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A BIBLIOGRAPHICAL REVIEW  
OF THE  
CANADIAN TELEGRAPH INDUSTRY

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A BIBLIOGRAPHICAL REVIEW  
OF THE  
CANADIAN TELEGRAPH INDUSTRY

Department of Communications  
Economic Policy Planning Branch  
Ottawa, March, 1974

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SUMMARY

The research, upon which the following comment and annotated bibliography is based, clearly reveals that there is adequate primary material to support the writing of an economic history of the Canadian Telegraph industry. The core of the primary material is found in the Montreal Telegraph Company's Minute Books; in the extensive telegraph reporting of the Monetary Times; and in the statistical and statutory publications of the Canadian Government.

Secondly, the research demonstrates that the existing secondary literature has failed to exploit the primary sources and, consequently, has failed to provide a competent and consistent account of the growth and influence of the Canadian telegraph industry within the macro Canadian economy. In this regard, the anecdotal work of John Murray, A Story of the Telegraph, and the undergraduate work of Hank Witteveen, "The Telegraph in Canada", are lacking to such an extent that one must have recourse to the flowery, nineteenth-century American work of Reid, The Telegraph in America, for a more complete, but still inadequate picture of telegraphic development in Canada.

If the priorities of economic historical research in Canada make the absence of a Canadian telegraphy history an understandable lacunae, they do not make it a less regrettable one.

I INTRODUCTION

The ensuing paper is a report on four months of research into the literary and documentary sources relating to the history of the Canadian telegraph industry. Facing a temporal constraint, it is usually necessary to choose between a relatively superficial survey of some breadth and a relatively restricted survey of some depth. Obviously, the choice of one bears the cost of foregoing the other. In this case, priority is accorded to breadth and consequently, many of the following judgements should be viewed as tentative. Moreover, it is assumed this paper will be read in conjunction with the appended annotated bibliography, in which more detailed comments on individual sources are provided. Time has also precluded consideration of post World War I documentary sources as well as the potentially rich Canadian Pacific Telegraph records. In light of these constraints, the text seeks to highlight the more significant material in the bibliography and, therefore, is forced to treat several groupings of material in a more perfunctory manner.

The practical organization of this effort, to catalogue and evaluate both the secondary and primary sources which relate to Canadian telegraphic history, involves a fourfold division. The first section<sup>1</sup> surveys the secondary literature which has appeared between the late 1840s and the early 1970s. The second part<sup>2</sup> reviews most of the pre-1914 primary material. A third section<sup>3</sup> comments briefly upon the locations of the various materials; while the concluding division<sup>4</sup> makes some suggestions as to the potential for a Canadian telegraph history and the possibilities of key sources in the creation of such a history.

Further, one should explain that although the focus of this undertaking has been the Canadian sources of Canadian telegraphic history, a fair amount of American material has been surveyed as well. The rationale for this seeming anomaly is that many American writers in commenting on their domestic telegraph industry pause to allude in a cursory manner - to the Canadian experience. The dearth of Canadian comment implies that such references should not be overlooked and in addition, the more abundant American literature has value in terms of its methodological guidance. Moreover, the inclusion of American comment and history has the advantage of throwing the Canadian experience into sharper relief with the juxtaposition of Canadian and American industrial histories helping to differentiate between what is industrially and what is domestically significant.

Two final introductory points must be made. First, this research and survey has been confined to the non-technical literature and documents of Canadian telegraphy. Secondly, the critical touchstone of this research and essay has been the perspective and criteria of economic history. In other words, the sources have been considered in the light of their putative contribution to an economic analysis of the telegraph industry; rather than for their anecdotal and biographical value - a value much favoured by retired professional telegraphers turned amateur historian.<sup>5</sup>

I: INTRODUCTION; FOOTNOTES

1. Infra, "The Secondary Literature 1840-1970", 4-17.
2. Infra, "The Primary Material 1840-1914", 25-32.
3. Infra, "The Depositories 1973", 36-40.
4. Infra, "Conclusion: The Research Potential", 42-46.
5. John Murray, A Story of the Telegraph, (Montreal, 1905); and: Robert Easson, "The Telegraph in Canada" The Monetary Times, 2 Dec. 1892, (Vol. XXVI, 22), 642-3; and: Robert Easson, "Reminiscences", Old Time Telegraphers and Historical Association Annual Report 1920; and: Guy Lawrence, 40 Years on the Yukon Telegraph, (Vancouver, 1965), provide good examples of this.



## II THE SECONDARY LITERATURE 1840-1970

Researchers' responses to the poverty of source material are varied, ranging from the abandonment of research projects to the construction of hypothetical canals.<sup>1</sup> The amount of primary material available on Canadian telegraph history<sup>2</sup> suggests that there should be no need to string theoretical telegraph wires across the Canadian past. The state of the secondary literature on Canadian telegraph history, however, fails to reflect the existence of primary documentary data. This condition may be attributed to the scarcity of entrants into the field and then, such entry has usually been by a dilettante or, putting more kindly, by a debutant. Moreover, this speculation as to the generally low quality of the secondary material does nothing to explain the small quantity of available sources.

The following, then, seeks to report on what does exist, rather than explaining the gaps in both quality and quantity. It is a combined review of monographic, periodical, and general text literature and is divided into five subsections, being: the telegraph histories; transoceanic telegraph histories; related industry histories; histories and analyses of governmental policy towards the telecommunications industry; and, general political and economic histories.

### 1. The Telegraphic Histories

#### 1.1 Canadian Telegraphic Histories

The literature which may be classified as being directly on topic -- the Canadian telegraph histories -- is a rather rare breed. John Murray's A Story of the Telegraph<sup>3</sup> appears to be the only effort by a Canadian to write a history of the telegraph in Canada. Unfortunately, Murray's effort, to meld

company histories, biographical and autobiographical material into a coherent chronicle of the telegraph, fails. Instead, he has produced a disjointed book in which the company histories are skeletal<sup>4</sup> and incomplete<sup>5</sup> and occupy a poor third position behind Murray's memories and his thumbnail sketches of "great men" in both Canadian and American telegraphy.

If good monographs partially depend upon the existence of a solid journal literature, then the disappointing monographic literature comes as no surprise as one surveys the relevant periodical literature. Periodical indices<sup>6</sup> catalogue an impressive number of articles about telegraphy; the problem, however, is that between eighty and ninety per cent of these seem to be of a technical nature.<sup>7</sup> Happily, this still leaves the periodical area more heavily populated than the monographic.

The best work of a periodical nature is probably Witteveen's undergraduate essay, "The Telegraph in Canada".<sup>8</sup> This paper performs the useful task of consolidating considerable material on the growth of the telegraph in Canada. The material is assembled on a regional basis, and its thematic unity is found in the search for American dollars behind every Canadian telegraph pole<sup>9</sup>, (dollars which are resented when found)<sup>10</sup>. Unfortunately, the paper relies heavily upon the 1879 edition of Reid<sup>11</sup> and, therefore, accepts the conclusion that the Canadian telegraph industry was dominated by American interests. Although this may be a fair inference for the period 1878-1882,<sup>12</sup> it is misleading with respect both to the prior period (1846-1878) and the subsequent period.<sup>13</sup> If Witteveen had had access to the 1886 edition of Reid<sup>14</sup>, he undoubtedly would have given fuller consideration to the Great North-Western Telegraph Company (hereafter GNWTC) and its competitive relationship with the

Canadian Pacific Railway Telegraph Service (hereafter CPT). It is possible that Witteveen's effort to write regional, chronological histories obscured the market structures which faced the telegraph entrepreneurs in Canada, and hence led him to both draw some misleading conclusions and overlook the importance of market structure itself.

Green's article, "Canada's First Electric Telegraph"<sup>15</sup> is an excellent supplement to Witteveen with respect to the first Canadian telegraph firm. Green's work, however, is not intrinsically outstanding as it tends to be choppy and poorly annotated. Amongst the remaining Canadian periodical literature, MacKay's two articles on the "Overland" telegraph<sup>16</sup> deserve mention. These two, in relating the saga of Western Union's failure to substitute a land line through Alaska and Russia for the Atlantic cable, do not contribute a great deal to the history of the Canadian industry. Of course, they do explain Western Union's ephemeral interest in the operation of British Columbia's pre-Confederation telegraph.<sup>17</sup> Clarke's<sup>18</sup> untitled address and Dubé's<sup>19</sup> evidence before the Canadian Transport Commission provide accurate, though brief, overviews of the progress of the telegraph in Canada; while Croft's "100 years of Canada's Electric Telegraph"<sup>20</sup> being even shorter than Clarke and Dubé, is less informative for this brevity.

McNicol's "A Chronological History of Electrical Communication ..."<sup>21</sup> is worth noting. This is exactly what it says it is - a table of contents of important events in the history of electrical communication. It includes most of the founding and merging dates of Canadian telegraph firms, although it is not exhaustive. Moreover, as its scope is world wide and its temporal horizon is prehistoric, it is only useful as a quick reference.

It was thought Canadian biography might hold some promise for a history of Canadian telegraphy. Nevertheless, because of the marked preference of old telegraphers for anecdotal biography or autobiography<sup>22</sup>, this area of the literature makes little contribution to the history of the telegraph industry per se. It was disappointing to discover that the biographers of outstanding individuals in the creation or exploitation of the telegraph were more interested in the non-telegraphic activities of their subjects. For instance, Vaughan<sup>23</sup> charts Van Horne's railway building career with only peripheral mention of Van Horne's role in establishing the unique Canadian relationship between railroads and commercial telegraphy. Vaughan does, however, allot some space to Van Horne's youthful employment as a telegrapher. Lawrence's autobiography<sup>24</sup> has less to offer; it is based upon his diary and has more to say about life in the wilderness than it has about telegraphy or the industry.

To conclude, one should note that the various dictionaries of Canadian biography are as reticent on the telegraph activities of Canadian entrepreneurs as the full blown biographies are. One exception is found in the entries for Erastus Wiman, which invariably mention his presidency of the Great North Western Telegraph Company and his expatriot residency in New York. As is the nature of dictionary comment, these entries give no further details.

### 1.2 American Telegraph Histories

In turning to American monographs on telegraphy, three books are most worth consideration: one, Reid<sup>25</sup> for its Canadian content; another, Thompson<sup>26</sup> for its bibliography; and the third, Harlow<sup>27</sup> for its breadth of view.

As Thompson's bibliography reveals there was a large output of telegraph monographs in nineteenth century America. Most of these were written during

the first blush of the telegraph's success and consequently, most of the monographs are lacking in both perspective and accuracy.<sup>28</sup> In contrast, Reid's work appears to be unique in that he wrote well after Western Union had consolidated its telegraph monopoly and wrote the only nineteenth century monograph that dealt with the macro history of telegraphy as the sum of the micro histories of the myriad individual telegraph firms. What is perhaps more remarkable is that Reid specifically treats America as North America and accordingly he narrates the history of Canadian telegraph firms with the same attention he gives to their United States counterparts. Indeed, Reid would appear to be the only author who deals with the Canadian industry in this manner and although his language is flowery, his style hyperbolic, and his biography eulogistic, his information is reliable. It is regrettable that Reid's history stops in the early 1880s,<sup>29</sup> because no one else has taken up his pen.

