats, railways and highways, for British Columbia to drain southward. As politics overrode topography, the engineering challenge was compounded and construction costs rose.

Yet, steamboats, railways and motor vehicles were part of a modernizing British Columbia. If motorized transportation has been essential in any modern industrial economy, its influence has been exaggerated in this province because the advent of such transportation often coincided with the beginning of settlement, because of the enormous difficulty of superimposing a modern system of transportation on rugged terrain, because of the province's remoteness from its principal markets, and because transportation would be a large percentage of the cost of the relatively unmanufactured products of a primary-resource-dependent, export economy.

From the large, scattered literature on transportation in early British Columbia, this paper extracts a compact and relatively comprehensive outline of the main patterns of British Columbia's evolving transportation system in the years between 1870 and 1930. Its main contribution is a series of maps, drawn from a wide variety of sources and intended to be as accurate a basic reference as their scale allows, to which the text is an accompaniment. It begins with descriptions of the transportation system in British Columbia in 1870 and 1890 and then considers the spread of railways and inland steamboats, roads and coastal shipping. While the paper's purpose is essentially descriptive, a final section comments on some of the relationships between the transportation system as a whole and the developing economy and society of British Columbia.

Transportation in British Columbia: 1870-1890

Figure 1 shows the main components of the transportation system in southern British Columbia in 1870. In the twelve years after the first gold rush to the lower Fraser a new transportation system emerged. Here and there, as through the Okanagan and lower Thompson valleys, it used fur traders' trails or, as from Bella Coola to Fort Alexandria, it followed far older Indian trails; but the Hudson's Bay Company's brigade trails from the lower Fraser to the interior had been abandoned, a wagon road had made the Fraser canyon a major commercial artery for

the first time, steamboats plied inland waters, and many local trails led to particular diggings. This system was created to move miners and supplies to and from the gold camps, and by 1870 it was also beginning to serve a tiny, scattered population of ranchers and farmers. Its principal inland destination was the Cariboo diggings east of Quesnel, but each of the lesser rushes — principally Rock Creek (1861), Wild Horse Creek (1864-65), Gold Creek on the Big Bend of the Columbia (1865-66), and Omineca (1869-71) — added elements.

Although Americans had contested the Pacific outlet of the British Columbian gold fields, by 1870 most of the interior trade funnelled through the lower Fraser Valley and the ports of New Westminster and Victoria. American pressure had come from the Whatcom trail built in 1858 from Puget Sound to the Fraser River thirty miles below Hope and extended east to connect with a brigade trail to Kamloops;[2] from the Columbia River route to the Okanagan Valley via the Okanagan River; from the middle Columbia, marginally navigable by shallow-draft steamboats above Fort Colville; and from trails built in the mid-1860s to connect Walla Walla in southeastern Washington with the gold camps along the upper Kootenay River (figure 1). To meet these American pressures there were two principal colonial responses; the Cariboo wagon road,[3] engineered by a detachment of Royal Engineers and completed between Yale and Barkerville in 1865; and the Dewdney Trail,[4] opened from Hope to Rock Creek in 1861 and extended to Wild Horse Creek in 1865. Audacious in conception and spectacular in execution, the wagon road took over the trade of the Cariboo camps — in 1870 most of the Whatcom trail was abandoned and the Okanagan border crossing was almost unused. The Dewdney trail, which reached Rock and Wild Horse Creeks after their rushes had subsided and which often was closed by windfalls and slides, was less successful, but it did open an intermittent connection across southern British Columbia from the lower Fraser Valley to the Kootenays. As early as 1870 cattle were driven over

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[2] For the location of this trail as originally built see George Rheumer, "Nineteenth Century Trails of the Similkameen Valley of Southern British Columbia," *Western Geographical Series* (Vancouver: Tantalus Books, 1979), pp. 19-40.

[3] The best account of the Cariboo Wagon Road is still in F. W. Howay, *British Columbia*, vol. II, chaps. 6-7.

[4] Popular but essentially accurate accounts of the Dewdney Trail are in two booklets by Frank W. Anderson, *A Frontier Guide to the Dewdney Trail: Hope to Rock Creek* and *A Frontier Guide to the Dewdney Trail, Salmo to Wild Horse*, Frontier Books, 19 and 27, 1969 and 1972.
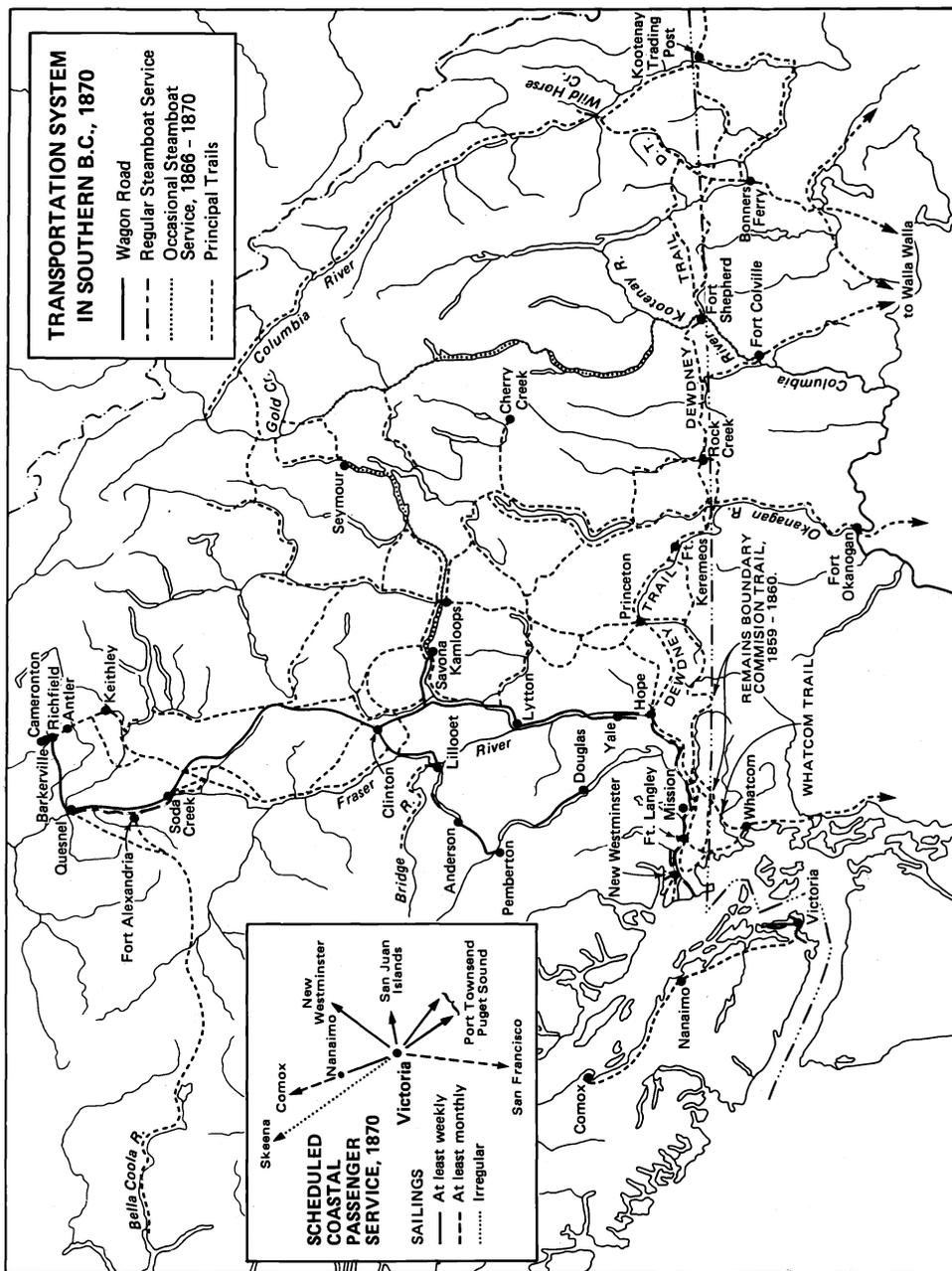
FIGURE 1

Transportation System in Southern B.C., 1870

the western third of the Dewdney trail,[5] but though the government spent $1,400 that year to clear some of its eastern sections, the few remaining miners on Wild Horse Creek relied on trails to Walla Walla.[6]

The most efficient inland parts of this transportation system were the tiny steamers that in 1870 were regularly used on fewer than 200 miles of the Fraser River.[7] Packhorse trails were the system's least efficient but most common parts. Trails that required little maintenance in grasslands soon became impassable in forests.[8] By 1870 some of the trails shown in figure 1, such as the Boundary Commissioners' trails cut in 1859 and 1860, probably had been reclaimed by bush and windfalls. Even the Dewdney Trail, better built and maintained than most, was intermittently closed before its eastern half was abandoned in the 1870s. Vastly more efficient than the trails, less efficient than the steamboats, was the colony's one important road. The Cariboo Wagon Road, well graded, 18 feet wide and more than 400 miles long, was an engineering wonder through the Fraser and Thompson canyons. It offered the economies of a turn-pike wagon road, reducing fivefold the cost of shipment from Yale to Barkerville — from about a dollar a pound to about twenty cents (in-cluding tolls) — and allowed stages to make the trip from Yale to Barker-ville in four days (for almost $100 a passenger). Express freight made the same trip in two weeks, and oxen, hauling the heaviest loads on the road, travelled six to twelve miles a day. In 1864 Lieut. H. S. Palmer, an officer of the Royal Engineers and surveyor of the trail from Bella Coola to Fort Alexandria, reported to the Royal Geographical Society in London that "with new roads, a new day has dawned upon British Columbia. Already the foundations of its ultimate prosperity seem to have been laid. . . ."[9] This was hardly so. Lumber or low-grade ore would

[5] Susan Allison, who had just arrived at her husband's Similkameen ranch, met near Princeton a rider who claimed to have come from Hope that day. Margaret A. Ormsby, ed., *A Pioneer Gentlewoman in British Columbia: The Recollections of Susan Allison* (Vancouver: UBC Press, 1976), p. 27.

[6] J. W. Christian, "The Kootenay Gold Rush: The Placer Decade, 1863-1872," PhD thesis, Washington State University, 1967.

[7] These were unpretentious representatives of a riverboat technology that had evolved on American rivers over the previous fifty years. For the general picture see Louis C. Hunter, *Steamboats on the Western Rivers* (Cambridge, Mass.: Harvard University Press, 1949).

[8] In August 1871 a geological survey party of eight men (including two choppers) and fifteen horses made 105 miles along the North Thompson in thirteen days. Andrew Birrell, *Benjamin Baltzly, Photographs and Journal of an Expedition through British Columbia: 1871* (Toronto: Coach House Press, 1978), pp. 125-32.

[9] H. S. Palmer, "Remarks upon the Geography and Natural Capabilities of British Columbia, and the Condition of its principal Gold-Fields," *Royal Geographical Society* 34 (1864): 195.

not move far on a wagon road. The Cariboo road served a gold rush and consolidated a British colony but, like the rest of the transportation system in the interior of British Columbia in 1870, was almost irrelevant to the needs of an industrial economy at a time when there were 10,000 miles of railway in England and Wales and the first transcontinental was in operation in the United States.

On the coast, sailing ships loaded lumber at the sawmills on Burrard Inlet for markets around the Pacific Rim. Victoria was the modest hub of scheduled maritime shipping. In 1870 the Hudson's Bay Company's sidewheeler *Enterprise* made two round trips a week to New Westminster, and its screw steamer *Otter* made an approximately monthly trip up the coast to Fort Simpson.[10] The *James Douglas*, a government steamer, provided weekly service to Nanaimo and monthly service to Comox.[11] Two American boats competed for the trade between Victoria and Puget Sound, but this competition would end the following year after a brief steamboat war. On the lower Fraser the intense riverboat activity of the early sixties had dwindled until, in 1870, there was only one round trip weekly between New Westminster and Yale.[12]

In 1870 merchants in British Columbia were beginning to exploit Pacific markets for the goods that eventually would be the province's export staples. The Atlantic remained beyond range, sealed by shipping costs. Within British Columbia inland shipping costs were also prohibitive. The transportation system that had evolved after 1858 served the gold rushes and made central, if not yet southeastern, British Columbia tributary to Victoria and New Westminster, but did no more.

In 1890, as in 1870, the transportation system focused on the lower Fraser Valley and depended on the Fraser-Thompson route to the interior, but parts of the Cariboo Wagon Road had been obliterated during

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[10] The best account is in Norman R. Hacking and W. Kaye Lamb, *The Princess Story* (Vancouver: Mitchell Press Ltd., 1974), part I, chap. 3.

