
Regulation, Monopoly, and Competition in Canadian Urban Transit: 1914 to 1939

Donald Davis

University of Ottawa, Faculty of Arts
Ottawa, Ontario, Canada

Canadians once passionately debated the relative merits of the private versus public ownership of urban mass transit, a debate the historians have continued. Yet, the riding public have gradually lost interest in the controversy: who now believes that it greatly matters who owns the right to the stupendous losses incurred year after year by urban transit companies? What was once pivotal to research — the question of who should control the monopoly provider of mass transit — now seems almost quaint. Even the most fervent disciple of privatization must doubt that an entrepreneur could much improve either the profitability or the quality of service of urban transit in Canada — unless, that is, there is a dramatic change in its regulatory environment.

One regulation in particular has come under attack at least in Great Britain and the United States: it is the exclusive transportation franchise awarded to individual transit companies (generally in the 1920s) to protect electric railways from motorbus competition. At issue here is monopoly, and it is the collective decision to grant that monopoly — rather than the increasingly irrelevant debate over the claims of public versus private ownership — that warrants further consideration from historians of regulation. With transportation scholars keenly debating the merits of competition in public transportation and with Great Britain having already enacted laws to end monopoly in urban transit, it is important to learn more about the origins of the exclusive franchise in this country. There should be an historical dimension to the debate that will surely develop here as it already has abroad.

In this country, it was the jitney bus that made city councils resolve for monopoly, and it is the regulatory response to the jitney, therefore, that provides the focus for this paper. The story begins in 1914 with the sudden emergence of the jitney bus as a serious threat to the viability of electric transit in British Columbia. With the Spring of 1915, competition in public transit had flowered in most of the large cities of Canada. About half of the motor vehicles of 1914-1915 conformed to the modern definition of a jitney; that is, they operated over more or less fixed routes but without fixed stops of fixed schedules. They were "a form of shared ride service which might be termed hail-a-ride."¹ The other half were not true jitneys — being either shared-ride taxis with routes that varied with the whims of their passengers or imitations of the street railway with fixed schedules and designated stops.²

At their peak, jitneys operated in more than 24 Canadian municipalities; there may have been as many as 3,800 jitneys in the early summer of 1915.³ If so, then four percent of registered Canadian motor vehicles were being used as jitneys. Most of them congregated on street railway routes siphoning passengers from the trams. The young of both sexes were especially attracted to the jitneys because of its novelty and speed — it ran 40 percent faster than a trolley — and where they swarmed by shorter headways or waiting time. While some women complained of unwanted familiarity and risks brought on by overcrowding in the jitneys, others praised it for getting them home for their lunch break.

Jitneys offered a multiplicity of options further adding to their appeal: even before New Westminster decreed racially segregated jitneys, the small vehicles obviously permitted more racial, class, and sexual discrimination than did streetcars, thus taking some of the mass out of the mass transit experience. Women, for example, could find sexually segregated jitneys in Winnipeg and Montreal. Jitneys also appealed to smokers, whose habit faced either an outright ban or consignment to the rear platform with the contemporaneous disappearance of open streetcars. While the jitney could promote discrimination, it

could also fight it (especially in the southern United States); in Hamilton, it enabled industrial workers to protest the street railway's practice of consigning its oldest equipment to their neighborhoods. Overall, by increasing the number of options for commuters, the jitney undoubtedly increased the Canadian riding habit — that is, the propensity to take mass transit.

The street railways, faced with unwanted competition in the midst of an economic recession, immediately demanded that the jitney be strictly regulated or, better yet, suppressed. Their case for regulation may be summarized as follows: that the street railways, as a regulated industry, deserved protection from regulators; that considerations of equity demanded that competing modes of transportation be treated the same by regulators; that investors would think twice about putting their money into a province that did not protect sunk capital; that the jitney engaged in unfair and destructive competition; that the operation of the jitneys threatened the universal five-cent fare, the free transfer, and the social values that these practices promoted; that the jitneys were overcrowded and unsafe and, therefore, a threat to the physical and moral well-being of the public; that the jitneys reduced government tax revenues from the street railways, which paid a percentage of their gross as well as special paving, bridge maintenance, and snow clearance taxes; and that the jitneys should be required to make up any shortfall in municipal revenues from reduced transit use; and, finally, that the jitney threatened the continued existence of a transit system, that it, thanks to higher operating costs, could not afford to replace. Even a mere listing of these arguments makes it clear that the regulatory impulse on this occasion was self-protective and anti-competitive, even though the street railways cloaked their appeals in the language of public interest and consumer well-being.⁴

Speaking for his industry, the general manager of Hamilton's street railway predicted in June 1915 that the jitney could not survive "even a small portion of the regulation imposed upon street railways, and when forced to meet its obligations in respect to taxes and responsibility for accident ... [would go] almost entirely out of business."⁵ Street railways had a fairly solid idea of jitney economics: they traded information gleaned from interviews of jitney drivers, from experimental operations conducted by companies like British Columbia Electric, and from scholarly articles in *Scientific American* and *The Journal of Political Economy*. They knew that their wilder claims — that no jitney paid for its replacement — were simply false. In fact, the Vancouver jitneys operated covertly by British Columbia Electric during the winter of 1915 seemed to prove that owner-operators who did their own repairs could earn enough in a 300-day working year to replace a Model-T Ford over two years, while paying a working-class wage (\$900-\$1,000 a year) to themselves. Jitneying, thus, was viable as a petty enterprise, but it could not, as the street railways knew, provide a sufficient surplus to subsidize a managerial hierarchy. Indeed, even a second driver could scarcely earn his wage. The jitney was, consequently, an unsuitable vehicle for corporate capitalism and incapable of systematization — that is, of being incorporated in one of the closed, highly centralized systems characteristic of that period.⁶

To suppress the jitney, street railways disingenuously called for regulation that they knew their competitor could not afford. They said that street railways and jitneys should be placed "on a similar basis" with respect to taxes and service requirements, that competition would soon cease. The only equitable alternative, they held, was for regulators to deregulate the traction industry allowing streetcars to behave like jitneys and operate as they pleased.