Thompson's Wiring a Continent ...<sup>30</sup> is possibly more valuable to Canadian research for its bibliography than it is for its analysis of the telegraphy industry. Moreover, the bibliography should be used with care because it is basically concerned with the American literature, and seeks to be exhaustive rather than critical. Therefore, it fails to reveal the almost universal unreliability of the numerous mid-nineteenth century monographs.<sup>31</sup> Thompson's history itself is discursive in style rather than analytical, and hence, it offers a better chronicle than an explanation of telegraphic events. As a result he provides no analytical framework which could be applied to the Canadian empirical record.

However, in pursuing his goal,<sup>32</sup> which is to trace the creation of Western Union's monopoly of American telegraphy in the Antebellum period,

Thompson exposes a clear pattern of early telegraphic development in America. Basically, the pattern involves a steady retreat away from a highly disjointed, competitive, unremunerative, multi-firm market towards a highly concentrated, immensely profitable monopoly market,<sup>33</sup> which is but slightly disciplined by the entry of a series of unsuccessful challengers.<sup>34</sup> This is a pattern which the Canadian industry appears to follow in its early years (1846-1872) but to deviate from in maturity (post 1872).<sup>35</sup> Lastly, Thompson only makes isolated references to the Canadian experience;<sup>36</sup> in view of his objective this is not surprising.

Harlow's book,<sup>37</sup> unlike Thompson's which was a doctoral dissertation, is a popular history of electronic communication. Harlow's main concern is to look at the acorn (Morse's invention) and the oak (Western Union) while he largely ignores the sapling (how the acorn grew). Writing in the mid-1930s and writing about the whole telecommunications industry Harlow brings a breadth of view to telegraph history which is seldom apparent in the more specific telegraph studies. Harlow's perspective, as reflected in the space he allots to each of the telegraph, the telephone, and the radio, reveals a tacit recognition of the declining importance of the telegraph in the total telecommunications market.

American periodical histories of the telegraph were generally found to be too specialized to contain reference or analyses useful for Canadian research.<sup>38</sup> Biographies of American telegraphers and electrical engineers seem to suffer from the same lacunae as Canadian biographies. Thus Mabee<sup>39</sup> and Prime<sup>40</sup> stress Morse's scientific and personal life to the detriment of his own exploitive efforts and, indeed, the effect of all such exploitive efforts.

## 2. The Transoceanic Telegraph Histories

### 2.1 Monographs

Submarine telegraphy is not a truly appropriate concern here, except that it is one area of telegraphy in which Canadian publicists took considerable interest. Most of the Canadians involved here were Imperial Unionists, (they would probably be considered as Diefenbaker conservatives today), and their concern is more with promoting Empire solidarity than with telegraphy as such. For them the transoceanic cables were but one means to an end. However, most of the material produced by these people on the transoceanic projects shows some marginal interest in existing or proposed Canadian land line telegraphic plant.<sup>41</sup> Of course, the Canadian land line plant was essential to the commercial and political success of these "all red line" entrepreneurs and publicists.

### 2.2 Periodicals and Biographies

As with the monographic literature, periodical pieces on transoceanic telegraphy have little to contribute to the history of Canadian land line telegraphy or the firms involved in it. Sir Sandford Fleming, mainly through the pamphlet medium<sup>42</sup>, dominates this area with a plethora of Pacific Cable propaganda. The biographical literature in this area does not deviate from the pattern established by the monographs and periodicals. Carter's biography of Cyrus Field<sup>43</sup> is illustrative of this point. This apparent literary independence of land line and submarine telegraphy is probably no more than a reflection of the actual operational independence. The large integrated (land and ocean line) telegraph firms of the real world operated the two services separately of each other.<sup>44</sup>

### 3. Related Industry Histories

This group includes published material on the Canadian and American Telephone industry and on Canadian Railways. The material covered is by no means exhaustive, being restricted to those books whose tables of contents or indices suggested telegraph content.

#### 3.1 Canadian Telephone Literature

For the Canadian scene Patten's Pioneering the Telephone ...<sup>45</sup> is an important, if unpolished, contributor to the history of the interaction of the telephone and telegraph industries in the period 1880-1920. Patten was given access to Bell Canada documents, including C.F. Sise's logbook, which he reproduces in part. Some of this material outlines Bell's early relations with the Canadian telegraph companies, an association which does not reflect kindly on the perspicacity of the telegraph companies given the sale of all their telephone plant and rights to Bell despite the clear advice of junior telegraph employees on the potential of the telephone.<sup>46</sup>

Periodical literature on related Canadian industries does not offer much promise for a telegraphic history; this is probably because its focus is too sharp with no significant digressions. Fetherstonbaugh's biography of C.F. Sise,<sup>47</sup> however, is another matter. Sise, as the first general manager and then as president and general manager, was the moving force in Bell Canada during its formative years (1880-1917). Fetherstonbaugh, like Patten, comments on Bell's early and decisive move to buy up the telephone plant and rights of the Montreal and the Dominion Telegraph Companies rather than setting up a competing operation. This purchase seems to have had two significant results. First, since Bell's telephone patents were successfully challenged in 1885,<sup>48</sup> had the



telegraph companies retained ownership of their telephone plant, Bell might not have been able to secure an early predominance in the provision of telephone service. Secondly, in combination with the Telegraph Amendment Act<sup>49</sup> (1882) which defined "telegraph" as being exclusive of "telephone", the sales contracts between telegraph companies and Bell contained clauses prohibiting the telegraph companies from entering the telephone business in the future<sup>50</sup> and this seems to go a long way in explaining the subsequent separation of the voice and record transmission services in Canada. These transactions also illustrate the substantial price paid by the telegraph companies for their failure to maintain technical facilities capable of developing, or assessing other developments, in electric transmission technology.<sup>51</sup>

### 3.2 American Telephone Literature

On the American telephone scene both Coon<sup>52</sup> and Danielian<sup>53</sup> are valuable as points of reference or comparison in telephone-telegraph relations. Both men make many similar points, which is not surprising in view of their common reliance on the 1934 Federal Communications Commission report on the telecommunication industry. Coon has written the more "popular" history whereas Danielian has taken a more scholarly approach. Coon, however, appears to have more frequent, albeit minor, references to Canadian matters. Both are valuable - Danielian is more valuable - as models of the kind of study that should be available for the Canadian experience.

### 3.3 Canadian Railway Literature

Within the Railway group, Harold Innis' A History of the Canadian Pacific Railway<sup>54</sup> should probably rank first in significance as an input into a telegraph history. As usual Innis paints on a very broad canvass but the

first hundred odd pages of C.P.R.<sup>55</sup> are replete with allusions to and foot-  
notes on CP's telegraph powers and proposals. The legislative grant of telegraph  
power to Canadian Pacific seems especially critical in Canadian telegraph affairs  
in view of the Great North Western Telegraph's successful monopolisation of  
Canadian telegraphy.<sup>56</sup> The balance of Innis' material mainly relates to  
governmental policy towards, and the economic exigencies of Canadian telegraphy.  
Steven's Canadian National Railways<sup>57</sup> deals very briefly with CN's telegraph  
operations. His terse comments, however, are worth reading because of the motives  
he attributes to the momentous events in early twentieth century Canadian  
telegraphy.<sup>58</sup> Both Innis, Stevens and others' efforts on Canadian Railways gloss  
over or fail completely to comment on the uniquely close relationship between  
railway and commercial telegraph enterprise in Canada.

Bonar's typescript history of the CPR<sup>59</sup> is appropriately considered here,  
even though it treats the CPR as the conglomerate it is, rather than as a mere  
railway company. Bonar, an ex-secretary to the Company, is obviously concerned  
to present CP's best profile. In so doing, he tries too hard to reveal the  
"vast" contributions of CPR to Canada's "progress". He protests too much with  
too little data behind him.<sup>60</sup> Bonar is fond, for instance, of bench mark  
comparisons made in isolation from the economy as a whole, such that 1882  
accomplishments are used as the measure of success for activities in the late  
1940s. Such unreferenced comparisons have a tendency to mislead. The Synoptical  
History<sup>61</sup> put out by CNR's Accounting Department, being half document, half  
monograph and a wholly corporate autobiography is difficult to classify  
precisely; nevertheless, its telegraph entries warrant its inclusion here. These

entries are predominantly legal or financial in nature. That is, the authors have traced and consolidated information relating to changes in the statutory powers (company charters) and the capitalization figures of the various telegraph firms that eventually came together under the CNT umbrella. If this makes rather dry reading, it also makes it the most reliable source of chronological and capitalization information available for most of the early Canadian Telegraph Companies -- all of which ended up in the CNT family. One should be warned, nevertheless, that many of the smaller mid-nineteenth century companies lost their corporate identities long before CNT entered the telegraph scene in 1920-21.<sup>62</sup> Hence, Synoptical is not a comprehensive source for this type of information.

4. Histories and Analyses of Governmental Policy Towards the Telecommunications Industries

4.1 Monographs

Although the policy literature considered here falls considerably short of being exhaustive, those that have been reviewed were selected for their promise of historical material concerning telegraphy -- a promise which was not always fulfilled. Of these Borchardt,<sup>63</sup> Herring and Gross,<sup>64</sup> and MacLaurin<sup>65</sup> deserve some attention. Borchardt's main contribution to telegraph history and analysis is one of bringing Goldin's<sup>66</sup> 1947 article on government policy forward from its 1945 cut off up to 1969-70.<sup>67</sup> The merit of Borchardt and Goldin together is found not so much in the Canadian material they present, which is little or none, but in their approach to and analysis of government-industry interaction.

Their joint work does not, however, really provide a model into which one can plug Canadian data, but it does display an analytical framework worth emulating. Herring and Gross deserve attention upon similar grounds.<sup>68</sup> Again the authors largely ignore Canada, but again their analysis of the government - industry interface can provide a sane guide in the shaping of hypotheses one would want to test against the Canadian record.<sup>69</sup> MacLaurin, although predominantly interested in the American Radio Industry, takes a cursory look at radio's relatives in telecommunications.<sup>70</sup> In so doing, he suggests that in the telegraph community there was a marked lack of any intra-firm innovation.<sup>71</sup> In this regard, the Canadian experience would seem to have been analogous to the American, despite the fact that several Canadian firms acquired charters which specifically empowered them to set up manufacturing subsidiaries to produce the instruments of the telegraph trade.<sup>72</sup>

#### 4.2 Periodicals

In the periodical literature on public policy, Goldin's<sup>73</sup> article is outstanding. Like Thompson but covering a longer time frame,<sup>74</sup> Goldin exposes a pattern of telegraph development. It is a four stage pattern involving periods of: emergence, prosperity, decline, and poverty.<sup>75</sup> Clearly this is a very general pattern -- analogous to the human life cycle -- so it is not surprising that it corresponds with the Canadian experience, although there seems to be some deviation from the American pattern in the period of decline. Governmental intervention to shore up declining telegraph revenues, is considerably less demonstrative and takes place later in Canada than in the United States. As a result the Canadian telegraph firms and the chief agents of their decline, the telephone firms, were left to determine their respective fortunes

in the market.<sup>76</sup>

## 5. General Political and Economic Histories

In turning from the specific to the more general text literature, one discovers once again that the more adequate material is American, while the Canadian sources are disappointing. As in the previous sections, this survey does not pretend to be exhaustive, and indices' entries served as the selection criteria.