[11] See the editorial "Nanaimo and Coast Settlements," in *The British Colonist*, Victoria, 7 August 1870, p. 2.

[12] Norman R. Hacking, "Steamboating on the Fraser in the 'Sixties,'" *British Columbia Historical Quarterly* X(1) (January 1946): 1-42. The New Westminster newspaper reported each meagre complement of passengers and cargo: "The Steamer Onward, Capt. Irving, arrived from Yale and way ports yesterday.... She carried a lot of wool, which came from the interior, from Yale to the Mission where it will be manufactured. Also 15 cows from the upper country to Langley for Messrs. Innis. A cariboo mail and express came down with about $27,000 in treasure for the banks, and about $25,000 by the express and private hands. She brought two head of cattle for R. Dickinson and three bales of furs. The water in the river is falling rapidly." *The Mainland Guardian*, New Westminster, 16 July 1870, p. 3.

railway construction, and the Canadian Pacific Railway was now the dominant ingredient of another transportation system (figure 2). Promised in 1870 when British Columbia entered Confederation; fought over for years as Victorians promoted a route that led via the Homathko Valley, Bute Inlet, and a bridge to Vancouver Island and a terminus at Esquimalt; the object of dozens of surveys of mountain passes and the subject of national political scandals; the railway was completed to Port Moody at the head of Burrard Inlet in November 1885. By June 1886 it was opened for regular passenger travel, and in 1887 its terminus was shifted a few miles west to Granville Townsite, renamed Vancouver. A few years before (1883) the Northern Pacific had been completed from Duluth and Minneapolis to Portland and north to Tacoma. A spur reached Seattle. In northern Idaho the Northern Pacific was thirty-four miles from Bonners Ferry, a Kootenay River settlement that was a short steamboat ride from the Canadian border (figure 2).

The completion of railways marked a dramatic change in the province's external connections. British Columbia was suddenly a few days from Montreal, Vancouver emerged as Canada's Pacific port and soon replaced New Westminster, a river-mouth, steamboat town, and Victoria, the provincial capital, to become the dominant city in British Columbia. Through the Fraser canyon, the route rejected by Fraser and Simpson, bulk goods could travel at thirty-five miles an hour. Within British Columbia the railway traversed five hundred unsettled and largely uncultivatable miles. A few miles from the railway, problems of transportation remained as acute as ever. There were more roads, especially in the dry belt (see figure 2), than twenty years before, but roads could not handle bulk shipments over long distances. Except for exploration, inter-regional trails were irrelevant to the needs of a resource-based, industrial economy. Therefore, as the resources of the interior came into clearer focus in the last decades of the nineteenth-century their development required direct, economical connections to the mainline of a railway. For longer hauls there were two possibilities: steamboats or spur railways.

In British Columbia in the summer of 1890 excitement had shifted to the southeast (the Kootenays) where, close to the international border and approximately midway between the mainlines of the CPR and Northern Pacific, American prospectors found silver, gold and copper ores. An American mining complex was moving into the area from the Couer d'Alene in Idaho where, a few years before, prospects had been transformed into mines by spur railway lines from Spokane and steam-
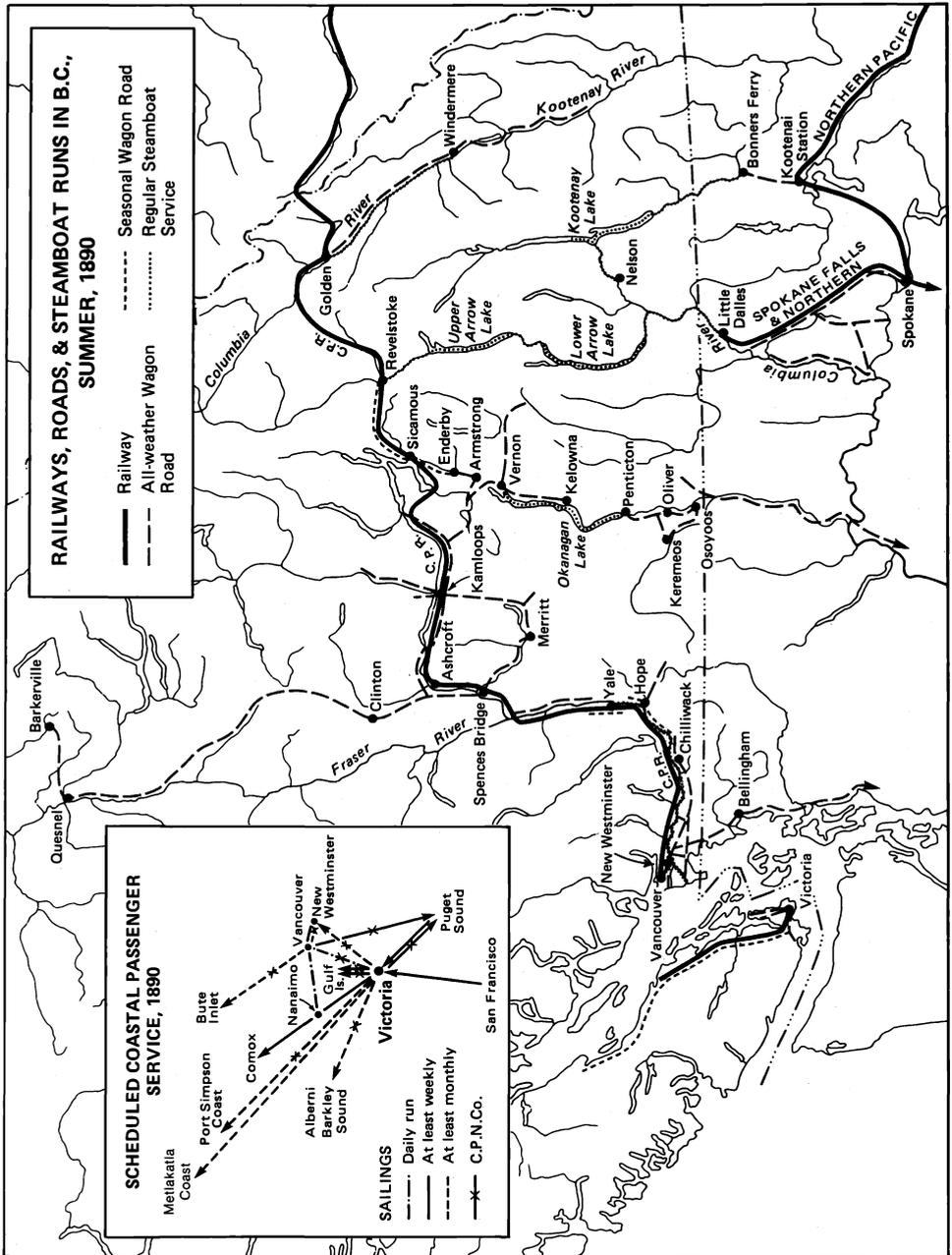
FIGURE 2

Railways, Roads, & Steamboat Runs in B.C., Summer, 1890

boats on Coeur d'Alene Lake.[13] As early as 1890 Daniel Corbin, the
Spokane railways entrepreneur responsible for the Coeur d'Alene lines,
had laid track north from Spokane to Colville and on to Little Dalles on
the Columbia, beyond which point steamboat navigation was relatively
easy to and through the Arrow Lakes. There was talk of a spur line from
Kootenay Station to Bonners Ferry. The CPR had not yet built south-
ward, but London money had put up a small smelter in Revelstoke that
could be reached in high water by steamboats from the Arrow Lakes.[14]
Overall, the situation was this: The trade of the Columbia Valley be-
tween Revelstoke and Little Dalles was disputed, but most of it, because
of the direction of development and the location of larger smelters, went
south. Because the Kootenay River between Nelson and the Columbia
River was unnavigable, Kootenay Lake was, economically, an American
lake, its external connection by steamboat to Bonners Ferry and wagon
road to the Northern Pacific. High grade ores made this trip. Tiny, make-
shift steamers on the Upper Columbia between Golden and Invermere,
on Okanagan Lake, and on the Shuswap River[15] (figure 2) served a few
farmers and ranchers and extended the southward reach of the CPR but
did not touch the mining areas.

On the coast developments were mixed. In the lower Fraser Valley
and on southeastern Vancouver Island the road network expanded,
although most roads were only seasonally passable. At any time of year
the road trip between New Westminster and Hope or between Nanaimo
and Comox was a last resort. For a federal subsidy of $750,000 and
nearly 2,000,000 acres of land, in 1886 Robert Dunsmuir completed a
seventy-mile railway between Victoria and his collieries at Nanaimo[16] —
the line and its extravagant subsidy the principal, ironic fruit of Victoria's
dream of becoming the Pacific terminus of the CPR. There had been
scheduled passenger sailings into Burrard Inlet since 1883, but in 1890
Victoria was still the principal focus of coastal shipping. The Canadian
Pacific Navigation Company, founded in 1883 and backed by Hudson's
Bay Company capital, now dominated the coastal trade.[17] At the end of

[13] John Fahey, *Inland Empire: D. C. Corbin and Spokane* (Seattle: University of
Washington Press, 1965), chap. 3.

[14] This smelter closed in 1892. Its principal problems were a difficult, expensive con-
nection to the mines and lack of smelting expertise with Kootenay ores.

[15] E. L. Affleck, *Sternwheelers, Sandbars and Switchbacks* (Vancouver: Alexander
Nicholls Press, 1973), pp. 21-56.

[16] Robert D. Turner, *Vancouver Island Railroads* (San Marino, California: Golden
West Books, 1973), chap. 2.

[17] Hacking and Lamb, *The Princess Story*, part I, chap. 5.

RAILWAYS AND STEAMBOATS IN THE SOUTHERN INTERIOR, 1897

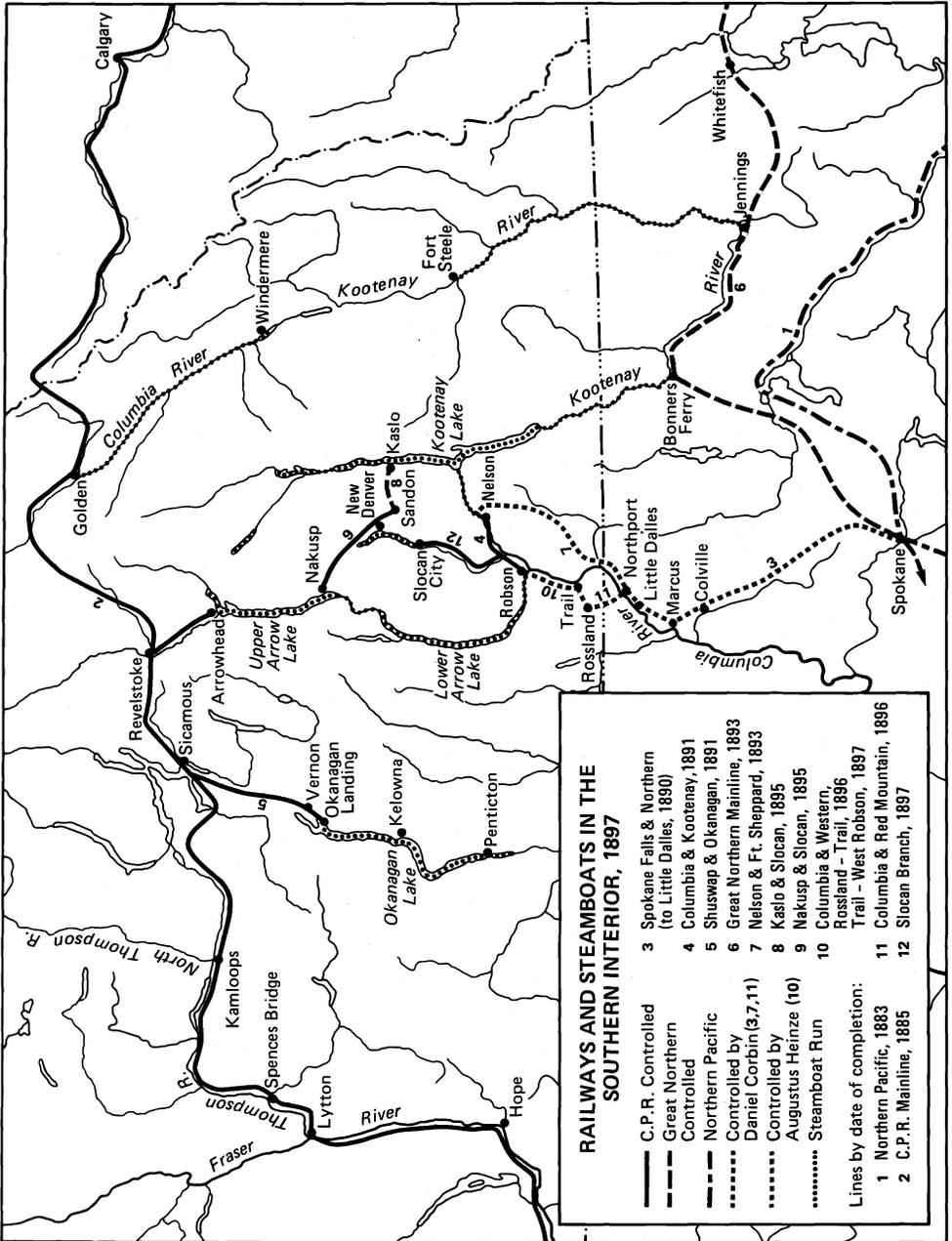|		
—— C.P.R. Controlled	3	Spokane Falls & Northern (to Little Dalles, 1890)
– – – Great Northern Controlled	4	Columbia & Kootenay, 1891
– · – Northern Pacific	5	Shuswap & Okanagan, 1891
······ Controlled by Daniel Corbin (3,7,11)	6	Great Northern Mainline, 1893
	7	Nelson & Ft. Sheppard, 1893
║║║║ Controlled by Augustus Heinze (10)	8	Kaslo & Slocan, 1895
	9	Nakusp & Slocan, 1895
········· Steamboat Run	10	Columbia & Western, Rossland – Trail, 1896 Trail – West Robson, 1897
Lines by date of completion:	11	Columbia & Red Mountain, 1896
1 Northern Pacific, 1883	12	Slocan Branch, 1897
2 C.P.R. Mainline, 1885		