This alternative was not taken seriously in 1915, for deregulation would have cost municipal governments too much tax revenue. Besides, the street railway plea for jitney regulation had widespread support in the community: the coalition included the street railways' own employees, fearful for their jobs; sympathetic labor unions; and many property holders from the "streetcar suburbs" and the central business district, who together viewed jitneys as a threat to the social hierarchy created by the tram and thus to established property values.⁷

Streetcar suburbs contained thousands who believed the warnings of the street railways that continued jitney competition would force rail service cutbacks and an end to the universal, five-cent (cash) fare. Long-distance commuters wanted to continue paying less than the marginal cost of their journeys — to continue, in other words, a system whereby poorer central city residents subsidized the construction of the middle class suburbs by paying too much for their own, shorter trolley trips. Jitneys, by competing only on "creamy" routes within two-and-one-half miles of downtown threatened the subsidization of the suburbs; they either had to be suppressed or else street railways would have to convert to a zone fare system, thereby ending the policy of cross-subsidization that had given the jitneys their opportunity to do some "skimming" on over-priced trolley routes.⁸

Although a zone fare system would have reordered property values in favor of more central locations, downtown property-holders also favored strict jitney regulations, for they were inclined to make the jitney a scapegoat for the sins of the private automobile. With only one registered motor vehicle for every eighty-four Canadians in 1915, and many of these farmers, urban automobilists still tended to divide into two groups: the wealthy and those who used their vehicles commercially.⁹ For obvious reasons, it was politically easier to blame jitneys, taxis, and delivery vans than elite motorists for the declining benefits that downtown businesses were receiving for their locations near the hub of the street railway system. As traffic congestion worsened downtown, and trams became ever slower, centrality had become less profitable as suburbanites increasingly did business closer to home. It was tempting to blame the jitney for this trend.¹⁰

The jitney threatened not only the economic order of the radial city but also its moral order. There were quite legitimate fears for the safety not only of jitney passengers but also of unwary pedestrians not yet used to having the streets full of speeding motor vehicles. Probably no theme showed up more often in the street railways' campaigns for regulation than the "safety" theme, which suggests that the most fearsome aspect of the unregulated jitney was its tendency to speed ahead of the streetcars in the scramble to pick up waiting customers and to dash down streets normally off-limits to common carriers in an effort to give door-to-door service.¹¹

The overcrowding of jitneys also attracted support to the pro-regulatory coalition: not only were people worried about the threat to life and limb for people sitting o jitney doors and trunks or standing on the running board, but also some Canadians were concerned about the moral implications of having men and women pressed together or sitting on each other's knees in the back seat of an unlit automobile. Regulations on seating promised greater safety — physically and morally.¹²

The coalition on behalf of jitney regulation was, in other words, quite extensive. As a result, either the city council or the police commission of every major city had — save for Victoria — enacted a regulatory bylaw by June 1915. Victoria's aldermen, angered over the terms of the city's long-term franchise with the British Columbia Electric Railway, were until 1920 not disposed to go beyond testing jitneys for road-worthiness. Although other cities enacted more of the street railways' agenda, in none of the major cities before 1918 did privately-owned trolley companies obtain proscriptive legislation as they so noisily demanded. So far as private enterprise was concerned, until 1918, it was obvious that regulation was not "simply a derived function of corporate will" as Armstrong and Nelles put it. Public enterprise was another matter: councils in cities with municipally-owned street railways — for example, Calgary, Regina, and Saskatoon — had by May 15 enacted jitney-killing bylaws. Edmonton's council bungled the job — the Alberta Supreme Court ruling against its attempt to eliminate jitneys through high license fees and bond requirements — and jitneys competed against municipally-owned Edmonton Radial Railway until 1921.¹³

In cities with privately-owned street railways, municipal councils were reluctant to be seen doing the bidding of the traction magnates. In jitney strongholds — Toronto, Hamilton, London, Winnipeg,

Edmonton, Vancouver, and Victoria — the street railways needed at least three years and as many as fifteen to obtain the kind of "strict regulation" designed to suppress competition entirely.¹⁴

The process of regulation in these cities had — to risk generalization — three distinct stages: first came safety regulation in the spring of 1915 as city councils or police commissions enacted bylaws requiring drivers to submit themselves and their vehicles for examination. Typically, they were required to post their license, their rates, and their route to protect passengers from misrepresentation or extortion. The first stage of regulation also typically limits on seating capacity as well as bans on such unsafe practices as standing in an automobile or perching on its doors. These regulations were not all that controversial with organized jitneyists whose associations helped to write them in Hamilton and Winnipeg; Victoria's jitney association voluntarily imposed a similar code of behavior on its own members.¹⁵