### 5.1 Canadian Texts

It seems fair to say that most Canadian political histories are preoccupied with Canada's communications problems. Unfortunately, for those interested in the Canadian telegraph industry, this preoccupation does not extend to telecommunications problems.<sup>77</sup> Those, like McInnis,<sup>78</sup> who deign to mention the telegraph, do so incidently and usually in connection with the torturous acquisition of the Hudson's Bay Company by the Dominion<sup>79</sup> or as an example of the central governments timorous efforts to exercise some control over industry.<sup>80</sup>

Canadian economic history texts, (of which there are only a few), are marginally better than their political and social counterparts. Once again, however, their main concern is physical communication - rivers, roads, canals and railways<sup>81</sup> which relegates the telegraph to incidental references. Texts on the Canadian economy, as opposed to economic histories, give no independent attention to the telegraph industry. If dealt with at all the telegraph, indeed telecommunications at large, appears to be submerged in aggregate of the tertiary or service industry.<sup>82</sup> The one exception to these oversights is found in Innis and Lower<sup>83</sup> who reproduce a number of mid-nine-

teenth century newspaper articles on the infant Canadian Telegraph industry.<sup>84</sup>

## 5.2 American Texts

Most American texts seem to be satisfied with presenting a paragraph or so of banal facts coupled with rather superficial interpretation concerning the development of the American industry.<sup>85</sup> in American Economic History, Faulkner sets himself apart from his fellow authors by providing a brief bibliography of telecommunication literature.<sup>86</sup>

II: THE SECONDARY LITERATURE 1840-1970; FOOTNOTES

1. Robert Fogel, Railroads and American Economic Growth, (Baltimore, 1964).
2. See: Section III The Primary Material 1840-1914 and its corresponding bibliographic section.
3. Murray, A Story ...
4. Ibid., 107-124.
5. Ibid., 112. Here reference is made to the People's Telegraph, Co., the Dominion Telegraph Co., and the Provincial Telegraph Co., but no details are given of company history.
6. See, for example: Poole's Readers Guide to Nineteenth Century Periodical Literature; or, Index to Canadian Periodical Literature.
7. See, for example: Poole's, in which 14 of 17 entries are clearly technical articles.
8. Hank Witteveen, "The Telegraph in Canada", (Ottawa, 1973).
9. Ibid., passim.
10. Idem.
11. James Reid, The Telegraph in America, (New York, 1879). Many of Witteveen's references appear to include more of the preceding material than is usual. Hence the number of references to Reid is not a good indication of the reliance placed upon him.
12. In 1878 the Dominion Telegraph was leased by Western Union who almost immediately assigned this lease to the Great North Western Telegraph Company (GNWTC). This latter company then proceeded to arrive at a similar agreement with the Montreal Telegraph Company and hence established itself as a monopolist. Majority control of the GNWTC seems to have been in American hands but see: MacDonald Papers, Vol. 139, 57188-99, which denies this. Monetary Times, 1877-1881.
13. Prior to 1878 the Canadian telegraph market was divided unequally between the Montreal Telegraph Company (MTC) (between 70 and 80% of the market) and the Dominion Telegraph Company (DTC). Both firms were Canadian controlled. In the twenty years after 1846 there had been many other Canadian controlled entrants into the industry - these, however, were absorbed by either MTC or DTC. After 1882, Canadian Pacific entered the telegraph market and made steady inroads into GNWTC's market share. In 1920 the creation of CNT returned the entire market to Canadian interests. Monetary Times "The Telegraph in Canada" (1892-93); and Canadian National Railways Synoptical History, (Montreal, 1962).

14. Reid, The Telegraph in America, (New York, 1886).
15. Ernest Green, "Canada's First Electric Telegraph", Ontario Historical Society Papers and Records, XXIV (1927), 366-372.
16. Corday MacKay, "The Collins Overland Telegraph", The British Columbia Historical Quarterly, Vol. X, iii, (July, 1946), 187-215.  
\_\_\_\_\_, "The Overland Telegraph", Canadian Geographical Journal, Vol. 32, #4, (April, 1946), 172-179.
17. In 1880, nine years after B.C. entered Confederation, the Dominion Government bought Western Union's interest pursuant to the agreement for B.C.'s entry into the Dominion.
18. H.J. Clarke, "An untitled address on the telegraph in Canada," (Ottawa, 1973).
19. Canadian Transport Commission. Telecommunication Committee. Evidence of Julien Dubé, (Ottawa, CTC file no. 10041.186), 1-7.
20. Frank E. Croft, "100 Years of Canada's Electric Telegraph" Saturday Night, Vol. 62, #16, (21 Dec. 1946), 32-3.
21. Donald McNicol, "A Chronological History of Electrical Communication ... from B.C. 2000 to 1920", (Queen's University, McNicol Collection #472).
22. See: Footnote #5 to the Introduction, supra.
23. Walter Vaughan, The Life and Work of Sir William Van Horne, (New York, 1920).
24. Guy Lawrence, 40 Years on the Yukon Telegraph, (Vancouver, 1965).
25. Reid, The Telegraph ...
26. Robert L. Thompson, Wiring a Continent. The History of the Telegraph Industry in the United States 1832-1866, (Princeton, N.J., 1947).
27. Alvin Harlow, Old Wires and New Waves. The History of the Telegraph, Telephone, and Wireless, (New York, 1936).
28. This judgement is based upon research in the McNicol Collection at Queen's which contains a representative amount of this nineteenth century historiography which was not thought worthy of inclusion here. See: Catalogue of the McNicol Collection, (Kingston, 1942).
29. Reid, 1886 edition.. Reid's 1879 edition comes to a rather abrupt end (for Canadian telegraph history) in about 1878.
30. Thompson.
31. See: Footnote #28, supra.



32. Thompson, 440.
33. Ibid., 440-446.
34. The best evidence of this is the simple survival of Western Union as a monopolist.
35. The best evidence of the Canadian experience is found in the editorials and articles of the Monetary Times. See especially the series: "The Telegraph in Canada" 1892-1893, and Appendix A of this Paper. Further evidence is to be found in the Montreal Telegraph's Minute Books and in the initial issue of: Canada, Department of Railways and Canals, Telegraph Statistics, (Ottawa, 1913).
36. Thompson, 253-4, 324.
37. Harlow, Old Wires ...
38. L.J. Arrington, "Deseret Telegraph - A church Owned Public Utility", JEH, Vol. 11, #2, (June, 1951), 117-139.
39. Carleton Mabee, The American Leonardo. The Life of Samuel F.B. Morse, (New York, 1957).
40. Samuel Prime, The Life of Samuel F.B. Morse. Inventor of the Electro-Magnetic Recording Telegraph, (New York, 1875).
41. Charles Bright, Imperial Telegraphic Communication, (London, 1911).  
  
Henry Field, History of the Atlantic Telegraph, (New York, 1869). This volume, for example, has short sections on the Nova Scotia Telegraph Co. as the Cable's link to Western Union's New Brunswick and American lines. He also has a graphic section on the building of the trans-Newfoundland land line.  
  
George Johnson, The All Red Line, (Ottawa, 1903).
42. Sir Sandford Fleming, "Cheap Telegraph Rates" (Toronto, 1902); Documents in reference to ... direct telegraphic connection between (units of the Empire), 1886; Memorandum ... for ... intercontinental telegraph, (London, 1882); Postal and Telegraphic communication by the Canadian route, (1887); Telegraphic Communication ... by the Canadian route, (1887); Telegraphy between England and Australia, (London, 1890). Fleming nearly always refers to and extols CPT in these pamphlets.
43. Samuel Carter, Cyrus Field: Man of Two World, (New York, 1968). Particularly, 94-105.
44. Western Union is the example in mind, but see also Herring and Gross Telecommunications Economics and Regulation, (New York, 1936).

45. William Patten, Pioneering the Telephone in Canada, (Montreal, 1926). Patten's lack of polish shows up in his frequent point form presentation and his failure to annotate his sources.
46. Ibid., 46-97 and particularly the letter from MacFarland to H.P. Dwight.
47. R.C. Fetherstonbaugh, Charles Fleetford Sise 1834-1918 A Biography, (Montreal, 1944).
48. Decision of the Commissioner of Agriculture at the suit of the Canadian Telephone Company, a small independent firm operating in the Eastern Townships with both Bell and Edison equipment. Patten, 103.
49. Canada. Revised Statues of Canada, 1886, "An Act to Amend the Telegraph Act", (Ottawa, 1886).
50. Bell Canada, Telephone Company File, Contracts of Sale (between Montreal Telegraph Company and Bell and between Dominion Telegraph Company and Bell). General Contracts, files #3, #5, 21 June 1880, 16 Nov. 1880.
51. Fetherstonbaugh, 120 ff. The evidence here suggests that both MTC and DTC were more worried about the price or the timing of the sale than they were aware of the value of what they were selling. See the excerpts from the Logbook and Sise's letters to Vail in Patten, 46-97.
52. Horace Coon, American Tel. & Tel. The Story of a Great Monopoly, (New York, 1939).
53. N.R. Danielian, A.T.&T. The Story of Industrial Conquest, (New York, 1939).
54. H.A. Innis, A History of the Canadian Pacific Railway, (Toronto, 1923).
55. Ibid., 41-151; and Appendix A: The Canadian Pacific Charter, 298.
56. See: MacDonalld-Wiman and MacDonalld-Van Horne correspondence in the MacDonalld Papers (1880-86). Wiman was an ex-patriot Canadian operating out of New York. He was on the Board of Western Union which no doubt provided him with a powerful or profitable example, if not impetus, to monopolise the Canadian telegraph industry.
57. G.R. Stevens, Canadian National Railways, Vol. 1, Sixty Years of Trial and Error (1836-1896), (Toronto, 1960); Vol. 2, Towards the Inevitable (1896-1922), (Toronto, 1962).
58. Ibid., Vol. II, 78-79.
59. James Bonar, Canadian Pacific Railway Company and its contributions towards the early development and to the continued progress of Canada, (Montreal 1950).

60. Ibid., Vol. VI, 50. Where he asserts that CP was instrumental in lowering telegraph rates, but fails to demonstrate how, or how low.
61. Canadian National Railways, Accounting Department, A Synoptical History ... (Montreal, 1962).
62. For example. the Toronto Hamilton and Niagara Electric Telegraph Company; the People's Telegraph Co.; the Montreal and Troy Co.; the International Co.; the Grand Trunk Co.; and the Bytown and Prescott Co. are not included in Synoptical.
63. Kurt Borchardt, Structure and Performance of the US Communications Industry Government Regulation and Company Planning, (Boston, 1970).
64. James Herring and Gerald Gross, Telecommunications Economics and Regulation, (New York, 1936).
65. Rupert MacLaurin, Invention and Innovation in the Radio Industry, (New York, 1949).
66. H.H. Goldin, "Governmental Policy and the Domestic Telegraph Industry," J.E.H., (May, 1947).
67. Borchardt, Chapter 2.
68. Herring and Gross, particularly chapters 1 and 2, and pages 181-209.
69. Ibid., 213-216 where they look at Federal versus State regulation.
70. MacLaurin, 23-25 (telegraph) and 25-26 (telephone).
71. Ibid., 24.
72. Canada, Parliament. House of Commons, "An Act to incorporate the North American Telegraph Company 1886", Clause 3. See also the 1857 amendment to Montreal Telegraph Company's Charter.