FIGURE 3

Railways and Steamboats in the Southern Interior, 1897

1890 the company operated four wooden sternwheelers, four wooden sidewheelers and four screw steamers, three of them with iron or steel hulls. Its newest ship, the 240-foot *Islander*, a twin screw, steel-hulled steamer, was as up to date as the latest British cross-Channel packet. Figure 2 shows the scheduled passenger sailings to B.C. port in 1890, and identifies the Canadian Pacific Navigation Company's runs. Competing with the CPN Co. were the newly formed Union Steamship Company that, in 1890, established a run between Vancouver and Nanaimo;[18] the steamer *Delaware* that tried to compete with the Canadian Pacific Navigation Company on the lower Fraser between 1889 and 1894;[19] the tiny, three-masted auxiliary schooner, the *Barbara Boscowitz*, that for many years made a monthly run, with the mail contract, as far north as Metlakatla;[20] and the Oregon Railway and Navigation Company on the run from Tacoma to Victoria. The CPR's *Empress* sailings from Vancouver to the Orient began in 1891.

In summary, by 1890 the province was directly served by one transcontinental railway and closely influenced by another, and up-to-date steamers plied the Strait of Georgia. These were major achievements, portents for British Columbians of their province's expanding future. But behind the drama of a transcontinental railway and the new coastal steamships lay the more sober fact that a railway through a mountainous wilderness and a few steamships were the barest beginnings of a system of modern transportation in British Columbia. Together, the CPR and the coastal steamers had the capacity to reorient much of the external trade of the Strait of Georgia region but, except for the impetus given to the growth of Vancouver, they were largely insufficient to shape the internal spatial economy of British Columbia. Away from the mainline of the CPR and a few steamship runs, the transportation system in British Columbia in 1890 still had a negligible capacity to move bulk goods quickly over appreciable distances at modest cost. This had to be achieved were a modern spatial economy to be imposed on British Columbia and, as events in the Kootenays were showing, achieved in an integrated system north of the international border were British Columbia not to be an economic dependent of the United States.

[18] Gerald A. Rushton, *Whistle Up the Inlet: The Union Steamship Story* (Vancouver: J. J. Douglas Ltd., 1974), chap. 2.

[19] The *Delaware* was a 136-foot sternwheeler built in 1889 by Captain Ashbury Insley. Faced with the hold of the Canadian Pacific Navigation Company on the lower Fraser and with declining freight from Yale and Hope to New Westminster as trains replaced riverboats, she was dismantled in 1894.

[20] Owned by Joseph Boscowitz, a Victoria fur dealer, and Captain J. D. Warren.

Railways and Inland Steamboats, 1890-1930

In these years in North America most long-distance, inland transportation still depended on railways and on steamboats that, on navigable lakes and rivers, were their relatively inexpensive complements. As industrial capital penetrated the British Columbia interior after 1890 it would be accompanied by these forms of transportation. On British Columbia's interrupted waterways steamboat runs handled local traffic over limited distances; railways were built either for such trade or to influence transcontinental, and even trans-Pacific, trading systems. There were two principal phases of construction. The earlier and more local phase grew primarily out of the mining developments in southern British Columbia and reflected the protracted struggle between transcontinental railways — the CPR and American rivals — for control of the north-south trade between them. The second and more external phase came after 1910 when two new railways were built to challenge the CPR transcontinental dominance. Steamboats on inland waterways were closely associated with the former phase, but not with the latter. The steamboat's advantage lay in the speed and relative cheapness with which, where waterways permitted, a local bulk carrier could be created and, as such, they preceded and were complementary to, but rarely competitive with, railways. After a time, the number of steamboat runs declined as the rail network expanded. Railway construction created almost 3,000 miles of track (excluding logging railways) in British Columbia by the end of World War I, far more than the provincial economy could sustain. Construction was fuelled by an expanding resource-based economy, by intense international competition along the border between rival railway companies, for a time by generous government grants to railway builders, by massive doses of external capital, and by the continuing conviction, however often qualified by North American experience, that railways and prosperity were synonymous.

In southern British Columbia in 1897 the transportation system was largely dominated by steamboats, and was aligned north-south between rival transcontinental railways. In 1893 James Jerome Hill[21] had completed the Great Northern Railway from Minneapolis to Everett on Puget Sound with connections to Seattle and to the Fraser River opposite New Westminster, building as close as possible to the border to draw trade from the CPR. Following the upper Kootenay River between Jen-

21 For a picture of this remarkable man see Albro Martin, *James J. Hill and the Opening of the Northwest* (New York: Oxford University Press, 1976).

nings and Bonners Ferry, the Great Northern was poised at the threshold
of the Kootenay mining camps. In the same year Daniel Corbin extended
his railway to Nelson, and three years later built a spur to the Rossland
mines. In 1895 a narrow gauge railway controlled by the Great Northern
opened from Kaslo on Kootenay Lake to Sandon in the heart of boom-
ing Slocan. American railways were in southern British Columbia. The
CPR responded by building a short line from Nelson to the Columbia
River, thereby gaining roundabout access to Kootenay Lake; by build-
ing south from Revelstoke to the head of the Arrow Lakes to bypass a
difficult stretch of the Columbia River; by building two spur lines to
reach the Slocan camps, one from Nakusp on the Upper Arrow Lake
and the other up the Slocan Valley, and by competing for the steamboat
trade on the upper Columbia and the Kootenay. For the rest the regional
transportation system depended on steamboats, and in the spring of
1897 the CPR bought out the Columbia and Kootenay Steam Naviga-
tion Company, the largest steamboat company then operating in the
Kootenays; launched its first Kootenay steamboat at Nakusp; and man-
aged for a short time, by controlling all the steamboats on the Kootenay
north of Bonners Ferry, to shut the Great Northern from Kootenay
Lake.[22] To the west, a steamboat and spur railway gave the CPR control
of the Okanagan. The Kootenay trade was the larger plum, and there,
for all the vigour of its response to American advances, the CPR was at
a competitive disadvantage. Some mines, such as the rich silver-lead
workings on St. Mary River just west of the old placer camp at Wild
Horse Creek, were beyond its range. These ores could only be shipped by
steamboat down the Kootenay River to Jennings, Montana. Throughout
the Kootenays the CPR was hampered by inadequate Canadian smelters.
The small smelter at Revelstoke had closed in 1892, while another at
Golden proved equally isolated and ineffective. Better located smelters at
Nelson and at Pilot Bay on the east side of Kootenay Lake were insuffi-
cient to handle the Kootenay ores. The CPR had not yet purchased
Augustus Heinze's smelter at Trail, which in any case (in spite of
Heinze's narrow gauge railway to Rossland) was losing much of the
Rossland business to American rivals. The Kootenay mines had been
opened from the south, and in 1897 they still depended on the southward
connection.

By 1901 the situation had changed considerably (figure 4). Although
the Great Northern had acquired Corbin's railways to Nelson and Ross-

[22] Affleck, *Sternwheelers, Sandbars and Switchbacks*, pp. 43-46.
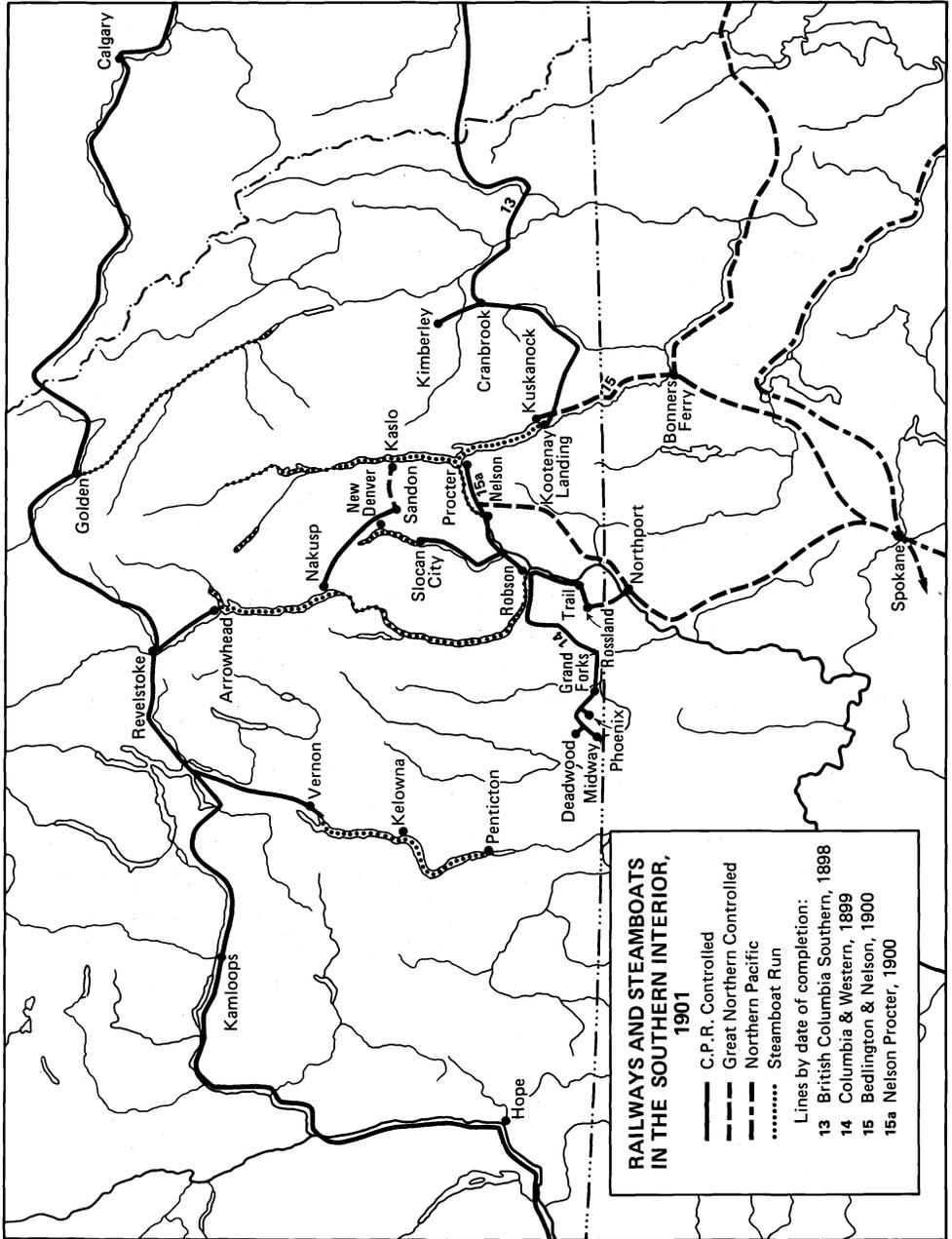
FIGURE 4

Railways and Steamboats in the Southern Interior, 1901

land in 1898 and had built to Kootenay Lake from Bonners Ferry in 1900, its relative position in southern British Columbia had weakened. The British Columbia Southern Railway, controlled by the CPR, was completed from Lethbridge, Alberta, through the Crowsnest Pass to Kootenay Lake in 1898, thereby opening up the Crowsnest coal seams and abruptly terminating steamboat traffic along the Upper Kootenay. In the same year the CPR bought out Heinze's smelter at Trail and his railway along the Columbia, and in 1899 extended the latter westward to the new copper mines in the Boundary Country. The CPR then had an east-west railway, joined by a thirty-mile steamboat run on Kootenay Lake, across half of southern British Columbia. At the same time, British and Eastern Canadian companies were buying into Kootenay mines. American entrepreneurship was retreating from the Kootenays, leaving some gutted mines and taking eastern Canadian and British capital to fuel a building boom in Spokane.[23] In fact, the spectacular Kootenay years were over, but the struggle between the CPR and the Great Northern for the trade of southern British Columbia would continue.