The first stage of regulation might also require an indemnity bond of \$1,000 to \$5,000 to insure jitney passengers in case of accident. However, conceptually, the bond belonged to the second stage (reached by most cities by July 1915) for its proponents believed its high cost — \$125 to \$250 a year — would drive most jitneyists (who typically cleared \$2.00 to \$2.50 a day after expenses) out of the trade. The second stage also saw regulations preventing jitneys from operating as taxicabs, livery cars, or sightseeing buses during slack hours from stopping near certain busy intersections, from standing at curbside any longer than necessary to take on or let off passengers, and from leaving the fixed routes they had outlined on their license applications.¹⁶ While these various measures did in various ways advance the "public" interest, they were also designed — as Ross Eckert and George Hilton have observed for the United States — to impose,

*some special burden on the jitney ... designed to negate one or more of the several aspects of its comparative advantage — that of a relatively speedy, convenient, and specialized service — by so greatly raising the cost of operation that entry into the industry would cease and extant jitneys would be left with the choice of either unprofitable operation or withdrawal ... from the industry.*¹⁷

By the summer of 1915, the combined efforts of the first and second phases of regulation had been to eliminate almost all of the jitneys in cities with municipally-owned railways (except for Edmonton) and about two-thirds of jitneys elsewhere. And so matters stood for about three years: even though street railways lobbied municipal and provincial politicians continuously planted anti-jitney articles in the press, they seemed stuck with an incredible 75 to 300 jitneys as competitors in Victoria, Vancouver, Winnipeg, Hamilton, and Toronto.¹⁸

What, then, triggered the third and final stage that occurred variously between 1918 and 1929 in which cities either banned jitneys outright (in Ottawa, Vancouver, London, and Hamilton), or achieved the same effect by ordering them off profitable routes (in Victoria and Edmonton), or by giving the traction company a veto over jitney licenses (in Toronto), or forbidding them from charging a competitive fare (in Winnipeg)? In the case of Toronto, the answer is fairly straightforward: in 1921, its street railway joined the ranks of the municipally-owned, and, by 1924, it had persuaded Toronto's police commission to protect it from competition. Elsewhere, jitney prohibition was triggered by the realization that the local street railway was, thanks to years of passed dividends, sufficiently desperate either to start shutting down operations (thus damaging local aldermen politically) or to agree to offer major concessions in exchange for an exclusive transportation franchise (thus helping local aldermen politically).¹⁹

Jitneys were subjected, in other words, to proscriptive regulation in their one-time strongholds as part of a package deal whereby street railways agree to modernize and to extend their rail systems, to initiate bus operations, and to preserve the universal fare at or near its traditional level of five cents. These arrangements primarily benefitted outlying residents, who were assured either the continuation or

introduction of subsidized mass transit; the losers were jitneyists, their patrons, and inner city residents in general. As for street railways, the results were — as Sam Peltzman's regulatory model would predict — quite mixed. They did obtain a monopoly over public transportation but only at the price of concessions to consumer interests, concessions that would continue to undermine the railways' economic viability and attractiveness to investors.²⁰

Was the public interest served? There was no obvious answer to this question in the 1920s, although the public "will" was certainly satisfied inasmuch as most of these jitney-killing agreements were voted on by the ratepayers. Yet, from the perspective of this historian of jitneys and technology, it is debateable whether regulation in this instance served the public interest, because the exclusive franchises delivered the fate of the public motor vehicle into the hands of the traction industry.

This outcome was doubly unfortunate: not only were street railways a stagnant, heavily indebted industry unable to attract new investment from the private sector, but also they were determinedly oblivious to the full potential of the motor vehicle in public transit. Before regulators clamped down, jitneys of various shapes, sizes, and operating characteristics had explored the endless possibilities for common carriers no longer constrained by overhead wires and fixed rails. This experimentation was short-circuited by the award to the street railways of an exclusive franchise for public transportation. Venture capital ceased to be attracted to this sector: it was too highly regulated, and tram companies were too laden with sunk investments to amortize them to make a rapid conversion to bus transit regardless of its potential.

Besides, trolley companies were not all that interested in converting to buses. Their executives, ignoring the threat from the private automobile, still acted as though they enjoyed a **true** monopoly over urban transit instead of just the common carriage portion of it. Thus, they continued to behave as though they had all the time in the world — or at least twenty to forty years — to operate their equipment and to amortize it. Inevitably, the aging trams had difficulty attracting riders used to constant model changes in automobiles and consumer goods.²¹ (The current revival for light-rail transit may rapidly fade once the present cars, most of which are a decade old, outwear their welcome.) In the 1920s, 1930s, and since, the street railway companies overbuilt their equipment, constructing it to be more durable than their customers wanted just as the theory of regulated monopoly suggests they would.²²

The jitneys, by contrast, lasted only a year or two if bought second-hand. Even newly purchased Fords could survive only two to three years in service, therefore, they had more potential than streetcars for keeping up with the public's tastes and specifications for modern styling, speed, acceleration, braking, and creature comforts. Street railways refused to operate automobiles for reasons of prestige and profit: not only was a jitney automobile beneath a corporation's dignity, but also it was more expensive (because of labor costs) to operate per seat-mile than larger vehicles like the tram, the trackless trolley, and the transit-type bus.²³

Under constant financial pressure because of past concessions regarding fares and route extensions and a tax structure that assumed them still to hold a monopoly over the streets, electric railways made marginal costs the deciding factor in their equipment decisions. They, therefore, preferred trams — even though the Canadian public in the 1920s and 1930s clearly did not (as street railways recognized when they charged extra for "deluxe" bus service in such cities as Calgary, Hamilton, Montreal, Moose Jaw, Sherbrooke, Toronto, Vancouver, Windsor, and Winnipeg). Buses had, however, higher operating costs than streetcars, and traction companies were correspondingly slow to add them to their fleets. (See Table 1.)