The Desoronto (NATC) file in the Bell collection suggests that NATC never exploited this power - being content to buy its technology from Bell. Moreover, the larger Montreal Telegraph Company, which had similar powers, seems only to have exploited this power to the extent of operating its own insulator cap factory. Montreal Telegraph Company, Minute Book, Vol. II, Semi Annual Report 1856, 210. The rest of MTC's technology seems to have been bought directly from engineers or from Western Union (which also got it from engineer-inventors). MTC Minute Book, Vol. III, 127. These documents contain no evidence of MTC selling technology. The point, of course, is that having specifically acquired the power to develop their own technology the Canadian firms did little with it.

73. Goldin.
74. 1844 to 1945 as opposed to 1844-1866.
75. Goldin, 53.
76. Although this point needs considerable expansion, it is interesting to compare the "Kingsbury Commitment" of 1913, which was extracted from AT&T by the Justice Department (Coon, 112-114) with the CN-CP Act of 1933. The former gave effective government sanction to the separation of the voice and record markets and equally effectively shored up Western Union's monopoly position. The latter merely permitted CN and CP to enter market pooling arrangements but did nothing further to protect telegraph revenues or rationalize the communications market. See: Clause 16(1) of Part II of the CN-CP Act (1933), 23-24 George V, Chapter 33.
77. J.M.S. Carless, Canada: A Story of Challenge, (Toronto, 1963), 212-216.
78. Paul Cornel, et al., Canada Unity in Diversity, (Toronto, 1967), in which the stress on regionalism throws communication problems into focus, if only tacitly.
78. Edgar McInnis, Canada A Political and Social History, (Toronto, 1959).
79. Ibid., 307.
80. Ibid., 383-4.
81. H.A. Innis, Essays in Canadian Economic History, (Toronto, 1956), 62-77, and 220-232.  
  
G.P. de T. Glazebrook, A History of Transportation in Canada, (Toronto, 1938).  
  
W.T. Easterbrook and Hugh Aitkin, Canadian Economic History, (Toronto, 1963), 293-320 and 409-445.  
  
Constitute fine examples of this bias.
82. André Raynaud, The Canadian Economic System, (Toronto, 1967).  
  
Richard Caves and Richard Holton, The Canadian Economy, (Cambridge, Mass., 1961).
83. H.A. Innis and A.R.M. Lower, Select Documents in Canadian Economic History 1783-1885, (Toronto, 1933).
84. Ibid., 214-216.
85. Harold Faulkner, the Decline of Laissez-Faire, 1897-1917, (New York, 1951).

Seymour Harris, American Economic History (New York, 1961).

Edward Kirkland, A History of American Economic Life, (New York, 1951).

Clark Spence, The Sinews of American Capitalism, (New York, 1964).

George Taylor, The Transportation Revolution, (New York, 1951).

86. Harold Faulkner, American Economic History, (New York, 1960).

III THE PRIMARY MATERIAL 1840-1914

The primary sources of Canadian telegraphic material have been grouped into six subdivisions. Quantitatively there would seem to be a mass of material available in this documentary area. Qualitatively, however, only a proportion of this seems to be material to an economic history of Canadian telegraphy.

1. Canadian Government Documents and Publications

Broadly speaking, government documentation of non-governmental telegraph enterprise is fairly sketchy until the appearance of the Department of Railways and Canals' Telegraph Statistics<sup>1</sup> in 1913. However, two Department of Communications productions, both really secondary material, provide competent, but brief, discussions of: Canadian telegraph history - Instant World,<sup>2</sup> and the recent decline in the market for the telegraphy - A Review of the Public Message Telegraph Service in Canada.<sup>3</sup> A certain amount of similar, if less comprehensive and less specific, material appears in various Select Committee reports, albeit the several of these reports with promising titles have nothing substantial on the telegraph.<sup>4</sup> One such document, the Senate's "Return to an address .. of correspondence ... between (several telegraph companies) and the government",<sup>5</sup> deserves special mention, for it records a clear governmental decision (1877) against any form of telegraph monopoly.

Parliamentary Sessional Papers<sup>6</sup> have not been adequately reviewed but those few which have been screened indicate that much of the information they provide relates to the Government Telegraph Service. Acts of Incorporation

and regulatory statutes are useful in recording the powers granted to, and the prohibitions imposed on the various telegraph companies. Perhaps their greatest value, however, is found in cases where the Company involved has petitioned for a new charter or charters.<sup>7</sup> In these cases, the Acts, in revealing the extension of authority granted the petitioner, reveal a good deal about the company's current activities or future plans. Moreover, these private Acts can contain significant policy ramifications, such as the Montreal Telegraph Company's charter of 1882<sup>8</sup> which imposed a rate ceiling of 25¢ per ten word message for communications passing over MTC lines, thereby establishing the rate for the entire industry.<sup>9</sup>

The regulatory Statutes, of course, also reveal something about the sort of market the enacting government wished to establish. Hence in 1882, the Telegraph Act<sup>10</sup> was amended to exclude the telephone from that group of instruments usually subsumed by the term telegraph.

The Annual Reports or Blue Books of the Department of Public Works,<sup>11</sup> containing the Report of the Superintendent of Telegraphs, provide extensive documentation for the government Telegraph Service. The consolidated DPW Report of 1882<sup>12</sup> is the best of this series in that it includes a verbal history of the government service which supplements the regular statistical and maintenance reports. Unfortunately, the DPW Reports do not concern themselves with commercial telegraph services, except for an occasional comment and after 1900, a brief tabular presentation of the line lengths of the major firms. This neglect of the commercial telegraphers was rectified in 1913 by a new publication put out by the Department of Railways and Canals. This initial issue of Telegraph Statistics<sup>13</sup> is to be prized for its short historical review of the

Canadian telegraph industry and its comprehensive review at that point in time of the fourteen reporting telegraph companies. In 1919 Dominion Bureau of Statistics took over the responsibility for reporting Telegraph Statistics. It should be noted here that the statistics reported by these two agencies have been consolidated by Urquhart and Buckley,<sup>14</sup> thereby rendering these sources partially redundant.

## 2. Related Industry Documents

Related industry and other non-telegraph company documents are only slightly more rewarding than government sources. Although it is difficult to generalize about their value or contribution, it might be said that most of them reveal the importance of the telegraph in the relevant period but fail to provide any important data. The exceptions to this are Fleming's three Reports,<sup>15</sup> Innis' Select Documents<sup>16</sup> and Urquhart's Historical Statistics.<sup>17</sup> Urquhart's contribution is obvious although it is unfortunate that his statistical series have not been extended backward beyond 1912. The three or four press clippings published by Innis are really not very valuable in light of what is available in the Monetary Times<sup>18</sup> and the Montreal Telegraph Company's Minute Books.<sup>19</sup> Fleming's Reports, however, are more significant. The 1874 Report being mainly topographical is not as interesting as the other two, except for its mapping of the proposed route of the CPR;<sup>20</sup> the 1877 Report reports on the progress of the telegraph construction undertaken by Fleming, (on behalf of the Government, not the CPR), reprints several of the contracts for telegraph construction, and strongly recommends that telegraph lines should go ahead without waiting upon railway progress;<sup>21</sup> and the 1880 Report<sup>22</sup> repeats this point with further reasons why the telegraph should precede the railroad.



### 3. Telegraph Company Documents

The records of the telegraph companies themselves are, obviously, indispensable to any responsible work on the Canadian Telegraph Industry. The Minute Books for the Montreal Telegraph Company<sup>23</sup> (MTC) and that of the Montreal and Troy Telegraph Company<sup>24</sup> are available and provide a substantial amount of relevant information. The minutes of the Troy Company outline the existence of a rather weak enterprise which grew weaker as it struggled to succeed with inadequate techniques to transverse the St. Lawrence River and insufficient capital to meet the recurring expense of replacing this transriver wire.<sup>25</sup> The Troy records also chronicle the rising influence of MTC shareholders and officers in its councils and its subsequent submission to the stronger company.<sup>26</sup>

The records of the MTC, on the other hand, disclose motives and manoeuvres of a stronger, more aggressive company. The MTC Minute Books exist for the period 1846 to 1957, the last volume, however, covering the years from 1938 to 1957 is unavailable (still being under the 35 year moratorium).<sup>27</sup> Although it is apparent that the MTC directors transacted a great deal of business which the Minute Books do not document, they do record all the Annual Meetings, Directors meetings and a fair amount of the Company's more significant correspondence. The latter deals mainly with expansion plans, take over or market sharing negotiations as well as legal opinions on various Company problems. It should be stressed that these more revealing documents are neither frequent nor complete expositions. Although the Annual Reports do not give a full appraisal of MTC's financial health, they do provide sufficient information to construct complete series of earnings, expenses, and profits, as well as series displaying the growth of MTC's physical plant. These records also contain

revealing information on the leasing arrangement with the Great North Western Telegraph Company (1881) (hereafter GNWTC) and the subsequent legal troubles of the MTC. After 1881 the MTC records become less concerned with telegraphy and more concerned with collecting the rent from GNWTC, dealing with MTC's other property, and reviewing the legal problems attendant on the GNWTC lease. Furthermore, between 1846 and 1867 the MTC records are a good source for general events in Canadian telegraphy as the MTC directors and shareholders worry about the possible inroads their competitors may be making into MTC profits. Then, as the MTC reports on its progress in buying up the telegraph rights from all the important railways, these worries tend to be replaced by self-congratulation.<sup>28</sup>

#### 4. Political and Commercial Personal Papers

The attached, annotated bibliography (Section VI) indicates that time spent on personal papers of a political and commercial nature may be rather unproductive. This is a surprising result. It may reflect that the telegraph was never a major interest of the entrepreneurs involved;<sup>29</sup> never a source of a major scandal; nor a nation builder on a scale which attracted much political attention. Apparently, the telegraph worked well, absorbed little entrepreneurial time, got its share of subsidies and kept its nose clean.

One should be warned, however, that these personal papers have been overindexed. That is to say that the indexers have catalogued the appearance of the word indexed, instead of discussions about what the word represents.<sup>30</sup> There are, nevertheless, several letters in MacDonald's papers which deal with Wiman's (president of the GNWTC) concern about GNWTC's public image given its American ownership<sup>31</sup> and the potential effect of CPR's operation on GNWTC's

profits.<sup>32</sup> In other letters Van Horne warns MacDonald that using GNWTC lines might jeopardize the security of his messages.<sup>33</sup> Generally, however, the political and personal papers reviewed here are devoid of comment and opinion concerning either appropriate governmental policies for the telegraph sector or the desirable performance of the industry.

#### 5. Contemporary Newspapers

Similarly, the annexed bibliography will indicate there was less available in the Contemporary Newspaper group than had been initially hoped. An important exception, however, was found in the Monetary Times.<sup>34</sup> It has full and regular reports plus editorial comments concerning Canadian telegraphy between 1867 and the early 1900's. In fact, research notes made while surveying the numerous articles in the Monetary Times are provided in Appendix I and II of this paper.