By 1909 the Great Northern came as close as it ever would to dominating all of southern British Columbia (figure 5). After building some 300 miles of railway in southern British Columbia from 1897 to 1899, the CPR built only two short lines in the first decade of the twentieth century. Hill had been more active. In the East Kootenay the Great Northern built north to Fernie and beyond to gain access to Crowsnest coal. In the Boundary country it bought controlling interest in the copper mine at Phoenix and the smelter at Grand Forks, and connected both by rail to Marcus on the Columbia River near the old Fort Colville. When it began shipping coal from the Crowsnest to Grand Forks it undermined the CPR's principal traffic in southern British Columbia. Farther west the Great Northern built to the gold camp at Hedley and the copper camp at Princeton to control the Similkameen Valley. It bridged the Fraser River to reach Vancouver (1904) and began to build east through the lower Fraser Valley. Although many British Columbians feared that Hill's ambition was to drain the province southward, he was now competing for the east-west trade across southern British Columbia. It remained to pierce the Cascade mountains east of Hope where, in 1909, both the CPR and the Great Northern had survey parties.

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[23] J. S. Church, "Mining Companies in the West Kootenay and Boundary Regions of British Columbia, 1890-1900; Capital Formation and Financial Operation," MA thesis, UBC, 1961; also Fahey, *Inland Empire*, chap. 13.
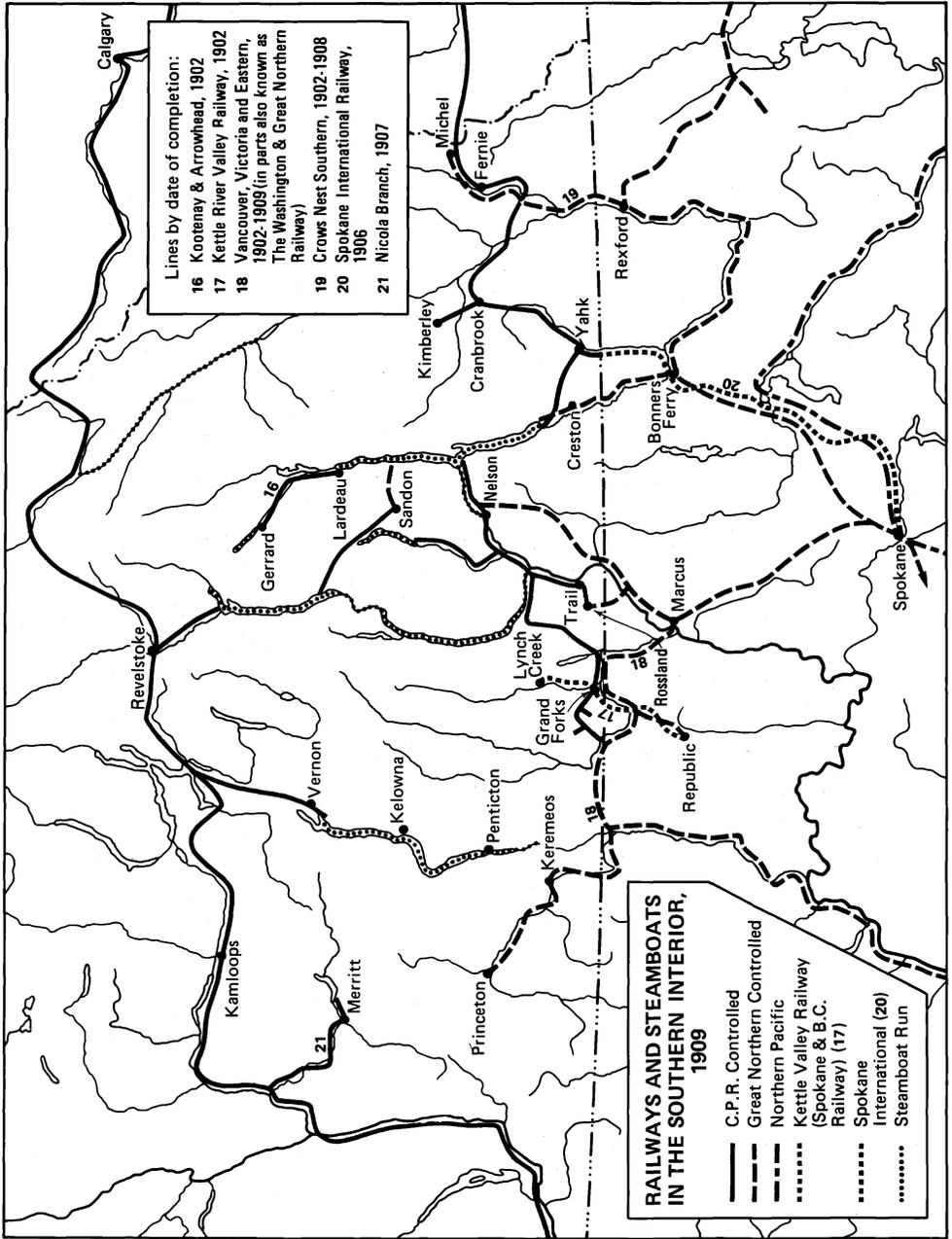
Lines by date of completion:

16 Kootenay & Arrowhead, 1902
17 Kettle River Valley Railway, 1902
18 Vancouver, Victoria and Eastern,
    1902-1909 (in parts also known as
    The Washington & Great Northern
    Railway)
19 Crows Nest Southern, 1902-1908
20 Spokane International Railway,
    1906
21 Nicola Branch, 1907

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1909

C.P.R. Controlled
Great Northern Controlled
Northern Pacific
Kettle Valley Railway
(Spokane & B.C.
Railway) (17)
Spokane
International (20)
Steamboat Run

FIGURE 5

Railways and Steamboats in the Southern Interior, 1909

In the end, the railway through the Cascades was built by the CPR.[24] In 1913 the Great Northern signed an agreement with the CPR for joint running rights on a line through the Coquihalla Valley east of Hope, but the CPR constructed and controlled this final segment (except for a track laid in the 1930s to replace steamboats on southern Kootenay Lake) of the line across southern British Columbia. The CPR had acquired a small private railway, the Kettle River Valley Railway, that a few years before was built from Grand Forks to the smelter not far away at Republic in Washington State, and used its name for the Kettle Valley Line of the CPR. By the summer of 1916 this line was completed as shown in figure 6. Built at huge expense through some of the most difficult terrain in the province, a remarkable feat of railway engineering, and a first effective link across southern British Columbia from the coast to the Kootenays, the Kettle Valley was neither profitable nor a catalyst of regional economic growth. It was completed long after the principal Kootenay boom. It faced a postwar depression, closing copper smelters at Princeton and in the Boundary Country, and increasing competition from roads.

Between 1909 and 1917 two new transcontinental railways, the Grand Trunk Pacific and the Canadian Northern, were built into British Columbia, a feat of construction almost comparable to the building of the Panama Canal and on a scale that dwarfed any previous or subsequent railway building in the province. Both entered the province through the Yellowhead Pass, 150 miles north of the CPR (figure 6). The Grand Trunk Pacific[25] grew out of a partnership (in a railway to be known as the National Transcontinental) between the Laurier government in Ottawa and the London-based Grand Trunk Railway Company that, fifty years before, had built the first railway from Montreal across the peninsula of southern Ontario. The National Transcontinental was a Liberal response to the CPR, it was also intended to open up northern Quebec and Ontario, and it was a last reflection of an imperial vision. More than a hundred years before, Alexander Mackenzie propounded a

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[24] Barrie Sanford, *McCulloch's Wonder: The Story of the Kettle Valley Railway* (West Vancouver: Whitecap Books, 1977), especially chaps. 9-11. Hill's age (he was born in 1838), the defeat in 1911 of the Laurier government and of its plans for a reciprocity treaty with the United States, the enormous cost of a railway through these mountains and, perhaps, some shrewd hunches about likely returns, were the reasons for the Great Northern's retreat.

[25] For general accounts of the Grand Trunk Pacific see: G. R. Stevens, *History of the Canadian National Railways* (Toronto: Macmillan, 1973), chaps. 11, 12 and 16; and J. A. Lower, "The Grand Trunk Pacific Railway and British Columbia," MA thesis, UBC, 1939.
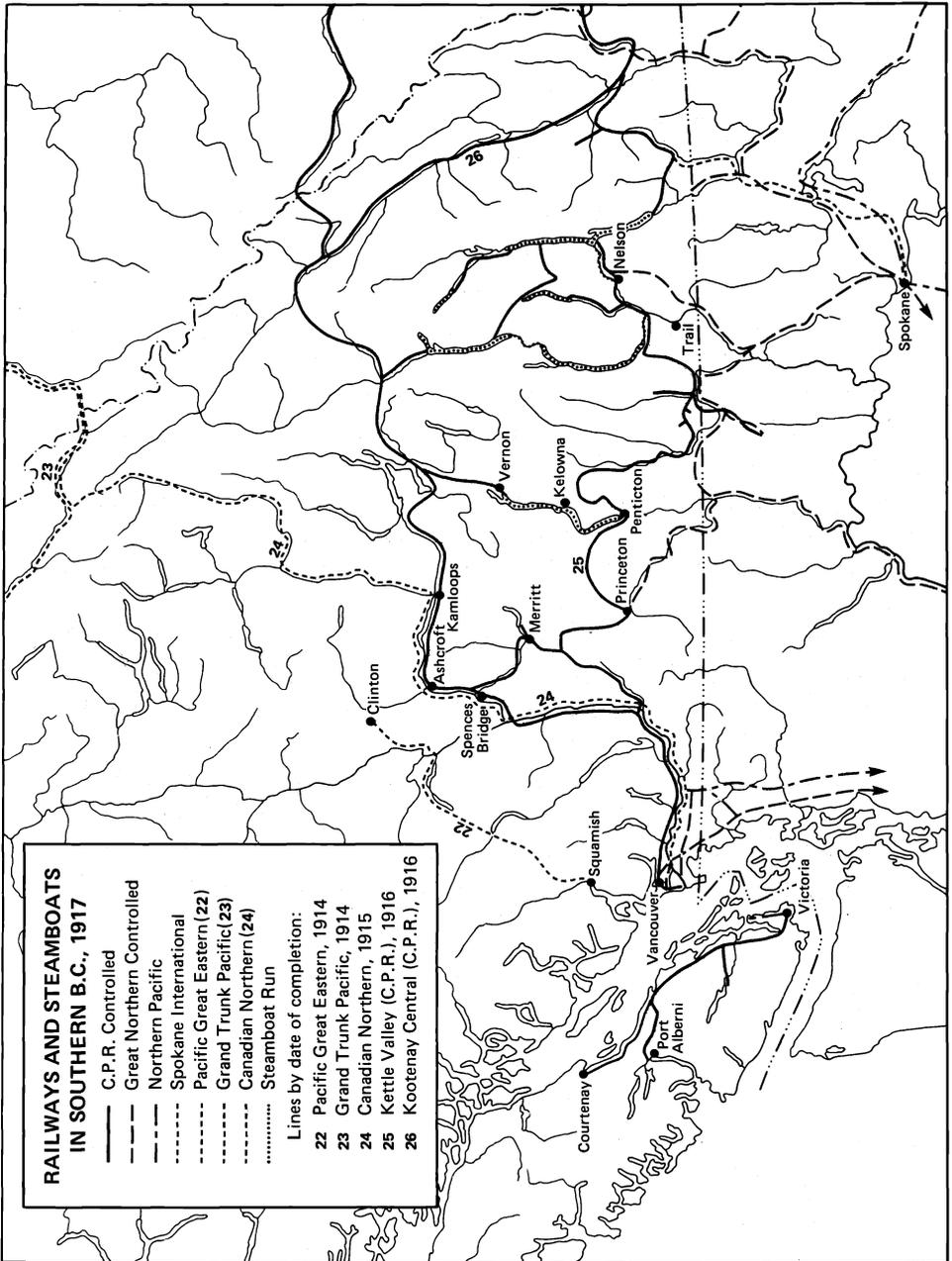
FIGURE 6

Railways and Steamboats in Southern B.C., 1917

British connection across North America to the Pacific and the Orient, a variant of the older dream of a northwest passage, and on the eve of World War I a similar vision still beguiled British investors. Running largely through wilderness between two inconsequential places on different oceans — Moncton, New Brunswick, on the Petitcodiac River at the head of the Fundy tides; and Prince Rupert, created by the railway out of an Indian reserve on an island at the mouth of the Skeena — the National Transcontinental was built to exacting standards: 80 pound rails, curves not to exceed 4 percent, and a grade of 0.5 percent through the lowest pass in the southern Rockies. A locomotive could haul seven times as much through the mountains on the GTP as on the CPR and this, plus Prince Rupert's more northerly location and, therefore, shorter great circle sailing distance to the Orient, was thought to give the line a decisive competitive advantage.