Moreover, most of the electric railways that offered bus service before 1930 did so only to stifle independent bus competition. When buses were used, street railways — obsessed with the bottom line or,

Table 1

Introduction of Buses by Canadian Street Railways		
Winnipeg 1918	Toronto 1921	Windsor 1922
Vancouver 1923	Ottawa 1925	Montreal 1925*
Port Arthur 1926	London 1926	Moncton 1926
Woodstock 1926	Hamilton 1926	Peterborough 1926
St. Catherines 1929	Guelph 1930	Lévis 1930
Kingston 1930	Victoria 1930	Saskatoon 1931
Sarnia 1931	Sherbrooke 1931	Calgary 1931
Edmonton 1932	Brandon 1932	Regina 1932
Moose Jaw 1923	Stratford 1932	Trois Rivières
Quebec 1933	Saint John 1934	Brantford 1937
New Westminster 1937	Kitchener 1939	Sudbury 1947
Halifax 1949		

*Montreal Tramway experimented with buses in 1919, but the date above is that cited by the company itself as its first bus operation, see J.M. Lajeunesse, *History of Public Transportation in Montreal*, 1973.
Sources: Canadian Railway and Marine World, August 1922, January 1926, August 1926, February 1934; John Knowles, *The Sudbury Streetcars*, 1983; R.D. Tennant, Jr., "The Electric Street Railway: Halifax's Symbol of Municipal Worth," *Collections of the Nova Scotia Historical Society* 40(1980).

more precisely, with marginal costs — put them not where they might be most popular or most successful in luring commuters from their automobiles but where traffic was too light to warrant the use of trams — the lowest cost vehicle at high ridership levels. The street railway, therefore, lingered on in most cities long after their welcome had worn out (as shown by the festive mood that attended the demise of the trolley in the 1950s).²⁴

Buses also gradually became larger and, consequently, less popular. By June 1939, the average bus in the four largest city systems (Montreal, Toronto, Winnipeg, and Vancouver) had more than 28 seats — four times the seating capacity of a standard jitney. The original popularity of buses had owed to their novelty and to their superior speed: smaller and more maneuverable than the trams, they made fewer time-consuming stops to take on and let off passengers and, if small enough, were able to wend their way through traffic like an automobile. Larger buses, however, made more sense to traction accounting departments: they could reduce labor costs per seat-mile, and fewer buses would be required for peak hour service. The switch to big buses (and, in our own era, to articulated giants) only made economic sense, however, if they were run less frequently than the buses they replaced. Their patrons were expected to wait. We know, of course, that most of them did not.²⁵

It is highly suggestive that transit managers labelled the large motor buses of the 1920s and 1930s as "transit-type" or "street railway type" buses. These names, as well as the growing similarity between trams and buses in size, appearance, accommodations, and operating characteristics, suggest that the traction

companies were bent on making the bus as much like a streetcar as possible. In other words, the street railway paradigm continued to rule the thinking of transit officials even as they gradually converted to a new technology. As buses became more elephantine, they became more awkward in traffic, made more frequent stops for passengers, and in general began to resemble the tram not only in size but also in schedule, speed, and unpopularity. Granted, the bigger buses assisted the transit companies' bottom line, thus slowing their decline into insolvency and subsidy; however, they also helped to guarantee the triumph of the private automobile.²⁶

It is, of course, possible that unregulated jitneys would have repeated this history, becoming similarly bloated in size and equally unpopular. After all, there were some basic rules of economics at work. Yet, experience in other countries suggests that in the absence of strict regulation, Canada would have ended up with a diversity of vehicle sizes with a diversity of operating characteristics. In less developed countries, jitneys, trams, and conventional buses often compete with each other; of the three, jitneys have been most successful in luring commuters from their automobiles, because they — and they alone among common carriers — offer automobile-like service at less than a luxury (taxi or livery car) fare. Canada is not less-developed country, although it was arguably so in 1915. It was through regulation that Canada acquired the urban transportation mix associated with the North American variant of "development." None of us, however, is quite as certain as we were in the past that the developed world has nothing to learn from the less developed world.²⁷

This line of argument should not be understood as suggesting that jitneys should not have been regulated; the first, safety-oriented phase was necessary as were some elements of the economic regulation that followed. But, in the absence of an attempt to coordinate the regulation of public and private vehicles, it was a mistake to suppress the jitney transit. The regulatory distinction between public and private vehicles was built on the fiction that they were non-competing; and that fiction allowed municipalities to persist in taxing the mythical "monopoly rents" of the street railway.²⁸

In conclusion, the regulation of urban transit in Canada between 1914 and 1939 was conservative in spirit and designed to retard unsettling technological change. Municipal regulators were not a disinterested party — as public interest theory assumes — but had a definite stake as politicians and as tax collectors in the traction monopoly. Though suppression of motorbus competition was sought by a large, inter-class coalition, the main outcome of regulation was to award to street railway companies a virtual monopoly over the subsequent social shaping of motor vehicles as public carriers.²⁹ Unfortunately, street railways were the group most likely to develop public vehicles along conservative, traditional, unimaginative lines. Meanwhile, the private motor vehicle had the backing of some of the most dynamic corporations of the twentieth century. It was an unequal contest.