The Monetary Times is primarily concerned with its home-town company, the Dominion Telegraph Company (hereafter DTC). The information provided with respect to DTC is similar to the MTC Minute Books.<sup>35</sup> In giving DTC the most attention the Monetary Times does not neglect other companies<sup>36</sup> or events of industry wide significance.<sup>37</sup> Moreover, the paper frequently, albeit not regularly, pauses to comment on what it thinks the role of government should be in the telegraph industry<sup>38</sup> and generally adopts an orthodox nineteenth century liberal stance. In other words, the Monetary Times does not like monopoly, but it likes government interference less, and government monopoly least of all. The newspaper happily cites as evidence the purported inefficiency of the state run telegraph systems in Europe.<sup>39</sup> Moreover, it repeatedly calculates the ratio of population per telegraph office to prove the superiority.

of the free enterprise North American systems.<sup>40</sup>

Observing the telegraph situation in Canada, the Monetary Times is somewhat more thoughtful, as from time to time it produces an editorial assessing the strengths of the various operating companies and the effects they have on each other's business.<sup>41</sup> It must be noted that the Monetary Times' stock quotations give a sterner assessment of the companies' relative positions.

The sixty odd editorial articles, running under the general title "The Télégraph in Canada" is a particularly valuable contribution of the Monetary Times.<sup>42</sup> Despite the fact that many of these editorials consist of reminiscences and anecdotes submitted by "old telegraphers," perhaps a third of them are lucid accounts and analyses of the development of the Canadian telegraph industry. Some of these more lucid accounts attempt to assess the effect of the introduction of the CPR commercial telegraph service into the market.<sup>43</sup> Unfortunately, the analysis is not substantive, but as other sources largely ignore<sup>44</sup> the entry, let alone the effect of the entry, of the CPR, the Monetary Times' efforts are to be appreciated.

#### 6. Catalogues and Indices

Although not qualifying as primary sources, it might be helpful to note the existence here of several indices, catalogues or collection descriptions. The Porteous catalogue<sup>45</sup> to the McNicol Collection at Queen's is the best of these, since it not only itemizes but also tersely describes each entry in the Collection. The indices to Canadian Statutes<sup>46</sup> are mainly useful as quick references to the legislation which exists on a given subject or a given firm. These indices have two main weaknesses. First, they do not indicate very much about the significance of a given Act and second, they

tend to be less than exhaustive, with Acts respecting the telegraph, divided into Public and Private categories; all the Acts do not appear in either one or the other. Therefore, the annual Statutes of Canada, and of the Provinces or the periodic Revised or Consolidated Statutes of Canada and the Provinces must be consulted. The staff of the Bell Historical Collection has produced a very terse guide<sup>47</sup> to its documentary holdings. Because of its brevity, this is more useful in determining whether a group of documents might be worth examining than it is as a guide to what the documents actually contain.

III: THE PRIMARY MATERIAL 1840-1914; FOOTNOTES

1. Canada. Department of Railways and Canals, Telegraph Statistics of the Dominion of Canada for the Year Ended June 30, 1912, (Ottawa, 1913).
2. Canada. Department of Communications, Instant World - A Report on Telecommunications in Canada, (Ottawa, 1971), 59-60.
3. Canada. Department of Communications, A Review of the Public Message Telegraph Service in Canada, (Ottawa, 1970).
4. Canada. Parliament. Legislative Assembly. Standing Committee on Railroads and Telegraph Lines, Proceeding..., (Toronto, 1851), is a case in point.
5. Canada. Parliament. Senate, Return to an address ... of correspondence ... between (several telegraph companies) and the Government, (Ottawa, 1877).
6. Canada. Parliament. Legislative Assembly, Journals of the Legislative Assembly, (Various places, 1841-1860).  
Canada. Parliament, Sessional Papers, (1867-1920).
7. Canada. Parliament. House of Commons, An Act to Incorporate the Montreal Telegraph Company, 10 & 11 Victoria (1847) chapter 83 and amendments in: 18 Victoria (1855), chapter 207; 20 Victoria (1857) chapter 75; 23 Victoria (1860) chapter 112; and Statutes of Canada 1872 chapter 95; 1873 chapter 96; 1880 chapter 64 and 1882 chapter 93.
8. Statutes of Canada, 1882, Chapter 93.
9. This 25¢ ceiling was an effective, if low limit on telegraph rates. Immediately prior to MTC and DTC amalgamation within GNWTC they were trying to operate at 20¢ per ten word message. Neither company could afford to maintain its plant at that price. See: Monetary Times comments through 1878-1881.
10. Statutes of Canada, 1882, Chapter 156.
11. Canada. Department of Public Works, Annual Reports 1867-1914.
12. Ibid., Consolidated Report 1882.
13. Canada. Department of Railways and Canals. (See footnote #1).
14. M.C. Urquhart and K.A.H. Buckley, editors, Historical Statistics of Canada, (Toronto, 1965).



32. Ibid., Vol. 526, Part I, 786.
33. Ibid., Vol. 288, 131798-99, and 132111.
34. The Monetary Times, 1867-1929, (Toronto), See Appendix "B" of this paper.
35. Ibid., 27 Feb. 1874, (Vol. VII, #35), p. 858-9; Feb. 1875, (Vol. VIII, #34), p. 949-50; 6 Feb. 1877, (Vol. X, #33), p. 899.
36. Ibid., 21 Feb. 1879, (Vol. XII, #35), 1048-49; 4 June 1880, (Vol. XIII, #50), p. 1432.
37. Ibid., 13 Dec. 1872, (Vol. VI, #24), p. 473-4; 18 Oct. 1878, (Vol. XII, #17,) p. 502.
38. Ibid., 7 Feb. 1873, (Vol. VI, #32), p. 673; 15 May 1874, (Vol. VII, #46), p. 1166; 3 Sept. 1875, (Vol. XI, #10), p. 265.
39. Ibid., 21 Dec. 1877, (Vol. XI, #26), p. 728-9; 18 Oct. 1878, (Vol. XII, #17), p. 502; 21 Feb 1879, (Vol. XII, #35), p. 1048-49.
40. Ibid., 10 March 1882, (Vol. XV, #37), 1109-1110.
41. Ibid., 20 June 1879, (Vol. XII, #52), 1566; 10 Oct. 1879, (Vol. XIII, #16), 441-2; 16 April 1880, (Vol. XIII, #43), 1233.
42. Ibid., "The Telegraph in Canada", from 22 April 1892 to 10 Nov. 1893. (About 60 articles). See Appendix "A" of this paper for research notes.
43. Ibid., 10 Feb. 1893, (Vol. XXVI, #32), 945-6; 3 March 1893, (Vol. XXVI, #35), 1040-41; 23 May 1890, (Vol. XXII, #47), 1452, 28 June 1889, (Vol. XXII, (Vol. XXII, #52), 1519.
44. Reid, The Telegraph in America, is an example here, despite his revision of 1886.
45. J. Porteous, compiler, Catalogue of the McNicol Collection of Books on Telegraphy, Telephony and Radio contained in the Douglas Library, Queen's University, (Kingston, 1942).
46. Canada. Department of Justice, Laws and Statutes of Canada - An Index of Local and Private Acts Dominion of Canada 1867-1941, (Ottawa, 1942).  
J. Hancock, A Synoptical Index of the Consolidated Statutes of Canada and Upper Canada, (Toronto, 1865).
47. E. Geraghty, The Telephone Historical Collection - The Collection Includes:, (Montreal, 1973).



#### IV DEPOSITORIES OF TELEGRAPH LITERATURE

A few words about the nature and peculiarities of the various locations of the material reviewed is appropriate at this point. At the outset, it should be noted that there appears to be no comprehensive bibliography available for the literature on telegraphy. Nor, unfortunately, is there a reliable central catalogue of published material, although the National Library's Union catalogue will one day meet this need.

##### 1. The National Library and the Public Archives

The jointly housed National Library and Public Archives are not the easiest facilities to use, and require some patience on the part of researchers. Both the library and the archives are operated independently, as are some of their subsections such as the Library's Newspaper Room and the Archives' Library. This structure leads to a certain amount of rivalry and ignorance of one another's operations and exacerbates the problems raised by the absence of a central index to the building's total holdings. For instance, the Public Archives Library, the National Library, and the Library's Newspaper Room all have holdings of the Monetary Times, but the first two are not aware that the third has the complete series of the Times on micro-film (nor do their catalogues show the fact). Added to this, is the purely administrative inconvenience which requires a separate registration and pass for each facility. Once registered, however, researchers have twenty-four hour access to the building, but not to the circulation service of course. Checked out material may be stored in lockers and hence the twenty-four hour access provides flexibility for research schedules.

The National Library holds most of the secondary material reviewed herein, but unless one uses Inter-Library Loan services the material may not be removed from the building. (The Library, incidentally, is the only Ottawa

location of Reid). In addition, the Library has an extensive collection of Government documents and publications and it is the depository of both the D.P.W. and DR&C records referred to above. It is also custodian of a complete run of Canadian Parliamentary and Legislative Sessional Papers. The Library's collection of Statute books and Law Reports, however, is neither as good nor as accessible as the Supreme Court's collection. The Reference section of the Library is excellent, and if you know what you want the Reference staff are very helpful.

The Public Archives holdings, are, quite naturally, documentary and include numerous political, official, and personal papers of prominent Canadians. The Archives also hold most of the papers of Federal Royal Commissions, but they do not compete with their provincial confrères by holding similar provincial documents. Business papers and industrial records come under the archival wing, indeed, there are separate staffs handling all the papers of the various industrial sectors. Hence, it is the Telecommunications Group that is responsible for the records in which the Montreal Telegraph Company's Minute Books are to be found.

The Newspaper Room, in falling heir to the Parliamentary Library's collection of daily and weekly newspapers, probably has the widest collection in Canada. For storage reasons, much of their material is on microfilm which makes it slightly tedious to use. Nevertheless, a more serious drawback to this collection is the incomplete series of particular papers - such as with the Canadian Economist.

The Public Archives Library is a bit of an anomaly in that it cares for the rarer of government documents, the older periodicals, real (not film)

newspapers of no special dating, a vast array of pamphlet material, and inexplicably, a great many books of no special age or merit with regard to (Atlantic Cable) Canada.

2. Carleton University

Like the National Library, Carleton University Library holds most of the secondary material noted here. Carleton also holds some of the D.P.W. Annual Reports and all three of Fleming's Reports. It seems that Carleton has the only local copy of Thompson's Wiring. Carleton's main card catalogue must be used with care because it does not indicate the full extent of Carleton's holdings, nor does it provide extensive cross-indexing. For example, the science collection at Carleton has several non-technical books on telegraphy which are not entered in the main catalogue. Hence, it is essential to cross-check the individual divisional catalogues. One positive feature of Carleton is the open stacks which allows one to browse freely through related material.