The Canadian Northern[26] depended on the talent and energy of two small-town Ontarians, William Mackenzie and Donald Mann, who built a successful settler railway across the prairies and then, their bonds guaranteed to the extent of $35,000 a mile by the Conservative government of British Columbia, undertook in 1910 to build to Vancouver. To ensure traffic for their railway, Mackenzie and Mann invested heavily in coastal industries. They bought the Dunsmuir collieries on Vancouver Island. They built a huge, modern sawmill (the Canadian Western Lumber Company) at Fraser Mills just east of New Westminster, acquired extensive timber lands on Vancouver Island, where they owned and ran the Comox Logging and Railway Company, and hauled the 120 million board feet of timber cut annually by this operation across the Strait of Georgia to Fraser Mills with tugs of the Canadian Tugboat Company, another Mackenzie and Mann subsidiary.[27] They invested in hardrock mining, in the fishing industry, and even in whaling. Although required by the terms of their agreement with the provincial government to build hotels in Vancouver and to establish a steamship line to the Orient, Mackenzie and Mann built primarily with an eye to Canadian rather than to trans-Pacific trade. Although their track through the Thompson and Fraser canyons was on the side of the river rejected by the CPR standards comparable to the Grand Trunk Pacific's were maintained until the final months of construction, when the Canadian North-

[26] The best general account of this railway and of its builder is in T. D. Regehr, *The Canadian Northern Railway* (Toronto: Macmillan, 1976).

[27] G. W. Taylor, *Timber: History of the Forest Industry in B.C.* (Vancouver: J. J. Douglas, 1975), pp. 91-92.

ern teetered on the brink of receivership. The line was in operation to Vancouver before the end of 1915. The Grand Trunk Pacific established regular passenger service to Prince Rupert a year earlier.

Finally, in 1912, after the Grand Trunk Pacific had become the unwelcome inheritance of Robert Borden's Conservative government in Ottawa, the Conservative government of British Columbia guaranteed bonds of a new railway, the Pacific Great Eastern, to be built from the Grand Trunk Pacific mainline at Prince George to North Vancouver. In supporting the Pacific Great Eastern the provincial government underwrote, to all intents and purposes, a spur of the Grand Trunk Pacific, for the Grand Trunk Pacific held running rights on the Pacific Great Eastern and a first option to purchase it. Intended to give the Grand Trunk Pacific a second Pacific outlet and access to the Vancouver harbour, in 1917 the line ran, somewhat pointlessly, from Squamish at the head of Howe Sound thirty miles from North Vancouver to the tiny interior town of Clinton (figure 6).

All of these railways foundered in the changed circumstances surrounding World War I. Depression after 1912, then war, terminated the settlement boom of the previous decade. Traffic did not materialize. Bond issues were coming due, money was scarce, and prices were rising. In the case of the Grand Trunk Pacific, the advantages of grade and curvature were offset by distance (Vancouver was 271 miles closer than Prince Rupert to Winnipeg), while the shorter sailing distance across the Pacific was offset by Prince Rupert's isolation from other cargo-supplying North American ports and, probably, by the shift of Pacific trade from British to Japanese ships. The anticipated Pacific connection did not develop. Vastly expensive railways were severely underused. Companies could not meet operating expenses much less interest payments on loans, and federal and provincial governments soon had to decide either to let railway companies collapse or to take them over. One after the other they became public property: the Canadian Northern, taken over by the federal government in 1917; the Pacific Great Eastern, taken over by the government of British Columbia in 1918; and the Grand Trunk Pacific, taken over by the federal government in 1920. The new Canadian National Railways became the longest railway system in the world. Behind its miles of track lay millions of English pounds squandered in Canadian railways like lives in the trenches.

After this, railway construction in British Columbia virtually stopped. The provincial government extended the Pacific Great Eastern to Quesnel in 1912, but not to Prince George for another thirty years. In the

1920s short stretches of CPR and CN track were laid in the Okanagan, and there was a little construction on Vancouver Island. Essentially, British Columbia's railways were built by 1917.

What had been achieved was a number of corridors of modern transportation through the mountains. Along these corridors the economies of modern transportation prevailed; away from them the transportation problem in most of British Columbia was as acute as it had been in 1890. If a railway was an excellent medium of built transport between distant points, it served a narrow band of intervening space, its width dependent on other modes of transportation. British Columbia's railways ran largely through wilderness where, to all intents and purposes, they had no lateral effect. They did provide the capacity to link British Columbia to a transcontinental economy, and to focus this trade at its western end. They did facilitate the establishment of many industrial camps in the wilderness, and influenced the locations of the towns that serviced them. At great cost, they did bring much of southern British Columbia into the direct economic range of Vancouver, but only after the Kootenay boom had passed and at a time when railways were beginning to be challenged by other forms of transportation. What, alone, they could not do was to provide anything like an integrated economic space across the breadth of British Columbia.

Roads, 1890-1930

Until well into the 1920s, roads in British Columbia were intended as local supplements to a transportation system based on railways and steamboats. As such, they attracted little external or local capital. In the 1890s the provincial government's expenditure on roads amounted to a few hundred thousand dollars a year, and to only a few million dollars a year (including monies from general revenue and from loans) by the 1920s.

Built for wagons, most early roads in British Columbia were narrow, winding, and seasonally impassable. In the early 1890s many roads were glorified trails, but as the government let small contracts each year for building culverts and bridges, and for improvements such as road widening, crowning, grade reduction and gravelling,[28] their quality gradually improved. Nevertheless, in the first years of this century the characteristic road in British Columbia was an unsurfaced dirt track twelve to fourteen

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[28] Before 1904 these contracts are described in some detail in the "Annual Report of the Minister of Public Works" printed in the *Sessional Papers of the Province of British Columbia.*

feet wide.[29] Road work usually was performed by local farmers and their teams, working under contract. Road machinery in British Columbia in 1907 comprised a rock crusher, a fifteen-ton steam roller, a traction engine, two horse rollers and twenty-five tiny, horse-drawn graders.[30]

The principal roads in British Columbia in 1903 are shown on figure 7. The West Kootenays, still the interior focus of economic growth, had no roads more than a few miles long. A wagon trip east or west out of the Kootenays was impossible, and the only lengthy Kootenay road followed the Rocky Mountain Trench from the border to Golden. Through the dry belt, where roads could be built and maintained relatively easily, a considerable network of roads stretched from the Cariboo diggings to the southern Okanagan. As the Cariboo Wagon Road through the Fraser and Thompson canyons had been disrupted by railway constructions, there was no road between this interior network and the coast. The lower Fraser Valley contained much the densest network of regional roads in the province (figure 8). On Vancouver Island a trunk road from Victoria to Comox was supplemented by many local roads in the Saanich Peninsula, in the Cowichan Valley, and in the Nanaimo area. In all, these narrow dirt roads added up to a considerable but scattered road system. The government maintained some 6,000 miles of roads and 4,500 miles of trails in 1903.[31]

Wagon roads carried mail, passengers and express freight for considerable distances, and bulk freight for rarely more than a few miles. The longest road trips were in the Cariboo where there were twice weekly stages from Ashcroft to Barkerville (280 miles). The few ranchers in the Chilcotin (west of the middle Fraser) and many others throughout the dry belt depended entirely on roads for supplies, marketing and mail. Their cattle walked to the railway. Little freight was hauled along these roads. Only 1,800 tons of freight moved north along the Cariboo Road from Ashcroft in 1903, almost all of it to destinations far short of Barkerville.[32] The busiest roads in the province were probably the three and a half miles between Victoria and Esquimalt, reported to carry "an immense amount of traffic" (15,000 tons annually),[33] and the Ladner Trunk

[29] There were a few miles of macadam in the Saanich peninsula near Victoria and in the Lower Fraser Valley. The trunk road between Vancouver and New Westminster was twenty-eight feet wide.

[30] *Sessional Papers*, 1907, p. I5.

[31] *Sessional Papers*, 1901, p. 373.

[32] *Sessional Papers*, 1903, p. F86.

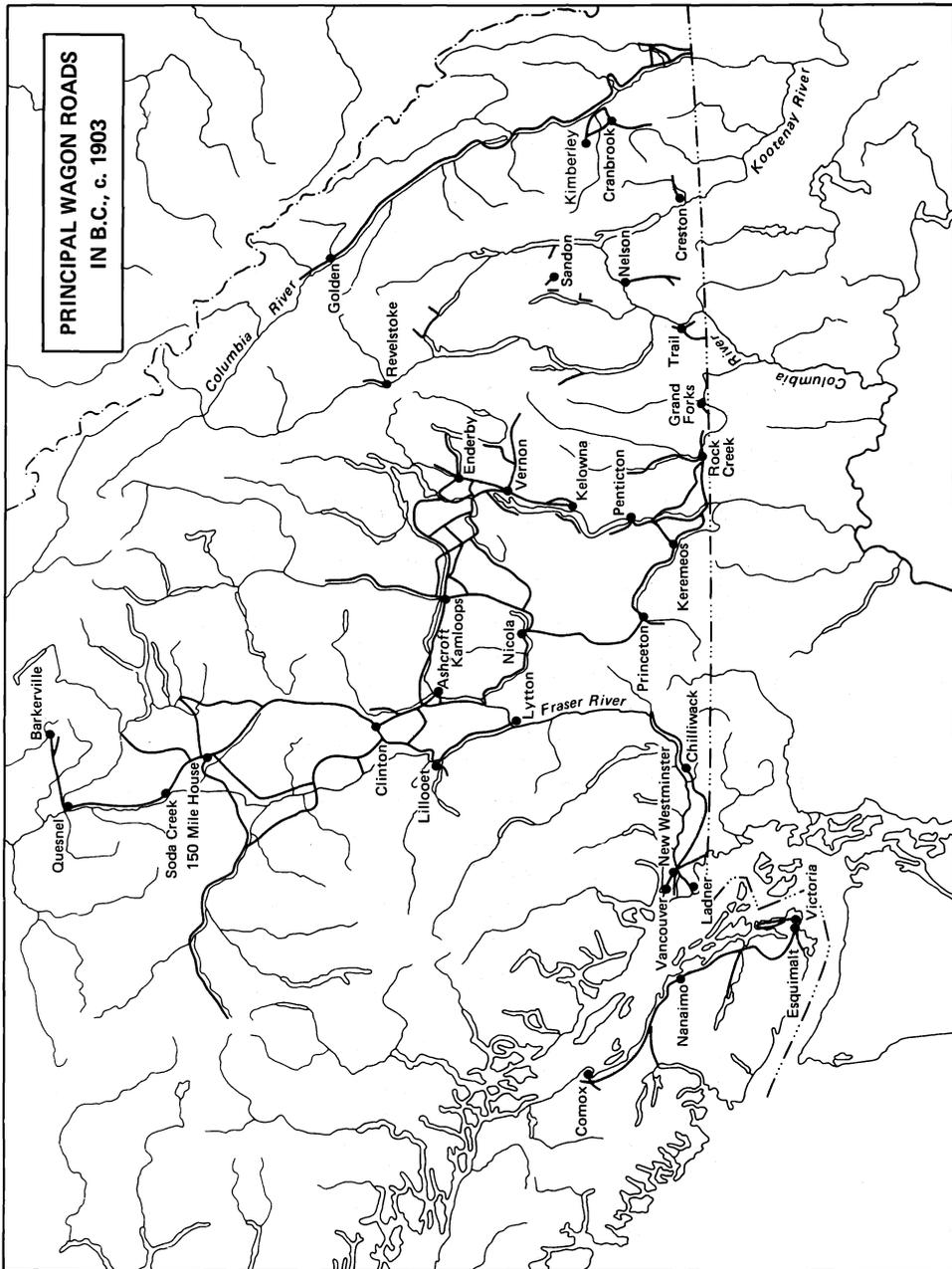[33] *Sessional Papers*, 1903, p. F15.