End Notes

1. Ecoplan International and Multisystems, Inc., *The European Paratransit Experience: A Report in the Series Paratransit Options of the Future* (Washington, DC: Urban Mass Transportation Administration, Office of Policy Research, October 1981), Michael Kemp, "Jitney Service," *Paratransit: Neglected Options for Urban Mobility*, Ronald Kirby, ed. (Washington, DC: 1974), and Ronald Kirby, "Paratransit: Experience and Potential in the USA," *Ekistics*, No.248, July 1967.
2. This generalization, like those to follow, is based on material in the city archives of Montreal, Ottawa, Toronto, London, Vancouver, and Victoria; the provincial archives of Ontario and British Columbia (especially the British Columbia Electric Railway Papers); the archives of the University of British Columbia, the Toronto Police Museum, the Canadian Automobile Association-Toronto; the Montreal, Toronto, and Hamilton public libraries; the archives of the Montreal Urban Transportation Commission; Canadian and American street railway

- and automobile trade journals; magazines, review, municipal journals, and newspapers; and the secondary literature. The latter for Canada is still rather sparse. It includes Donald F. Davis, "Competition's Moment: The Jitney Bus and Corporate Capitalism in the Canadian City, 1914-1929," *Urban History Review*, Autumn 1989; Fred Angus, *Loyalist City Streetcars: The Story of Street Railway in Saint John, New Brunswick* (Toronto, ON: 1979); Armstrong and Nelles, *Monopoly's Moment*; Michael Doucet, "politics, Space, and Trolleys: Mass Transit in Early Twentieth Century Toronto," *Shaping the Urban Landscape: Aspects of the Canadian City-Building Process*, Gilbert A. Stelter and Alan F.J. Artibise, eds. (Ottawa, ON: 1982); Henry Ewert, *The Story of the B.C. Electric Railway Company* (North Vancouver, BC: 1986); Colin K. Hatcher and Tom Schwarzkopf, *Edmonton's Electric Transit: The Story of Edmonton's Streetcars and Trolley Buses* (Toronto, ON: 1983); Paul-André Linteau, "Urban Mass Transit," *Building Canada*, Norman R. Ball, ed. (Toronto, ON: 1988); J.M. Mills, *Cataract Traction: The Railways of Hamilton* (Toronto, ON: 1971); Gerald Alfred Onn, *The History of the London Street Railway Company: 1873-1951* (Toronto, ON: University of Western Toronto, M.A. thesis, 1958); Patricia E. Roy, *The British Columbia Electric Railway Company: 1897-1928* (Vancouver, BC: University of British Columbia, Ph.D. thesis, 1970); Patricia E. Roy, "The Fine Arts of Lobbying and Persuading: The Case of the B.C. Electric Railway," *Canadian Business History: Selected Studies, 1947-1971*, David S. Macmillan, ed. (Toronto, ON: 1972); and Patricia E. Roy, "Regulating the British Columbia Electric Railway: The First Public Utilities Commission in British Columbia," *B.C. Studies*, No.11, Fall 1971.
3. For the derivation of the 3,800 figure, see Davis, "Competition's Moment." For Canadian motor vehicle registrations in 1915, see M.C. Urquhart, ed., *Historical Statistics of Canada* (Ottawa, ON: 1983).
 4. See *Proceedings of Annual Meeting of the Canadian Electric Railway Association*, June 6-8, 1928; *Canadian Motorist*, 2 (July 1915): 216; 9 (January 1922): 19, 298; *Electric Railway Journal*, 45 (April 10, 1915): 734; 49 (March 10, 1917): 459; *Financial Post*, May 15, 1915; *Canadian Railway and Marine World*, May 1915, 188; June 1915, 230; July 1915, 272-273; December 1925, 626-627; July 1928, 422; *Manitoba Free Press*, June 1, 1915, February 9, 1918; Provincial Archives and Record Service of British Columbia, British Columbia Electric Railway Papers, Add. Mss. 494, vol.2, File 7, "Jitney Argument, Victoria, July 1917" (by BCER); University of British Columbia, The Library, Special Collections Division, B.C. Electric Railway Co., M75, Box 38, File 1545, "Notes for Meeting with Premier and Mayors and Reeves of Cities and Municipalities, November 5, 1915."
 5. *Proceedings of the Annual Meeting* (Quebec: Canadian Electric Railway Association, June 21-22, 1915).
 6. *Ibid.*, 110-111; University of British Columbia, The Library, Special Collections Division, B.C. Electric Railway Company Papers, Box 38, File 1545, "Notes for City Council Enquiry Re: Jitney Regulations," November 11, 1916. See also Gordon Gassaway, "The Jitney Bus on the Pacific Coast," *Motor*, 24(May 1915): 136; *Electric Railway Journal* 45(February 13, 1915): 328.
 7. For the attitudes of street railway employees and their union sympathizers, see *Canadian Municipal Journal*, 11(March 1915): 96; *Canadian Railway and Marine World*, May 1915, 188; Hatcher and Schwarzkopf, *Edmonton's Electric Transit*, 77; *Canadian Motorist* 2(July 1915): 216; City of Ottawa Archives, Ottawa Electric Railway Scrapbooks, Reel 83; *Financial Post*, January 12, 1918; *Ottawa Journal*, July 15, 1919; City of Toronto Archives, Minutes, Toronto Board of Control, April 10, 1917, #833; *Saskatoon Phoenix*, May 27, 1915; *Regina Morning Leader*, May 25, 1915.
 8. Toronto Transportation Commission, *Ten Years of Progressive Public Service* (Toronto, ON: 1931); *Calgary Daily Herald*, May 199, 1915; Roy, "British Columbia Electric," 204; *British Columbia Financial Times*, 4(December 1, 1917); *Vancouver Daily Province*, November 26, 1917; *CRM*, May 1915, 186; March 1918, 116; *Commercial Vehicle*, 12(March 15, 1915): 30; *ERJ* 45(February 13, 1915): 319, 326; 45(March 27, 1915): 612; 45(May 8, 1915): 910; 46(September 18, 1915): 501-511; 47(June 24, 1916): 1184; *Financial Post*, May 15, 1915; *Proceedings of the Canadian Electric Railway Association*, June 2-4, 1926, 50; *Jitney Bus*, 1(August 1915): 125; *Transit Journal*, 81(September 15, 1937): 346-347; *Manitoba Free Press*, May 6, 1915; F.W. Doolittle, "The Economics of Jitney Bus Operation," *Journal of Political Economy* 23(July 1915): 679. For further discussion of "cream skimming" and zone fare issues, see Davis, "Competition's Moment"; M.W. Frankena, *Urban Transportation financing: Theory and Policy in Ontario* (Toronto, ON: 1982); Frances Frisken, "A Triumph for Public Ownership: The Toronto Transportation Commission, 1921-1953," *Forging a Consensus*:

- Historical Essays on Toronto*, Victor L. Russell, ed. (Toronto, ON: 1984); Arthur Saltzman and Richard J. Solomon, "Jitney Operation in the United States," *Highway Research Record*, 449(1973): 69; Michael Walter Roschlau, *Urban Transport in Developing Countries: The Peseros of Mexico City* (Vancouver, BC: 1981); Daniel Roos, "Paratransit," *Public Transportation: Planning, Operations, and Management*, George Gray and Lester Hoel, eds. (Englewood Cliffs, NJ: 1979); and Stanley Mallach, "The Origins of the Decline of Urban Mass Transportation in the United States, 1890-1930," *Urbanism Past and Present*, No.8, Summer 1979.
9. M.C. Urqhart, ed., *Historical Statistics of Canada* (Ottawa, ON: 1983), Series T147-149 and Series A1. As of 1918, Quebec and British Columbia were the only provinces in which more than half of the automobiles were owned by residents of cities with more than 5,000 population. See *Canadian Motorist* 5(February 1918): 74.
 10. The generalizations are based on the sources listed in endnote 9 and in "Competition's Moment." However, an especially good insight into these issues can be found in the *Manitoba Free Press*, June 9, 1915: downtown merchants demanded that the bylaw prohibiting autos from standing on certain congested streets be amended to apply only to jitneys, since, as a department store representative said to the city council, "Ladies want to show their fine cars and limousines, and if they can't drive up to the door and let their cars wait for them, they go to some other store."
 11. *Manitoba Free Press*, April 9, 1915; City of Toronto Archives, Board of Control Minutes, May 4, 1915, #1318; City of Toronto Archives, RG 2 B3, Board of Control Records, Box 98, H.J. Grasset, Chief constable to City Clerk, May 4, 1915; Box 99, A. Finlay to Mayor and Board of Control, June 17, 1915; *CRM*, April 1915, 150; July 1915, 272-273; December 1915, 480; *Canadian Motorist*, 2(June 1915): 175; 2(August 1915): 273; 3(April 1916): 124; Proceedings of the Canadian Electric Railway Association, June 21-22, 1915, 111; June 26-27, 1916, 11; *Vancouver Daily Province*, June 14, 1917; *Saskatoon Phoenix*, May 4 and 6, 1915; *Canadian Municipal Journal* 11(March 1915): 96; *Hamilton Spectator*, April 23, 1915; Hamilton Public Library Special Collections, RG 3, Series D, Legislation and Reception Committee, Minute Book, May 19, 1915. The experiences of E.P. Taylor, the future multi-millionaire, as a jitney operator demonstrated the need for safety regulations: his partner had such bad eyesight that he feared he would kill someone while jitneying. See Richard Rohmer, *E.P. Taylor* (Toronto, ON: 1978). In the United States, some jitney drivers had never before driven a car; and one operator blew himself up by using a match to look at his gas tank. See *ERJ* 47(April 29, 1916): 49(May 19, 1917): 937.
 12. *Hamilton Times*, April 30, June 3, June 25, 1915; *Hamilton Spectator*, June 25, 1915; *Jitney Bus*, 1(April 1915): 10; 1(June 1915): 72; *Vancouver Daily Province*, June 14, November 26, 1917; *Toronto Daily Star*, May 28, 1915; *Motor Bus*, 1(July 1915): 107; *CRM*, April 1915, 150; December 1915, 480; October 1916, 424; *Montreal Le Devoir*, April 15, 1915; Proceedings of the Canadian Electric Railway Association, June 21-22, 1915, 111; *Manitoba Free Press*, February 5-6, 1918.
 13. For Victoria, see Provincial Archives and Records Service of British Columbia, British Columbia Electric Railway Papers, Add MSS 494, Box 2, File 8, W.J. Dowler, City Clerk of Victoria, to Professor Adam Shortt, July 30, 1917; City of Victoria Archives, City solicitor's Records, File 730, City Solicitor to Public Works Committee. January 12, 1924. For Edmonton, see Hatcher and Schwarzkopf, *Edmonton's Electric Transit*, 77-95; *Edmonton Journal*, May 18, September 28, 1915; *Canadian Motorist* 2(August 1915): 273; 2(September 1915): 322; *Canadian Municipal Journal* 13(March 1917): 94; *CRM*, June 1915, 230, 235; February 1916, 70; May 1917, 200; September 1921, 497. For Calgary, see *Calgary Daily Herald*, May 11, 1915, June 12, 1915; *CRM*, June 1915, 230; July 1915, 275; *Canadian Motorist* 2(July 1915): 216. For the Saskatchewan cities, see *CRM*, April 1915, 150; May 1915, 188.
 14. Jitneys were basically eliminated in Calgary, Regina, Saskatoon, and Montreal in 1915; Vancouver and Winnipeg in 1918; Victoria in 1920; Edmonton in 1921; Toronto in 1924; Ottawa in 1925; Hamilton in 1928; and London in 1930. A few jitneys did survive the proscriptive stage of regulation either by running illegally or by serving outlying areas with the approval of the city council. Jitneys, thus, were still legally operating on Hamilton Street in Victoria in 1936. See City of Victoria Archives, City solicitor's Records, File 629, M.F. Hunter, Clerk of the Municipal Council to H.S. Pringle, City Solicitor, March 3, 1936.