3. Queen's University

The regular holdings of Douglas Library at Queen's University were not searched in detail except to note that its main catalogue indexes a copy of Reid as well as a selection of other nineteenth century monographs on telegraphy. In its Special Collections Division, however, the Douglas Library stores the McNicol Collection of Books on Telegraphy. This collection is predominantly technical in bias and contains more radio and telephone than telegraph material. Of the two hundred and fifty odd items bearing on telegraphy, only about fifty appear relevant for the history of telegraphy, and unfortunately, many of these do not fulfill that promise. "Canadian telegraph and telegraphers,"<sup>1</sup> for instance, consists of pages torn out of Reid and biographical sketches of about

two hundred Canadian telegraph operators. Those items in the collection that describe or report on company histories refer to American companies. The monographic material in the collection ranges widely over technical matters, instructional manuals, cable histories and a selection of the nineteenth century histories. The collection does, however, seem to be the most accessible location of Murray's A Story of the Telegraph.

4. The Bell Telephone Historical Collection

The Bell Telephone Historical Collection contains a certain amount of secondary material relating to Canadian telegraphy. This is not indexed and therefore requires a knowledgeable staff member to find it. The documentary material has been catalogued and described although at a highly aggregated level.<sup>2</sup> The Bell material which holds the greatest promise in respect to telegraphy - the Sise Log Book,<sup>3</sup> the Company Letterbooks, and its Minute Books - require special permission from the Company Secretary before access to them will be granted. As this material is kept in dead storage outside Beaver Hall, it is well to make arrangements in advance. The staff at Bell are both courteous and helpful but exercise a certain amount of discretion about what will be shown to researchers.

5. Other, mainly governmental Department, Libraries

The Libraries of the Department of Communications, (DOC) the National Research Council (NRC) and the Canadian Radio Television Commission (CRTC) all hold a certain amount of telegraph related material. Most of their holdings have a technical bias and hence, little of their collections relate to telegraph history. One potentially useful feature of the NRC Library is that it holds a complete set of the Scientific American. This might be useful because

the nineteenth century issues of this Journal contain a large number of technical articles on the Telegraph and such articles may contain a wealth of peripheral, non-technical material.

Finally, it should be noted that there was a large volume of telegraph litigation in the nineteenth century and Reports of these cases can be found most easily in the Law Reports in the Supreme Court Library, although the Law School at the University of Ottawa also has a complete run of the pertinent Canadian Law Reports.

IV: DEPOSITORIES OF TELEGRAPH LITERATURE; FOOTNOTES

1. Donald McNicol, compiler, "Canadian Telegraph and Telegraphers," McNicol Collection #483.
2. See: Geraghty, (And #47 in Primary Literature Footnotes)
3. C.F. Sise was trained as a sea captain (ship's master). Coming to the Telephone Industry rather late in life he did not shake his log keeping habit. Both as manager and president of Bell Canada, he kept or had kept this record of company activity from 1880 to 1917.

V CONCLUSION: THE RESEARCH POTENTIAL

The primary material available on Canadian telegraph history, although not extensive and often of merely peripheral interest, is nonetheless sufficient to suggest that the dearth in the secondary literature of topical telegraph studies is attributable to a certain ennui on the part of Canada's historians. To accuse the research community of an absolute lack of interest in the telegraph would be, without doubt, too harsh an assessment of its motives and performance. That little has been written about the domestic telegraph industry is probably no more than a reflection of the concern in the Canadian historical community to put more flesh on Innis' staple skeleton<sup>1</sup> and to trace the growth of the domestic transport sector.<sup>2</sup> Nor may one, with conviction, say that this concern has been or is misdirected with fur, fish, timber, minerals and wheat as the central elements in Canada's economic history. Furthermore, without the means of physical communication the existence of the staples per se would have been of little significance to Canadian growth.

But if Canadian economic historiography reflects priorities based upon Innis' scenario of Canadian development and neglects to discuss the domestic sector involved in message communication, and other service industries, it does not detract from their important roles in the economy. The message communication industry, it can be argued, was vital to the rationalization of Canadian markets and the nationalization of the diverse Canadian and British North American lands. Neither the governments<sup>3</sup> of the day, nor the railway engineers<sup>4</sup> were being frivolous when they maintained that telegraph lines should precede the railway north of Superior, across the Prairies, and into British Columbia. Observing that this proposal raised no opposition and few questions at that

time, one can argue that this lack of opposition provides eloquent testimony to the commercial, political and social weighting awarded to the project. Similar and earlier evidence of the value attached to telegraphy is found in the quick adoption and unanimous approval of telegraph construction schemes by the then powerful municipal Boards of Trade. Moreover, both Sir Hugh Allan and Erastus Wiman, entrepreneurs of some status and perspicacity, thought it worthwhile both to enter and to attempt to monopolize the telegraph field for economic<sup>5</sup> and political reasons.<sup>6</sup> This suggests that the industry had both intrinsic and extrinsic merits.

If such are neither persuasive, nor impressive reasons for correcting a lacuna in Canadian economic history, there are more fashionable ones available. First in fashion, needless to say, is the current Canadian concern with foreign ownership. On this question the experience of the telegraph industry has been such that it can throw light upon the ownership problems and pressures which may be faced by an importer of technology. The Canadian telegraphers' experience indicates that the 'price' the importer pays requires a cash outlay but does not involve, of necessity, branch plant status.

The 'monopoly' or industrial structure question is almost as popular a topic as the ownership question. Here too, the domestic telegraph industry's history has a contribution to make, and this contribution is not merely one of providing further empirical evidence for imperfect market theories. The Canadian industry, having lived through four distinct market structures - a competitive market (1847-1855); a monopoly situation (1855-1872); a two stage era of competing duopoly (1872-1881; 1882-1933); and an age of co-operative duopoly (1933- )<sup>7</sup> should be able to support some conclusions as to which



type of market best serves societal needs while allowing capital to earn a fair return.

Thus, it would appear that a comprehensive history of the Canadian telegraph industry would have something to contribute to the present or future framing of Canadian telecommunications policy. If such a suggestion has any merit at all, then this review - a mere canvass of the market - deserves to be worked into a commodity for the market. In any such effort to convert this canvass into a commodity, the most rewarding path to follow would probably begin with the 1886 edition of Reid's Telegraph in America.<sup>8</sup>

Reid, an anecdote lover, has the virtue of presenting reliable information along with his trivia and hyperbole. Moreover, though limited to the period 1846-1886, Reid's chapters on Canadian telegraph companies are the most comprehensive statement available on the subject. If followed with the Department of Railways and Canals' Telegraph Statistics (1913);<sup>9</sup> Green's<sup>10</sup> article on Canada's first telegraph Company (1927); the CNR's Synoptical History (1962)<sup>11</sup> and the Department of Communications Instant World (1971)<sup>12</sup> and A Review (1970),<sup>13</sup> future researchers should have enough information about the general history of the Canadian industry to exercise considerable discretion in choosing the directions for further work. Such an infrastructure, however, would be enhanced by reading the 1892-93 Monetary Times series on "The Telegraph in Canada."<sup>14</sup> Despite the anecdotal nature of much of this series, many of the constituent editorials are lucid chronological and analytical statements of the Canadian telegraph experience. Appendix "A" of this paper sets out the initial research notes made in connection with this series.

Although these "lucid" editorials are consolidations of earlier Monetary Times reports, they do not substitute for the originals both because they suffer from the wisdom of hindsight and because editorial pruning has dispensed with the invaluable financial statistics found in the earlier notes, editorials and company Annual Reports. These and other statistical presentations of the earlier issues (1867-1882) of the Monetary Times are really most reliable for the Dominion Telegraph Company. Appendix "B" of this paper provides initial research notes on many of these articles and editorials over a period from 1868 to 1899. Happily, where the Monetary Times becomes skimpy the Minute Books of the Montreal Telegraph Company (MTC)<sup>15</sup> help to fill the gap. These books, recording all of the MTC Annual Reports, Director's meetings and a certain amount of important, legal, entrepreneurial and financial correspondence, are available for the entire period 1846-1957. In addition, these MTC records contain a certain amount of material or comment on other telegraph firms and the telegraph industry generally.

The Monetary Times is equally weak on the Canadian Pacific Railways' telegraph service. It is not, however, completely silent on the subject and one suspects that the CPR's Annual Reports, (which the Times published), embodied the statistical records of its independent telegraph service within the faceless, aggregate termed "other earnings." It is to be hoped that the CPR's private records would allow a determination of the telegraph statistics.

Finally, it might be expedient for a future history of the telegraph industry to include a consideration of the position occupied by the Governments' Telegraph Service. One may tentatively suggest that it played a very minor, and not even a complementary, role in the telegraph system of Canada.<sup>16</sup> Seemingly

it was restricted to the provision of telegraph services in unremunerative areas. Moreover, most of the Government lines were operated by one or other of the private firms, an arrangement which probably served to reduce government influence in the private sector. If the government Service was to be included, the appropriate source material is to be found in Department of Public Works' Annual Reports (1867-1942)<sup>17</sup> and in the records of the Department of Railways and Canals as well as in those of the current Government Telephone Agency.

The foregoing, although clearly not a finished plan of research, nor perhaps a generous amount of material with which to research, should provide an adequate base for a more comprehensive history of the Canadian telegraph industry than is available at the present time.

V: CONCLUSION: THE RESEARCH POTENTIAL; FOOTNOTES

1. H.A. Innis, The Fur Trade in Canada, (Toronto, 1962), Chapter VI, 383-482 gives the closest thing to a clear exposition of the model that Innis ever was to make.
2. There is a plethora of literature running from Glazebrook's A History of Transportation in Canada to Pierre Berton's recent publications The National Dream and The Last Spike.
3. On this point see:  
H.A. Innis, A History of the Canadian Pacific Railway, (Toronto, 1923), 41-150 passim.; and also the Sessional Papers for the late 1870s and early 1880s.
4. Sir Sandford Fleming, Report on Surveys and Preliminary Operations on the Canadian Pacific Railroad up to January, 1877, (Ottawa, 1877), 35-41.  
        ; Report and Documents in Reference to the Canadian Pacific Railway, 1880, (Ottawa, 1880).
5. Hugh Allan's Montreal Telegraph Company never paid less than an 8% cash dividend per annum. It frequently paid stock dividends, usually of 25% or 33%. Both of which facts seem to be ample evidence of the profits available in the industry. Wiman's G.N.W.T.C. which was able to pay 8% a year on the M.T.C. stock of \$2,000,000, and 6% on the \$1,000,000 D.T.C. capital while still paying dividends on its own stock is a further witness to the profitability of telegraphy. (See MTC & DTC Annual Reports).
6. Allan, despite M.T.C.'s close association with Western Union made several moves to keep Canadian communication facilities within Canadian territory and to keep them Canadian owned. He tried to buy the Nova Scotia Telegraph Company lines and did buy the Provincial Telegraph Co., an American owned company. Wiman, on the other hand, as a staunch and belligerent Commercial Unionist, sought to base one of his arguments for Union on the success of the integrated American and Canadian lines within the G.N.W.T.C. Indeed, Wiman was so aggressive in his use of his telegraph as a vehicle of Union that Van Horne suspected him of breaking the law by examining government telegrams sent over the GNWTC wires and so advised MacDonal. (Van Horne to MacDonal circa 1890 MacDonal Papers, Volume 288, pp. 131, 798-99).
7. The first three market structures are suggested by the reports of the Monetary Times - in which see particularly the series "The Telegraph in Canada" 1892-93. The last structure, follows upon the CN-CP Act (1933) and is suggested by information contained in D.O.C., A Review of the Public Message Telegraph Service in Canada.