PRINCIPAL WAGON ROADS
IN B.C., c. 1903

FIGURE 7

Principal Wagon Roads in B.C., c. 1903

RAILWAYS, ROADS AND TRAILS
IN LOWER FRASER VALLEY, 1905
(After R.H.Meyer)

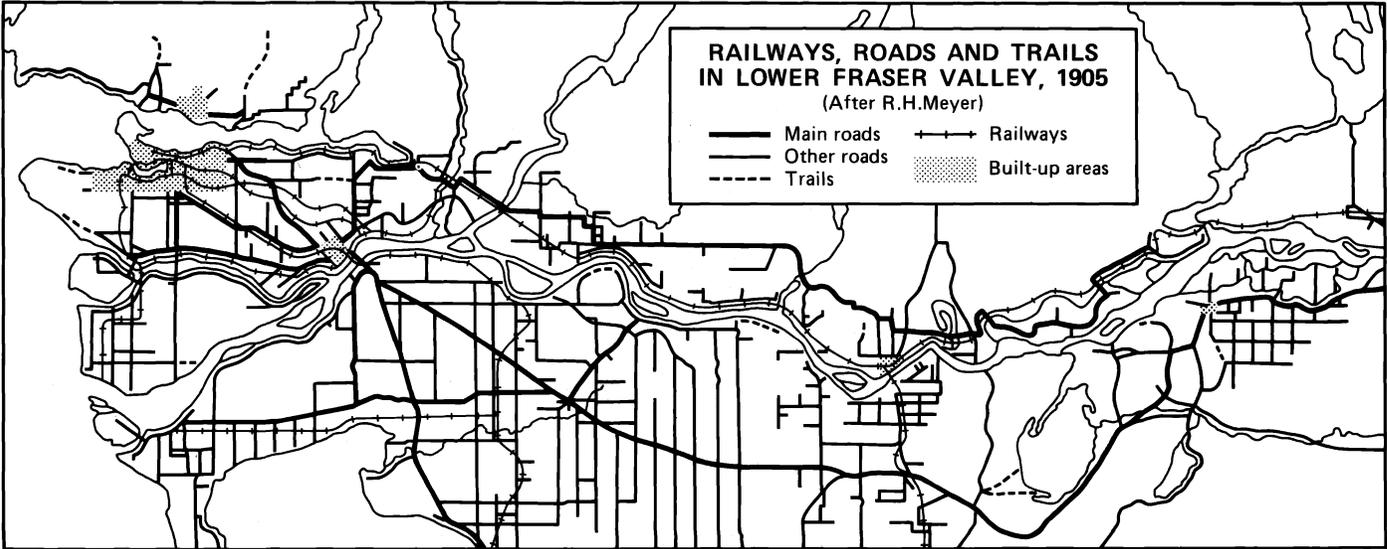| Main roads | Railways |
| Other roads | Built-up areas |
| Trails | |

FIGURE 8

Railways, Roads and Trails in Lower Fraser Valley, 1905

Road, extending for nine miles through the rich farmland south of the mouth of the Fraser. The trunk road from Vancouver to New Westminster carried only 6,000 tons a year,[34] mostly for settlers along the road; bulk shipments between these cities fifteen road miles apart moved by water. The main trunk road through the lower Fraser Valley was heavily used near New Westminster but was barely maintained east of Chilliwack. As bulk carriers, wagon roads served local needs. In the Kootenays they connected mines on the mountainsides to railways in the valleys; in the Okanagan they connected farms to lakeshore and steamer. In the lower Fraser Valley they connected farms to railway or river. As elsewhere on the eve of the automobile, transportation by rail and road belonged to different technological eras.

The automobile age reached British Columbia in the twelve years between World War I and the Depression. Fewer than 200 motor vehicles were registered in British Columbia in 1906, 15,000 in 1918, and very nearly 100,000 in 1930. Automobile associations proliferated, motoring magazines and road maps appeared, auto touring became widely popular, and garages began to accompany suburban housing. By the late 1920s, trucks and stages (buses) were competing with railways for local traffic.

Although individual automobiles could be pushed and pried through creek beds and bounced over railway bridges to reach remote parts of the province, the wagon roads of the beginning of the century were inadequate to handle this revolution in transportation. Automobile traffic required wider roads, different grades and curves, smoother surfaces and stronger bridges — a new, expensive road network. Through the 1920s the provincial Department of Public Works borrowed several million dollars a year to finance the capital costs of building new roads and bridges, built up a stock of road equipment (18 gas shovels, 50 power graders, 100 tractors, and 250 trucks by 1927),[35] appointed road engineers and foremen to each Road District, and began hiring its own road crews. By 1930 it had replaced most of the major bridges of the wagon era, and had begun using bulldozers and power shovels to build new roads. The quality of many roads improved, but a dirt road opened for automobile traffic through the Fraser Canyon in May 1927, the first road link between coast and interior since CPR construction destroyed sections of the Cariboo Wagon Road, was two feet narrower than the road the Royal Engineers had built in the 1860s. In 1930 the British Columbia

[34] *Sessional Papers*, 1903-04, p. E20.
[35] *Sessional Papers*, 1928, II, p. U8.

road system was still in a long period of transition between the requirements of wagons and of motor vehicles. Automobile associations and municipalities rather than the provincial government put up the few road signs; the government "hoped ultimately to have a Province-wide uniform system."[36] Of course, the automobile highway would be almost as difficult to impose on British Columbia as had been the railway. Because the motor vehicle did not immediately require its own roadbed, because its early use seemed recreational rather than industrial and local rather than inter-regional, and because the Depression and World War II intervened, the provincial highway system would catch up with the automobile only in the 1950s.

Figure 9 shows the road system in British Columbia in 1930. There were then three roads across the continental divide. After the opening of the Fraser Canyon road in the spring of 1927 it was possible to drive through British Columbia from Vancouver to Alberta. Roads had expanded along the narrow lakes of the West Kootenays, along the west side of Okanagan Lake, up the North Thompson toward the Yellowhead Pass, through the Fraser and Thompson canyons, and had come fairly close to connecting Prince Rupert and Prince George. Yet east of the lower Fraser Valley there was hardly a mile of pavement. Roads classified as "gravelled" were endlessly dusty and wash-boarded; long distance travel by motor vehicle was still slow and difficult. An average of forty-five cars a day travelled the Fraser Canyon road during the six months after its opening.[37] In 1930 there was still no bus service between Vancouver and the interior. Trucks, the largest with a capacity of three tons, operated on Vancouver Island, in the Lower Mainland, on local hauls in the interior, or between Vancouver and Seattle, but were hardly yet carriers of inter-regional trade.[38] Throughout the 1920s, a motor tour from Vancouver to the prairies almost invariably followed the paved highways of Washington State.[39]

Because the road system in Washington State had been converted more rapidly to the automobile than that in British Columbia, the motor vehicle reopened British Columbia to the south. In 1930 two paved roads crossed Washington. Paved roads reached north to the border of British

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[36] *Sessional Papers*, 1928, II, p. U7.

[37] *Sessional Papers*, 1928, II, p. U6.

[38] For a list of trucks registered in B.C. in 1929-30 and for their tonnages see *Sessional Papers*, 1930-31, pp. T48-56.

[39] For a description of such a trip see Sir Charles Piers, "Vancouver to Calgary by Motor Car," *Pacific Coast Motorist*, August 1926, p. 312.
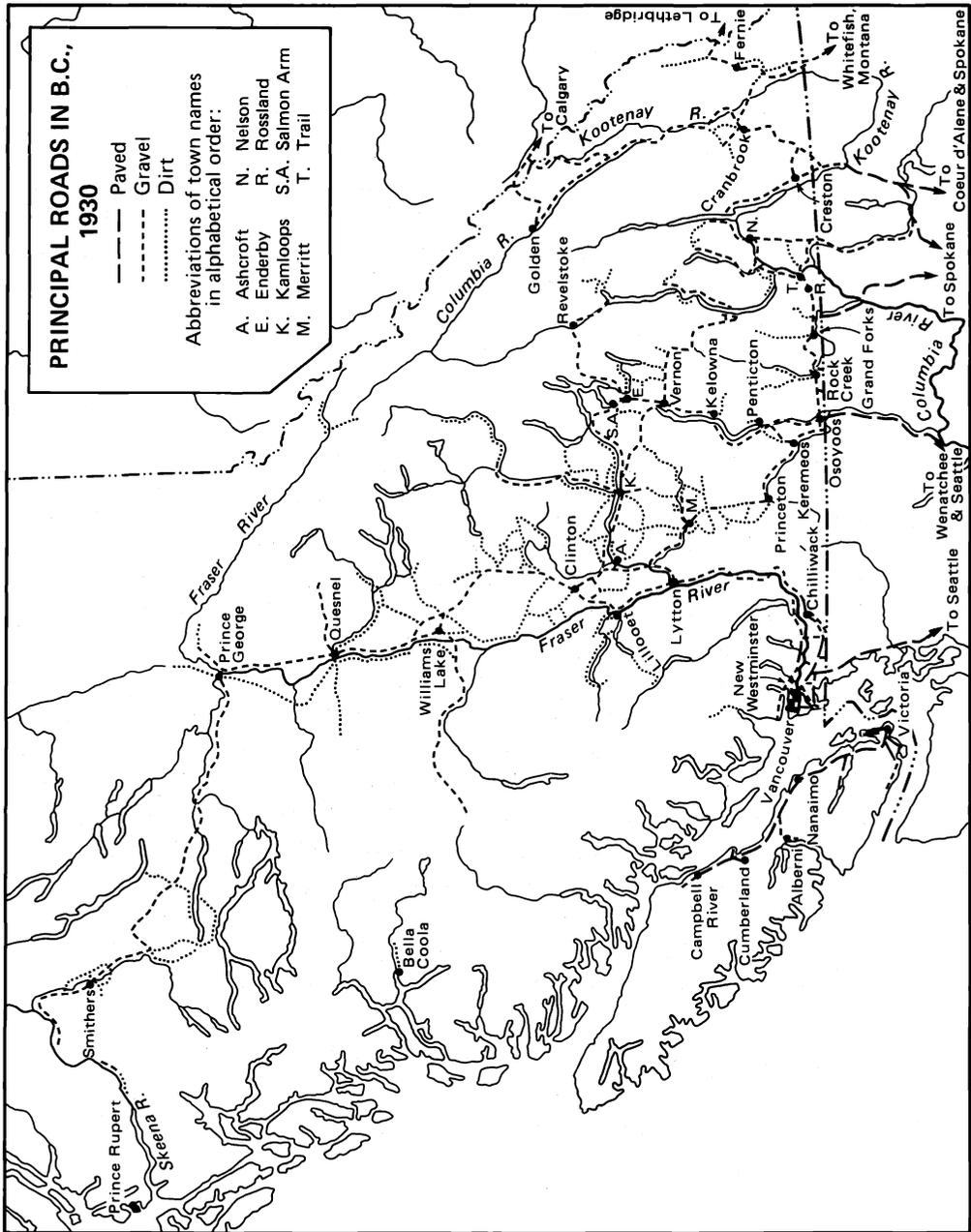
FIGURE 9

Principal Roads in B.C., 1930

Columbia at three points, and by the early 1920s there was a paved road along the Pacific coast from the Canadian border to Mexico. The Vancouverite with a car and plans for a weekend trip probably would drive to Seattle. The driving time from the Southern Okanagan to Tacoma or Seattle was considerably less than to Vancouver. Spokane, the early metropolis of the Kootenays, regained something of its former dominance when it could be reached in a few hours from most parts of the Kootenays while Vancouver or Calgary were two driving days away. In the British Columbia of 1930 the principal spatial effects of the increased personal mobility associated with the automobile were apparent in suburbs, in journeys-to-work, and in the growing recreational travel across the border.