15. London Police Department, Board of Police Commissioners, Minutes, May 20, 1915; *Hamilton Times*, June 25, 1915; Hamilton Public Library Special Collections, RG 3, Series F, Property and License Committee, City of Hamilton, Minutes, July 27, 1915; *Manitoba Free Press*, March 31, 1915, April 20, 1915; Proceedings of the Canadian Electric Railway Association, June 21-22, 1915, 108; *Canadian Motorist* 2(July 1915): 216; 2(August 1915): 273; *CRM*, February 1916, 70; Public Archives of Ontario, Oshawa Town Council, Minutes, June 23, 1915; City of Toronto Archives, Board of Control, Minutes, June 1, 1915, #1584-1585; *Toronto Evening Telegram*, October 23, 1915.
16. Delos Wilcox, *Analysis of the Electric Railway Problem* (New York, NY: 1921); Eckert and Hilton, *Jitneys*: *Toronto Daily Star*, May 28, 1915; *Vancouver Daily Province*, June 13, 1917; Gorman Gilbert and Robert E. Samuels, *The Taxicab: An Urban Transportation Survivor* (Chapel Hill, NC: 1982); J.C. Thirwall, "The Jitney Problem — I," *Scientific American*, Supplement No.2069, August 28, 1915; *Edmonton Journal*, May 18, 1915; Doolittle, "Economic of Jitney Operation;" *Commercial Vehicle* 12(May 8, 1915); *The Automobile* 32(April 15, 1915). See also *ERJ* and *CRM* (1915-1918) for bond regulations in each city.
17. Eckert and Hilton, "Jitneys," 309.
18. Provincial Archives and Records Service of British Columbia, British Columbia Electric Railways Papers, Add. Mss. 494, vol.2, File 7, "Jitney Argument, Victoria, July 1917;" *CRM*, April 1918, 161; City of Toronto Archives, Annual Report of the Chief constable, City of Toronto for 1915-1923; *Hamilton Herald*, January 21, 1922.
19. "The Hamilton Street Railway Act, 1927." Statutes of Ontario. 17 Geo. V, chapter 140, pp.931, 935; *ERJ* 51(May 18, 1918); Hamilton Public Library Special Collections, Hamilton Municipal Council Minutes, By-law No. 3336, May 25, 1926, pp. 396-400; Toronto Police Museum, Board of Police Commissioners, Minutes, April 24, 1924; Ewert, *B.C. Electric Railway Company*, 139-140; Roy, "British Columbia Electric Railway," 248-249, 292; *CRM*, April 1918, 161-163; Donald Eldon, *The Past, Present, and the Future of the London Street Railway Company*, report prepared for the London City Council, September 1948, 25; London Police Archives, Board of Police Commissioners, Minutes, December 19, 1929; Hatcher and Schwarzkopf, *Edmonton's Electric Transit*, 95; Ottawa City Archives, Ottawa City Council, Minutes, December 5, 1923, 623.
20. For the deleterious impact of regulatory compromise in Hamilton and Ottawa, see *CRM*, May 1929, 318-319; March 1934, 119. As a result of the five cent fare to rid the city jitneys, the Ottawa Electric Railway lost \$900,000 between 1924 and 1928.
21. See *Proceedings* of the Canadian Electric Railway Association, June 2-4, 1926, 51-65. *Proceedings* of the Canadian Transit Association, June 6-7, 1935, 47; *CRM*, March 1936, 119; August 1937, 393-396. The public in 1937 was quite enthusiastic over new transportation equipment, even the PCC car. However, their enthusiasm dimmed when the same vehicles were still on the streets forty years later.
22. The principal focus of the literature on the impact of regulation on technological change has been on the "Averch-Johnson effect" (A-J-W). In 1962, Harvey Averch and Leland Johnson wrote a now classic article that argued that a firm subject to rate-of-return regulation will invest more heavily in plant and equipment than it would if unregulated provided that the rate of return on investment allowed by the regulatory agency is greater than the cost of capital. Regulation, in other words, creates a bias — the Averch-Johnson effect — towards increasing capital-intensive technology. Since its profit or rate of return depends on its sunk costs, rather than on cost minimization, there is little incentive for the regulated firm to keep its costs down. In the case of regulated public transit, companies seem as the A-J-W model suggests, to have preferred to invest in big buses rather than in bus drivers. For a discussion of these issues, see Harvey Averch and Leland Johnson, "Behavior of the Firm under Regulatory Restraint," *American Economic Review* 52(1962); Fred M. Westfield, "Innovation and Monopoly Regulation," *Technological Change in Regulated Industries*, William M. Capron, ed. (Washington, DC: 1971); Barry Mitnick, *The Political Economy of Regulation* (New York, NY: 1980); Paul L. Joskow and Roger C. Noll, "Regulation in Theory and Practice: An Overview," *Studies in Public Regulation*, Gary Fromm, ed. (Cambridge, MA: 1981); Roger P. Sherman, "Is Public Utility Regulation beyond Hope?" *Current Issues in Public Utility Economics*, Albert Danielson and David R. Kamerschen, eds. (Toronto, ON: 1983).