8. Reid, (1886).
9. Canada. Department of Railways and Canals, Telegraph Statistics, (Ottawa, 1913-1919).
10. Green.
11. Canadian National Railways, Accounting Department, Synoptical History, (Montreal, 1962).
12. Canada, Department of Communications, Instant World.
13. Canada, Department of Communications, A Review of Public Message Telegraph Service in Canada.
14. Monetary Times, "The Telegraph in Canada," 1892-1893. See Appendix A in this paper.
15. Montreal Telegraph Company, Minute Books, Volumes 1 and 2.
16. Canada, Department of Public Works, Consolidated Annual Report 1882, (Ottawa, 1882).
17. Canada, Department of Public Works, Annual Reports, 1867-1942.

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A.1 Canadian Telegraph Histories: Monographs

Murray, John. A Story of the Telegraph (Montreal: John Lovell, 1905), 269.

TK 511/M9 QUEEN'S UNIVERSITY McNICOL COLLECTION.

A Story this is indeed although it is somewhat disjointed because it unsuccessfully seeks to combine personal reminiscences of the author's telegrapher's life with thumbnail eulogies of great telegraphers and information about various Canadian telegraph companies. The brief histories of the companies are basically sound as one would expect from straight forward factual reporting of dates of founding, of sale or lease, and of line length and number of office statistics.

A.2 Canadian Telegraph Histories: Periodicals

Anon. "How Telegrams Travel by Telephone Wire", Canadian Geographical Journal, Vol. 29, #1, (July, 1944), flyleaf note.

PER G4/C3 CARLETON UNIVERSITY.

This is a one page note without author or interest which seeks to explain - in very popular terms, how telegraph and telephone messages may travel over the same wires at the same time. Without using the words, it merely states that record and voice transmissions travel at different frequencies. It contains no data or facts pertinent to the Canadian telegraph industry.

Canadian Transport Commission. Telecommunication Committee. Evidence of Julien Dubé, (CTC File No. 10041.186), 1-7.

DOC ECONOMIC POLICY PLANNING BRANCH.

Dubé's statement includes a brief outline of the history of the Canadian telegraph industry. The brevity of the statement only allows for the "whats" and the "whens" of history, and not the "whys" and the "hows".

Clarke, H.J. An untitled address on the Telegraph in Canada (typescript 1973 - C.N. Ottawa).

DOC' ECONOMIC POLICY PLANNING BRANCH.

Clarke's address is almost all in point form and must have been committed to paper mainly as an aide-mémoire for the author/speaker. Like Dubé's evidence (q.v.) it goes mainly to the "whats and whens" of its subject matter - the Canadian Telegraph - rather than to the "whys and hows". Unfortunately it does not appear to be exhaustive on these points.

Croft, Frank E. "100 Years of Canada's Electric Telegraph", Saturday Night, Vol. 62, (21 Dec., 1946), 32-33.

NATIONAL LIBRARY.

Obviously written to celebrate the telegraph's centennial this two column article is a disappointing celebrant. Starting from some rather banal facts about Canada's first telegraph company, the article moves through a series of rather dull "firsts" - first quadruples, first teletype, first regular stock quotation service, first race track wire, first day letter, first night letter-in Canadian telegraphy and concludes with an almost inane comment on the importance of telegraphy.



Easson, Robert, F. "Reminiscences", 37th Annual Reunion of the Old Time Telegraphers and Historical Association, (Toronto: 1920), 51-57.

TK 1/04/1920 QUEEN'S UNIVERSITY, McNICOL COLLECTION.

The title of this address to the Old-Time Telegraphers' Association does not lie. The "reminiscences" and anecdotes relate to Easson's employment with MTC, Western Union, DTC and GNWTC. What information there is on the companies themselves is very straight forward, factual material, e.g. GNWTC was organized in 1880; or very anecdotal, e.g. MTC's efforts to keep its lines to Montreal Island in good repair.

Fleming, Sir Sandford, "Cheap Telegraph Rates" Address delivered to the Canadian Press Association (28 Feb., 1902).

HE 7814(F53/1902 CARLETON UNIVERSITY.

An imperial unionist propaganda pamphlet/address arguing for nationalization of the telegraph industry (on the model of the UK) to provide: (1) an all red telegraph system (location all in the empire); (2) cheaper rates. There is little that is pertinent to a factual history but it is of interest for the policy - Public Ownership - which it advocates.

Green, Ernest. "Canada's First Electric Telegraph", Ontario Historical Society Papers and Records, XXIV (1927), 366-372

CARLETON UNIVERSITY.

One of the few on point articles on the telegraph in Canada. Largely based upon an "Evening Telegram" (Toronto, 26 March 1926) article, Green's work is disjointed in that he reports what is known, but does not attempt to fill in any holes. The article is poorly annotated and referenced. It does, however, contain some fairly precise information with regard to the Toronto-Niagara Telegraph and the Montreal Telegraph Co. Although its chronological scope extends from 1846 to 1915, the information given for the post 1852 period is very sketchy. Moreover in attempting to include the highlights of the post 1852 period, the article degenerates into a point from style.

MacKay, Corday. "The Collins Overland Telegraph", The British Columbia Historical Quarterly, (X, iii), (July, 1946), 187-215.

TK 5116 C6M1 QUEEN'S UNIVERSITY, McNICOL COLLECTION.

One of the rare scholarly articles on the telegraph. Scholarly though it is, this article is mainly descriptive, and unfortunately, descriptive of a project which was not really Canadian. The overland telegraph only became Canadian by default - the project was abandoned by Western Union in 1867 because of the success of the Atlantic cable project - and by the passage of time - in 1880 nine years after British Columbia joined the Dominion the Canadian Government bought Western Union's interest in the operating remnant of the overland project.

MacKay, Corday. "The Overland Telegraph", Canadian Geographical Journal, Vol. 32, #4, (April, 1946), 172-179.

PER G4/C3 CARLETON UNIVERSITY.

This article is mainly concerned with the local colour of Western Union's efforts to build a telegraph through Canada (then B.C.) and Russia as a substitute for the three failures to construct an Atlantic Cable. With Fields' success in this latter endeavor in 1866, the "Overland" project was abandoned. Its authority appears to be the field books of the various construction group leaders. Since these leaders seemed to have been more interested in the stomachs of their men (not to mention their own) than the telegraph, the article should be of more interest to gastronomes than telegraphic researchers.

McNicol, Donald. "A Chronological History of Electrical Communication ... from B.C. 2000 to 1920".

QUEEN'S UNIVERSITY, McNICOL COLLECTION #472.

A useful if wide ranging chronology of electrical "progress". In being wide ranging it is, of course, too general or too "aggregated" for special use in a Canadian study of the telegraph or phone industry. That is, the information included is readily available elsewhere. Such a weakness is redeemed to some extent by the existance of an index to the chronology.

Raddall, Thomas H. "Nova Scotia's First Telegraph System", Dalhousie Review, Vol. 27, #2 (July, 1947), 131-142.

PER AP5/D3 CARLETON UNIVERSITY.

The author is the same Raddall of short story and children's stories-of-the-sea, fame. This particular piece is devoted not to the telegraph as the title would have us believe but to the ill fated semaphor system of the Duke of Kent, one time governor of Nova Scotia. His line ran from Halifax inland to Windsor

and then down some of the Annapolis Valley.

Stryker, George L. "The Public Telegraph", The Canadian Magazine, Vo. 55, #6, (October, 1920), 461.

PER AP 5/C2 CARLETON UNIVERSITY.

A popular "chatty" note on telegraph exchange and office operation. The article is written on a very general or exemplary level such that specific information is illustrative rather than real, (i.e. what appears to be factual is hypothetical). The sparse real information - facts and figures, are all drawn from the American industry, not the Canadian one. There is no information on sources.

Witteveen, Hank. "The Telegraph in Canada" (Term essay - Carleton University; typescript Spring 1973).

DOC, ECONOMIC POLICY PLANNING BRANCH.

A not untypical undergraduate essay, which although not particularly well organized, consolidates a certain amount of information on the Canadian telegraph experience. The paper is not analytical and spends a lot of time searching out nefarious American capital and then lamenting the finding. Most of the paper draws heavily upon Reid (q.v.).

A.3. Canadian Telegraph Histories: Biographies

Burpee, Laurence J. Sandford Fleming Empire Builder, (London: 1915), 231.

This was not available for this search. Although the references to it in other material suggest that Burpee is primarily concerned with Fleming's involvement with railways and the Pacific Cable Project, it might be worth checking for information about CPT.

Lawrence, Guy S. 40 Years on the Yukon Telegraph, (Vancouver: Mitchell Press, 1965) IX, 122.

HE 7818/Y8L3 NATIONAL LIBRARY.

Reminiscences of, and diary extracts from, the author's 40 years as a member of the Yukon Telegraph Service. The Line was government owned and operated and so its records would probably be a better source of information about revenue, etc statistics and the history of this line. The book is not very polished, nor is it very informative of anything but wilderness life and living between 1900-1940.

Vaughan, Walter. The Life and Work of Sir William Van Horne, (New York: Century, 1920).

HE 2808-2/V3V3/1920 CARLETON UNIVERSITY.

Vaughan was a former employee of Van Horne's and wrote this biography on a family commission. The myriad references to the telegraph all concern Van Horne's early employment, but none refer to Van Horne and Canadian Pacific Telegraph. The book is based upon notes made by Van Horne's personal secretary and tends to be imaginative and flowery.

A.4 American Telegraph Histories: Monographs

Harlow, Alvin F. Old Wires and New Waves. The History of the Telegraph, Telephone, and Wireless, (New York: Appleton-Century, 1936).

TK 5115/H2 QUEEN'S (DOUGLAS) LIBRARY and  
CARLETON UNIVERSITY.

This is a popular history of the three modes of communication mentioned in the title. Generally the stress is upon invention and inauguration but there is a great deal of trivia on the circumstances obtaining at the times of invention and inauguration. Attention then shifts to the period when each invention is well established, so there is little on the respective growth patterns of the industries concerned. The Canadian experience is not considered beyond a brief mention of the reciprocal arrangement between CPR and Postal Telegraph.

Jones, Alexander. Historical Sketch of the Electric Telegraph: Including its Rise and Progress in the United States, (New York: G.P. Putman, 1852), VI-XIII, 194. Appendix: Charges for Telegraph.

TK 5115/J7 QUEEN'S UNIVERSITY, McNICOL COLLECTION.

Although Jones would seem to be primarily concerned with the scientific development of the telegraph, he also provides a chronology of early telegraph building in the U.S. and Canada. This chronology, however, is not trustworthy. Jones' other statistics such as line lengths, number of offices, costs, etc, are equally unreliable. Sketch is also very concerned with the legal fights over patents and patent rights and with press-telegraph relations. In an appendix, Sketch presents a schedule of the telegraph tariff between various places, presumably the rates are for 1851-52.

Kingsbury, J.E. The Telephone and Telephone Exchanges Their Invention and Development, (London: Longmans, Green, 1915). 528.

TK 6015/K5 QUEEN'S UNIVERSITY, McNICOL COLLECTION.