Coastal Shipping, 1890-1930

Even in the difficult waters of a still poorly charted, frequently fogbound and intricately fiorded coastline, it was easier to impose a modern network of transportation on coastal than on interior settlements. Up-to-date coastal steamers were on the coast in 1890 and continued to be for the next forty years as a great variety of shipping spread a web of transportation over the coast that connected ports, canneries and lumber camps to each other and to the outside world. In 1890 most B.C. coastal steamers were side- or stern-wheelers with wooden hulls. Schooners still sailed from Victoria to the sealing grounds in Bering Sea.[40] Twenty-five years later such ships were almost gone. Steel hulls had largely replaced wooden ones, some steamers had been converted from coal to oil, and turbine engines were beginning to be used in passenger ships. By 1930 the CPR's fleet of nineteen ships represented an investment of over $10,000,000,[41] little in comparison with that in railways but far larger, for example, than that in Newfoundland shipping through the same years.[42]

In 1901 Victoria was still the principal port of entry from the south, but otherwise the focus of shipping had shifted to Vancouver (figure 10). New Westminster, the steamboat port at the mouth of the Fraser River,

[40] E. W. Wright, ed., *Lewis and Dryden's Marine History of the Pacific Northwest* (Portland, 1895, and republished in New York in 1961 by the Antiquarian Press), chap. XXI.

[41] Hacking and Lamb, *The Princess Story*, p. 273.

[42] Eric W. Sager, "A Report on the Shipping Industry of B.C., 1867-1914," unpublished technical paper, Atlantic Canada Shipping Project, Memorial University, St. John's, Newfoundland.
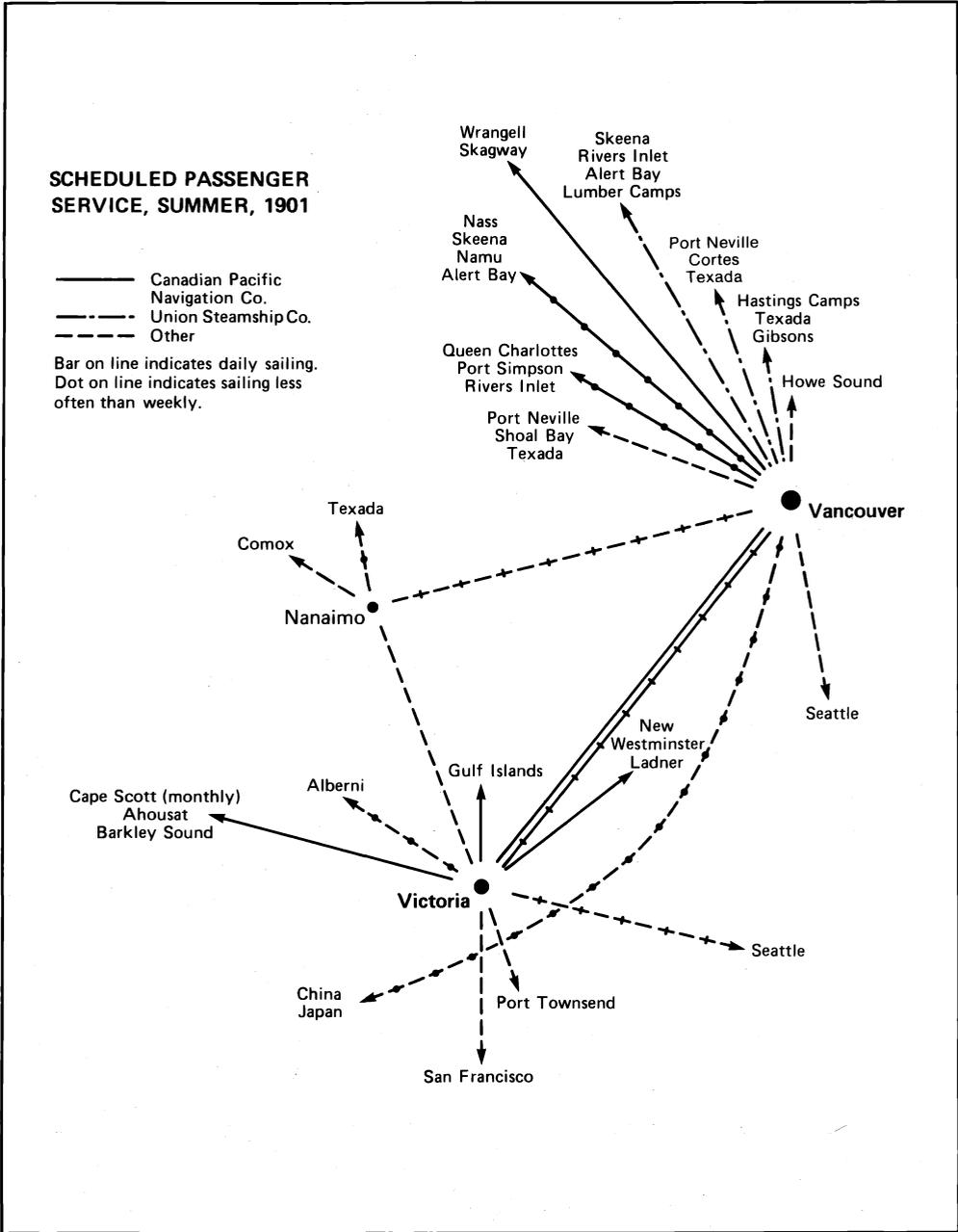
SCHEDULED PASSENGER
SERVICE, SUMMER, 1901

———————— Canadian Pacific
Navigation Co.
—·—·—· Union Steamship Co.
— — — — Other

Bar on line indicates daily sailing.
Dot on line indicates sailing less
often than weekly.

Wrangell
Skagway

Skeena
Rivers Inlet
Alert Bay
Lumber Camps

Nass
Skeena
Namu
Alert Bay

Port Neville
Cortes
Texada

Hastings Camps
Texada
Gibsons

Queen Charlottes
Port Simpson
Rivers Inlet

Howe Sound

Port Neville
Shoal Bay
Texada

Vancouver

Texada

Comox

Nanaimo

New
Westminster
Ladner

Seattle

Alberni

Gulf Islands

Cape Scott (monthly)
Ahousat
Barkley Sound

Victoria

Seattle

China
Japan

Port Townsend

San Francisco

FIGURE 10

Scheduled Passenger Service, Summer, 1901

was completely eclipsed. Except for the west coast of Vancouver Island and its east coast south of Comox, Vancouver now serviced the coastal settlements of British Columbia and competed with American ports for the Klondike trade. Every third week one of the CPR's new Empress liners sailed from Vancouver to the Orient. Two companies dominated coastal shipping. The larger, the Canadian Pacific Navigation Co., had been active in 1890 and in the summer of 1901 had just been purchased, but was not yet operated, by the CPR. The CPN Co. operated a daily run between Vancouver and Victoria, a weekly direct sailing to Skagway, fortnightly service to the Nass, Skeena, Queen Charlotte Islands and much of the north coast, and a weekly run along the west coast of Vancouver Island. The Union Steamship Company, based in Vancouver, supplied the logging camps, canneries, mines and few farms scattered along the inside passage between Vancouver Island and the Mainland. One of its ships made a weekly run north to the canneries on the Skeena. Apart from these companies, the Esquimalt and Nanaimo Railway maintained a ship on a daily return run between Vancouver and Nanaimo and another on a run between Victoria and Nanaimo with service north to Comox, American companies operated into Victoria and Vancouver, and several local companies provided limited services.

For the camps and canneries along the coast of British Columbia the steamer was the link to the world outside. Its arrival brought the people of a settlement to the wharf. Besides scheduled landings, many ships would put in here or there as required. This service depended on small, manoeuvrable ships that could carry one or two hundred tons of freight and some passengers. In 1901 none of the Union boats was longer than 120 feet or had a top speed of more than 12 knots.[43] The CPN Co. used larger, faster ships on its daily sailing between Vancouver and Victoria and on the weekly service to Alaska, but these were runs of a different type — tied to schedules and to deeper and relatively charted waters — that provided uninterrupted service between principal settlements. In 1910 the Grand Trunk Pacific inaugurated such a service between Prince Rupert and Seattle via Vancouver. Its two new passenger liners, the *Prince Rupert* and *Prince George*, were each 310 feet long and of more than 3,300 gross tons, and were licensed to carry 1,500 passengers at a top speed of 18 knots. Such ships did not touch most of the isolated fiords and islands of coastal British Columbia.

By 1921 Vancouver's domination of the coastal trade had grown at the expense of Victoria, and had been challenged only weakly in the

[43] Rushton, *Whistle up the Inlet*, pp. 210-19.

north by Prince Rupert (figure 11). Even in coastal shipping, Vancouver was overwhelmingly the port of British Columbia to which Victoria and Prince Rupert were appendages. When it purchased the Esquimalt and Nanaimo Railway (1905) the CPR took over the sailings to Nanaimo, and the company developed a triangular trade between Vancouver, Victoria and Seattle. Otherwise it offered much the same service that the Canadian Pacific Navigation Company provided in 1901: weekly sailings to the north coast and Alaska, daily service between Vancouver and Victoria, and two or three sailings a month along the west coast of Vancouver Island. The Union Steamship Company, too, built on earlier patterns: its enlarged fleet still comprised small, multi-purpose ships that primarily serviced the inland waters north of Vancouver. Competing with the CPR more than with Union Steamships were the ships of the Canadian National Railway (formerly of the Grand Trunk Pacific) that offered weekly service between Prince Rupert and Vancouver and on the triangular run between Vancouver, Victoria and Seattle.[44]

This impressive service along a difficult coast was but the formal part of the shipping of coastal British Columbia, for the resource-based industries had their own coastal shipping facilities. In the early 1890s almost 1,500 fishboats served the canneries at the mouth of the Fraser River; from 1895 to 1897 Wallace Shipyards in Vancouver built some 800 of the new thirty-foot, round-bottomed, decked sailboats (Columbia River boats) that were rapidly replacing the flat-bottomed skiff (Fraser Valley skiff) as the standard rivermouth fishboat.[45] Some companies sent tugs twice a day to the fish camps to leave empty scows and take full ones to the canneries; a few picked up fish directly from the boats. By the 1920s the larger fishing companies operating on the Nass and Skeena Rivers were sending their own supply ships north from Vancouver, by then a common practice of the larger lumber companies. Steam and, by the 1920s, diesel-powered tugs operated along the coast, particularly in the protected water between Vancouver Island and the mainland. Tugs hauled quarry stone to Vancouver and Victoria, railway freight cars across the Strait of Georgia and newsprint from the pulp mills; just before World War I barges and scows were 30 percent of all registered tonnage in the province.[46] Most tugs were used to haul booms of logs from the Douglas fir forest around Georgia and Johnston's Straits to the

[44] *Ibid.*, p. 115.

[45] Duncan A. Stacey, "Technological Change in the Fraser River Salmon Canning Industry, 1871-1912," MA thesis, UBC, 1977, chap. 2.

[46] Sager, "A Report on the Shipping Industry of B.C., 1867-1914," p. 9.

Stewart

**SCHEDULED COASTAL PASSENGER
SERVICE, SUMMER, 1921**

Alaska   Anyox

Prince Rupert

——————— Canadian Pacific
— · — · — Union Steamship Co.
· · · · · · · · · Canadian National
— — — — Other

Bar on line indicates daily sailing.
Dot on line indicates sailing less
often than weekly.