23. Proceedings of the Annual Meeting of the American Electric Railway Association, October 10-12, 1916; *Bus Transportation* 7(December 1928); *CRM*, September 1920, July 1927; *ERJ* 45(February 27, 1915), 47(June 24, 1916), 51(March 9, 1918), Doolittle, "Economics of Jitney Bus Operation;" Eckert and Hilton, "Jitneys;" Mallach, "Origins of the Decline;" Roschlau, "Peseros;" *Monetary Times* 54(April 9, 1915); Schwantes, "Jitney Phenomenon."
24. *Bus Transportation*, 4(April 25 1925); *CRM*, July 1926; December 1927; March 1928; July 1928; November 1928; February 1937; November 1938; *Proceedings of the Canadian Electric Railway Association*, June 2-4, 1926, June 6-8, 1928; Colin Hatcher, *Stampede City Streetcars: The Story of Calgary Municipal Railway* (Montreal: 1975), Mille, *Cataract Traction*, 42; City of Toronto Archives, Annual Statement, Toronto Transportation Commission, December 31, 1925, *Canadian Motorist*, 12(August 1925); *Saturday Night*, April 24, 1915.
25. Mallach, "Decline of Mass Transportation," 6; Statement of the Canadian Electric Railway Association to the Royal Commission on Railways and Transportation, February 15, 1932; *Proceedings of the Canadian Electric Railway Association*, June 2-4, 1926; June 1-2, 1927; *CRM*, September 1927; July 1928; February 1934; July 1935; March 1936; October 1936; 4(March 1925): 141-142; LTC-1; *Ottawa Citizen*, August 11, 1923; Morris Buck, "What's Happening to Transit in Canada?" *Transit Journal* 83(August 1939); City of Toronto Archives, Annual Statement for the Year Ending December 31, 1925, Toronto Transportation Commission.
26. *CRM*, July 1926; November 1927; July 1928; October 1928; March 1938; July 1935; June 1939; *Bus Transportation* 14(August 1935); City Solicitor's Office, City of Hamilton, "Bus and Taxi Costs" (from Hamilton Street Railway Reports); *Proceedings of the Canadian Transit Association*, June 3-5, 1936; P.H. Bly and R.H. Oldfield, "Competition between Minibuses and Regular Bus Services," *Journal of Transport Economics and Policy* 20(January 1986).
27. *Canadian Railway and Marine World*, October 1925, July 1928, January 1930, June 1936, September 1936, June 1937, July 1937, March 1938, June 1939; *Transit Journal* 81(September 15, 1937); 82(July 1938) Walter Jackson, "But It Must Run as a Trolley," *Canadian Motorist*, 9(January 1922); *Proceedings of the Canadian Electric Railway Association*, June 6-8, 1928. Researchers have found that entrepreneurs in competitive situations opt for smaller buses than do monopoly providers. See Peter R. White, "The Benefits of Minibuses: A Comment," *Journal of Transport Economics and Policy* (January 1981).
28. The failure to coordinate the regulation of private and public transit has been admirably discussed for Chicago in this era. See Paul Barrett, *The Automobile and Urban Transit: The Formation of Public Policy in Chicago, 1900-1930* (Philadelphia, 1983).
29. There is a growing literature pertaining to the "social construction" or "social shaping" of technology. An introduction to it can be found in Wiebe E. Bijker, et.al., eds, *The Social Construction of Technological Systems* (Cambridge, MA: 1987); Donald MacKenzie and Judy Wajcman, eds., *The Social Shaping of Technology* (Milton Keynes, UK: 1985), and for the labor process approach, Phillip Scranton, "The Workplace, Technology, and Theory in American Labor History," *International Labor and Working Class History*, 35(Spring 1989).