Queen Charlotte Islands

Way
Ports

Bella Coola
Rivers Inlet

Sechelt
& Area

Squamish

Ports & Landings
Strait of Georgia to
Queen Charlotte Strait

Vancouver

Nanaimo

Seattle

Gulf Islands

West Coast
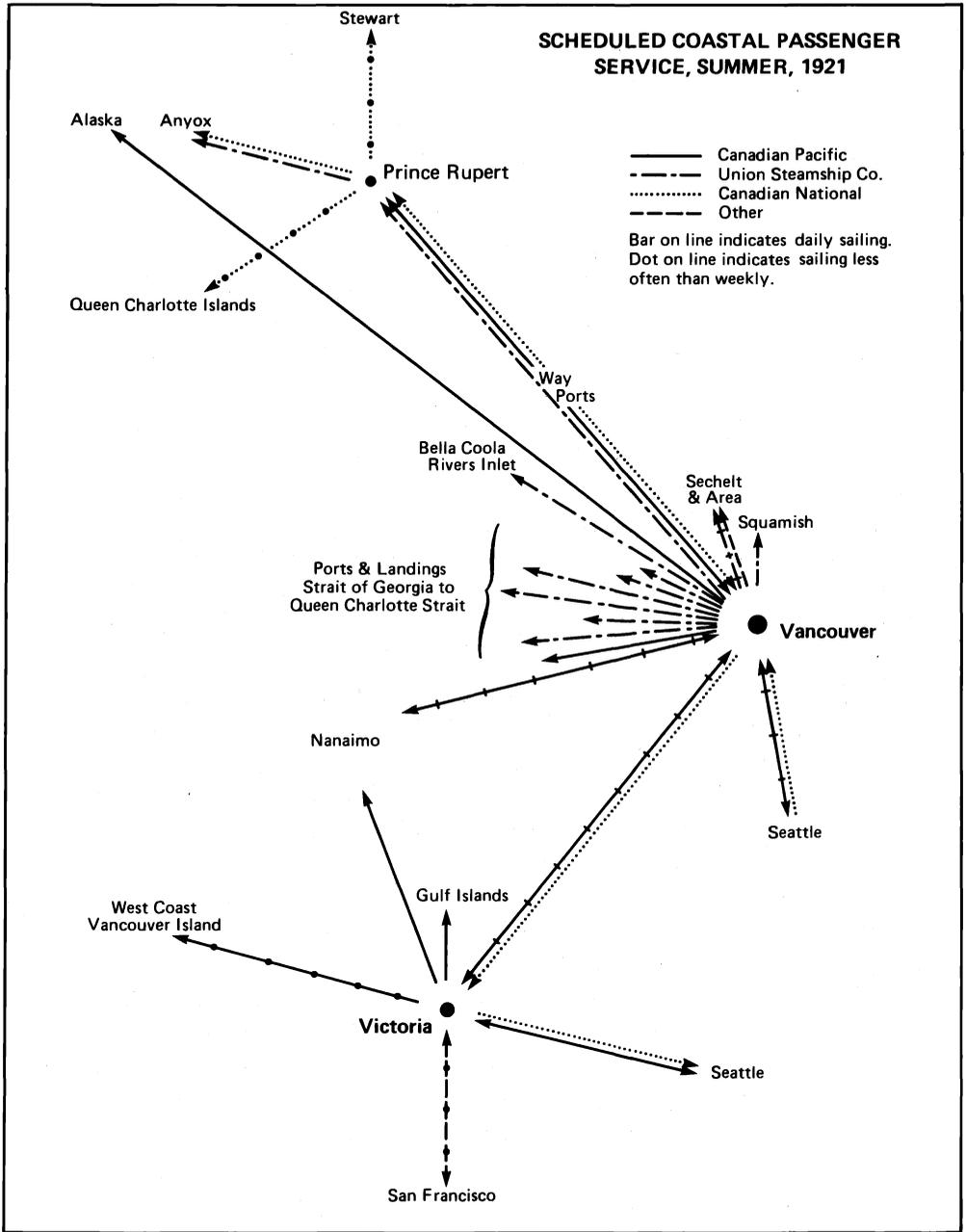Vancouver Island

Victoria

Seattle

San Francisco

FIGURE 11

Scheduled Coastal Passenger Service, Summer, 1921

sawmill complex in Vancouver and along the lower Fraser, a practice dating from the 1890s when the B.C. Mills Timber and Trading Company, then the province's largest lumber operation, began to supply its mills from lumber camps 130 miles north of Vancouver. By the 1920s the pattern was well established.[47]

Commentary

Considered as a whole, the modern transportation system in British Columbia by 1930 was strikingly uneven. It provided efficient freight and passenger service north-south along the coast and east-west along the mainlines of transcontinental railways. By means of spur railways and steamboats it provided fair service along the principal north-south valleys of southern British Columbia, and it was beginning to provide a few inter-regional automobile roads. Except in a few places it did not provide dense networks of local roads or many transportation alternatives, and it did not serve large areas of the province. However impressive an achievement of a few years, it was a stark system, a reflection, basically, of the transportation technology of its day quickly superimposed on a mountainous wilderness in response to the powerful momentum of several primary resource industries and, in the case of the transcontinental railways, of a vision of the transcontinental Canadian economy.

The system was equipped to do some things very well. It could move bulk goods rapidly and fairly cheaply across the province along the axes of the railways, a capacity that would transform the province's external relations. In 1870 British Columbia's meagre external trade was by sea as bulky, low-value producer goods (mainly lumber) were exported into the Pacific basin and compact, high-value consumer goods were imported around the Horn or via the Union Pacific and San Francisco from the Atlantic. But as railways reopened the continental connection, British Columbia's Pacific connection withered until, early in the twentieth century, the province's outlook was more continental than at any time since the early years of the Northwest Company's New Caledonian enterprise. Lumber, even prefabricated housing, found a large prairie sale; markets around the Pacific Rim were abandoned to sawmills in Washington and Oregon. Canned salmon, destined for eastern Canada and the British Isles, was shipped by train. After the opening of the Panama

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[47] W. G. Hardwick, *Geography of the Forest Industry of Coastal British Columbia,* Occasional Papers in Geography, no. 5, Canadian Association of Geographers, B.C. Division, 1963, p. 12.

Canal in 1915 the cheapest route for grain from the western Prairies to
Britain was by rail through British Columbia. Grain elevators were built
in Vancouver and Prince Rupert; by 1930, 40 percent of Canadian
grain exports passed through the province.[48] These were powerful con-
tinental links for which the east-west mainlines of transcontinental rail-
ways were a necessary condition. British Columbia did not develop a
deep sea merchant fleet. Immigrants poured in from eastern Canada and
the British Isles while restrictions and quotas tightened on the Chinese
and Japanese. British Columbians were "thinking white," an affordable
prejudice when their economy no longer depended on Pacific markets.
The CPR's Empress ships sailed for China every third week but, in effect,
transcontinental railways had enabled British Columbians to turn their
backs on their new ocean.

The system also could move bulky goods efficiently along the coast
approximately at right angles to the transcontinental railways. Vancou-
ver's growth and rapid metropolitan dominance depended, very largely,
on its command of these two transportation axes. Isolated by water, Vic-
toria could not make efficient transcontinental connections, while Prince
Rupert came too late on the scene and was too far north of the main
concentrations of coastal resources to mount an effective challenge. By
1900 most of the steamers and tugs that serviced the logging camps and
canneries of coastal British Columbia converged on Vancouver, the fun-
nel that received the production of the British Columbian coast and
redirected much of it eastward. Overwhelmingly, coastal transportation
was tied to coastal industries, a maritime outreach from a transconti-
nental railway to wilderness resources.

In the interior the same purpose was achieved, somewhat less compre-
hensively, by spur railways and by steamboats on rivers and lakes. Such
facilities extended the advantages of modern transportation to particular
wilderness destinations, and to stopping points along the routes to them.
Steamboats were the more flexible form of this transportation, being far
more cheaply put into service than a spur railway and, therefore, econo-
mically feasible when the demand for transportation was small; and
being able, like the smaller coastal steamers, to put in here and there
almost on demand. For both reasons, steamboats could service not only
bulk shippers but also the scattered, small-scale activities of, for example,
the orchardists along Okanagan and Kootenay Lakes. Spur railways

[48] For an elaboration of this paragraph see D. E. Kerfoot, *Port of British Columbia,
Development and Trading Patterns* (Vancouver: Tantalus Research, 1966), espe-
cially pp. 31, 45-48 and 65.

were usually built to a major mine or cluster of mines when there seemed a reasonable prospect of regular bulk shipments, and were part of a larger-scale, more heavily capitalized penetration of the interior. They were associated with companies rather than with prospectors or a few farmers, and with agglomerated rather than dispersed settlement; on the whole they served individual needs incidentally. In the dry belt a limited network of roads also made connections with the railway mainlines, and as automobiles and trucks became more common in the 1920s the advantages of a particularly flexible form of motorized transportation began to reach into parts of the British Columbian interior that railways and steamboats had not served. As this happened, the linearity of a transportation system built around railways and steamboats was somewhat reduced.

Most basically, the transportation system ensured that almost all the non-Indian settlements of British Columbia were functionally integrated components of an international economy. Railways, steamboats and, to a much lesser extent, roads reduced transfer costs into selected segments of wilderness to the point where the relatively bulky, slightly processed products of primary resource industries could be exported. In so doing they permitted not only the economies of scale of industrial production to penetrate the wilderness, but also its extreme spatial selectivity. This capacity, superimposed on the sharply differentiated physical environment of British Columbia and, in many parts of the province, on virtually unoccupied territory, entailed a striking specialization of land use. Lines of transportation reached into the wilderness to develop a particular resource, and settlements emerged in which neither a local past nor contemporary land use alternatives obtruded to modify their character. They were mining camps, or canneries, or orcharding communities. Here and there functions overlapped, but segregation was normal, not only of different productive activities from each other but also, in extreme but frequent cases, of workers from stable social environments. The journey-to-work, characteristic of modern industrial economies, was never more extreme than when Chinese, Swedish or Italian workers in British Columbia sent their pay home. At another scale, the capacity for spatial segregation that accompanied the abrupt introduction of motorized transportation to British Columbia would be reflected in the rapid growth of a few cities, and the almost instantaneous emergence of one of them to striking urban primacy. British Columbia was a *tabula rasa* on which the spatial consequences of modern transportation were marked with particular clarity.

If the system of transportation that developed in British Columbia before 1930 connected individual settlements to the international economy, it did not necessarily integrate more local space. In this, British Columbia was the opposite of, for example, almost any part of Western Europe, where motorized transportation with international connections was superimposed on prior networks of more local interaction. In non-Indian British Columbia, as in other areas of primary resource development in the North American wilderness, the international connections came first and networks of local transportation followed, far less purposefully, in their wake.

At the provincial scale, British Columbia in 1930 was not a functionally integrated region. Because none of the north-south interior valleys was large enough to produce anything like the volume of traffic that flowed along the coast, Vancouver had no urban rivals in the British Columbia interior. But American rivals, well served by modern transportation, ensured that none of these southern interior valleys fell automatically into Vancouver's hinterland. Hence the more than twenty-year struggle between the CPR and the Great Northern for control of these valleys; when this challenge was finally turned with the completion of the Kettle Valley Line it resumed, less dramatically, over the automobile. In 1930 almost all of the northern and central interior was beyond Vancouver's range, the spheres of influence of Edmonton and Calgary both extended substantially across the provincial border, and automobiles were being drawn to American cities by better American roads. Vancouver depended on its position at the junction of two major axes of transportation rather than on its hold on the provincial interior.

At the sub-provincial scale, regional functional integration also was patchy, and usually was the accidental by-product of transportation facilities created for other purposes. In the Kootenays, for example, the first arteries of modern transportation were built to transport ore out of the region rather than to achieve any functional unity within it; later when coal from Fernie was shipped to Grand Forks or galena from Kimberley to Trail, these were highly specific point-to-point links with few necessary multipliers. Nelson, the largest Kootenay city throughout these years, dominated a limited central fraction of Kootenay space. There was more functional integration where settlements were served by water, as around Okanagan Lake and much of the Strait of Georgia; and along some lines of transportation, particularly where settlements emerged at break-of-bulk points on the route of an industrial camp. In the Lower Fraser Valley the interurban railway was built to link the

agricultural land of the Valley to Vancouver as, on a smaller scale, the Saanich Peninsula was linked by road and rail to Victoria. Overall, these were exceptions within a transportation system whose primary function was to move goods to external markets.

At the scale at which individuals live their lives, the transportation system could move people fairly efficiently from job to job, or from work in a camp to a spree in a city; that is, could move them efficiently when patterns of personal mobility coincided, as in British Columbia until the automobile they were virtually required to do, with the directions of flow in a resource-based, industrial economy. The system existed to serve this economy, and individuals used it rather as — to take an extreme example — a Kootenay miner might use an aerial tramway to climb a mountainside to a bunkhouse. In many settings there were few, if any, transportation alternatives. The worker at a northern cannery who wanted to walk a mile or two might find it next to impossible to do so. The forest closed around, the steamer came and went, and that was that. Or, a railway filed through an uninhabited valley to a settlement reached, for all practical purposes, in no other way. The larger the settlement, the more varied the transportation options, but even the largest felt the pulse of the machines that provided their external connections and the power of the companies that controlled them.[49] No wonder that the railway and steamboat got into the minds of British Columbians, measuring their time, giving expression to their sense of power, focusing their rhetoric, shaping their new places, and connecting them to their old.

[49] Norbert MacDonald, "The Canadian Pacific Railway and Vancouver's Development to 1900," *BC Studies* 35 (1977).