Kingsbury's (presumably the AT & T vice-president who gave his name to the Memorandum agreeing to separate markets for telegraph and telephone services) book in the main is a technical monograph written for a popular audience. The book includes a brief section on competition in the telephone market and mentions the competition between telephone

and telegraph. Neither discussion makes any remarkable points. Other sections discuss the economics of the telephone, possible government roles in the telephone industry and telephone statistics of the World.

Reid, James D. The Telegraph in America and Morse Memorial, (Albany, N.Y.: Weed Parsons (for the author) 1886, New York: Derby Brothers, 1879).

TK 5123/R4 NATIONAL LIBRARY, QUEEN'S UNIVERSITY.

This is a nineteenth century eulogy to the men and machines involved in the establishment of the telegraph in North America. Reid, a long time superintendent of various telegraph companies, seems to have written the book largely from his own notes and memories. Despite Reid's dominating thought, that "telegraphness" is next to Godliness, his book provides a great deal of useful information on the early Canadian telegraph companies. It is, of course, discursive history, but such is indispensable to those who would write analytical history. Reid also provides an appendix of telegraph lines in existence in 1879 which is useful of suggesting the different market structures in Canada and the U.S. (The first looks duopolistic, the second monopolistic). Reid, however, provides no index, although his table of contents is sufficiently detailed to help cut search costs.

Thompson, Robert Luther. Wiring a Continent The History of the Telegraph Industry in the United States 1832-1866, (Princeton, N.J.: PUP, 1947).

HE 7775/T5 CARLETON UNIVERSITY.

This, an immediate post-war doctoral dissertation, is an exhaustive and exhausting descriptive history of the period of installation and consolidation of the American telegraph system. There are a few very brief allusions to the Canadian industry. The author explains most events as the products of "great men", although explanation itself is a fairly rare occurrence in the book. The book contains a wealth of numeric facts, but these are simply incorporated into the text and change their form frequently. Apart from these and the odd bar chart there are no tabular series provided. There is, however, an incredibly cramped "family tree" of the Western Union Companies. There are also several maps - also cramped showing the extent of telegraphy at various times.

Turnbull, Laurence. The Electro-Magnetic Telegraph: with an Historical Account of its rise, progress, and present

condition, (Philadelphia: A Hart, 1853), 264.

TK 3261/T9 QUEEN'S UNIVERSITY, McNICOL COLLECTION.

Predominantly this is a popular text of the telegraph. Some 30 pages, however, are devoted to an inventory of telegraph line placed all over the world. This should be used with caution since the MTC is listed as going from Quebec to "the suspension bridge at Niagara"..." distance 155 miles." Turnbull also gives the type of instrument and number of wires used on each line.

A.5 American Telegraph Histories: Periodicals

Arrington, L.J. "Deseret Telegraph - A Church owned Public Utility", Journal of Economic History, Vol. II, #2, (June, 1951), 117-139.

PER HC10 CARLETON UNIVERSITY.

A well written history of an economic institution (a co-op-firm), rather than an economic history. The subject matter is the Deseret Telegraph system, co-operatively financed, build and run by the Mormon Community in Utah. The firm is considered largely in isolation despite the fact that the key observation of the article is the low cost service provided by the firm, (i.e. there is no basis for comparison with the Canadian Industry).

Smith, Robert S. "Wiring a Continent ... Book Review", The South Atlantic Quarterly, Vol. 47, #3, (July, 1898), 396-398.

PER AP2/S75 CARLETON UNIVERSITY.

This is a friendly review of Thompson's monograph on the American telegraph. The reviewer does not seem to know anything about the American telegraph industry and seems content to restate what Thompson had said rather than criticize it.



A.6 American Telegraph Histories: Biographies

Mabee, Carleton. The American Leonardo The Life of Samuel F.B. Morse, (New York: Knopf, 1957).

TK 5243/M7M3 CARLETON UNIVERSITY.

A very readable, adequately annotated biography of Morse. The main concern of the book is very much Morse, the telegraph being almost incidental - at least as an industry. Canada is mentioned as not having given Morse a patent (294) and as taking the rapid extension of U.S. telegraph lines as firm evidence of U.S. war preparation. This latter is supported by the "Union" (D.C. newspaper's) quotation of a "Chronicle" (Kingston, Ont. newspaper 1845) editorial.

Prime, Samuel T. The Life of Samuel F.B. Morse Inventor of the Electro-Magnetic Recording Telegraph, (New York: Appleton, 1875).

TK 5243/M7P8 CARLETON UNIVERSITY.

An early biography of Morse which contains a wealth of information about Morse's life and inventions. But for other than technical information on the telegraph industry, it is not very illuminating. That is to say, the focus of the book is the invention and the inventor, but not the industry which grew up around the one and from the other. The book mentions the lack of a telegraph patent in Canada and its early introduction there, but gives no details.

Taltavall, John B. Telegraphers of To-Day Descriptive, Historical, Biographical, (New York: Taltavall, 1894).

TK 5241 T15 QUEEN'S UNIVERSITY, McNICOL COLLECTION #758.

Although there are a few non-Western Union Employees included in the coffee-table book of telegraphers, most of the pictures and biographical sketches are of Western Union employees of certain obscurity. Many of these men were born in Canada, but lists of these are available elsewhere in McNicol's Collection (#483).

A.7 Transoceanic Telegraph Histories: Monographs

Bright, Charles. Imperial Telegraphic Communication, (London: P.S. King, 1911), XXIV, 212.

HE 7713/G7B7 PUBLIC ARCHIVES LIBRARY.

This is a collection of articles or addresses written or delivered by the author in the decade preceding publication. The author is most concerned with supporting the "all red route" and reporting its progress and advantages. He also spends a good deal of time and type talking about hypothetical advantages of such a system. Further, he is concerned to lower telegraph rates - by government subsidy. Like many of his persuasion - imperial unionist - he takes a few critical shots at America and laments American dominance in the transoceanic telegraph market.

Field, Henry M. History of the Atlantic Telegraph, (New York: Scribner, 1869).

TK 5625/F45/1869 CARLETON UNIVERSITY.

Like most mid-century (19th) history there is more metaphor and imagination than factual material in this history of the Atlantic telegraph. The author's authority derives from his familial relationship (uncle) with Cyrus Fields, the organizer of the Atlantic Cable Company. The author does, however, give one a vivid picture of building the Newfoundland land line which, of course, was essential to the Atlantic cable's success and utility.

Johnson, George. The All Red Line The Annals and Aims of the Pacific Cable Project, (Ottawa: James Hope, 1903).

TK 5613/J58/1903 CARLETON UNIVERSITY.

This is a collection of Imperial unionist tracts dealing with the problems, projections and control of the Pacific cable. The author-editor, more enthusiast and dilettante than scholar, has provided a sometimes annotated bibliography (pages 10-44) of the literature. The entries therein are of two types: those dealing with the inception of the idea of a Pacific Cable: and those propounding the idea's execution. The bibliography is dominated by references to Sandford Flemings' Reports and Pamphlets: telegraphic (that is very brief) political reference both in Hansard and on the hustings; and references to the output of imperial conferences (also political). Although a Canadian publication and replete with references to

Canada's role in the Pacific cable there is little if any reference to Canadian land line telegraphy except insofar as it is a necessary link in the "All Red Line". Beyond mimicking Fleming's stand on nationalization, little is said about policy toward telegraphy.

Russel, W.H. *The Atlantic Telegraph*, (London: Day, 1865), 117.

HE 7725/R9 PUBLIC ARCHIVES LIBRARY.

Russel, a sometime correspondent for the "Times" (London) provides one with an apparently vivid, though balanced account of the two attempts to lay the Atlantic cable in the 1860's. The book has several appendices giving the names of those involved in the New York, Newfoundland & London Telegraph Co., and the Atlantic Telegraph Co; their solicitors, banker, etc. One gives a list of all the cables already installed, another lists those using Gutta Percha. The last appendix is the report of the directors of the Atlantic telegraph to the shareholders on the 1865 failure to complete the cable laying.

Smith, Willoughby. *The Rise and Extension of Submarine Telegraphy*, (London: J.S. Virtue, 1891), XII, 390.

HE 7711/S53 PUBLIC ARCHIVES LIBRARY.

Smith, one of the directors of the Atlantic Telegraph operation, wrote this history of the submarine telegraph industry largely from his personal papers and memory of the events he relates. Smith was also a member of the Gutta Percha Company and hence had an extensive acquaintance with the several cable projects he chronicles. Canada is only mentioned as a landing beach for the early cables and as a country to be crossed by land lines.

A.8 Transoceanic Telegraph Histories: Periodicals and Biographies

Fleming, Sir Sandford. Documents in reference to the establishment of direct telegraphic connection between Australia, New Zealand, Canada, and Great Britain. (n.p. 1886), 22.

1886 (19) PUBLIC ARCHIVES LIBRARY.

This group of documents contains: (1) Privy Council (CDA) to Tupper (High Commissioner in London); (2) Fleming to Tupper; (3) Memorandum (Fleming's); (4) Fleming to Canadian government; (5) Fleming to Sir John A; (6) Fleming & Co. to Tupper; the documents all relate to a commercial proposal to build a Pacific Cable (with a gov't subsidy). Document 4 gives details of the CPR-Fleming agreement for transmission through Canada via CP Railway Telegraph, then over the Inter-Colonial Railway to connect with the Atlantic Cable. There is some evidence presented showing a very great price elasticity of demand for cable communication: for example Direct U.S. Cable experienced 100% increase in traffic following a medium price cut (exact size not given), while Anglo-American reports 110% increase following the same type of price change. These documents are less politically propagandist (all red line) than others in the area.

Fleming, Sir Sandford. Memorandum in reference to a scheme for ... intercontinental telegraph system, (London: Sir Joseph Canston, 1882), 25.

1882 (17) PUBLIC ARCHIVES LIBRARY.

Another Fleming Pacific cable propagandist pamphlet. In this one he devotes a lot of space to presenting cost estimates of the project.

Fleming, Sir Sandford. Postal and Telegraphic communication by the Canadian route. Submitted ... Colonial Conference ... 1887, (n.p. 1887), 20.

1887 (2) PUBLIC ARCHIVES LIBRARY.

This is a confidential document presented to the Colonial Conference (London 1887) by Fleming criticizing the outlandish position of John Pender, the representative of the Eastern Extension Telegraph Co. and the Pacific Cable's competitor for the subsidy and regular revenue from an increased telegraphic capacity between the UK and Australia.

Fleming, Sir Sandford. Telegraphic Communication to India and

Australasia by the Canadian route. Submitted ... Colonial Conference ... 1887, (n.p. 1887). 13.

1887 (3) PUBLIC ARCHIVES LIBRARY.

This is another confidential document presented to the Colonial Conference (1887) by Fleming. It reviews the case for a UK - Australasian telegraph cable link through Canada over CP lines. It presents some cost estimates for laying the Vancouver - Australia Cable, but fails to do anything but mention the Canadian plant.

Fleming, Sir Sandford. Telegraphy between England and Australia, (London: n.p. 1890), 4.

1890 (20) PUBLIC ARCHIVES LIBRARY..

Another document from the prolific Mr. Fleming propounding the virtues of the Pacific Cable, connecting Australia and the UK through Canada and the Canadian Pacific Telegraph plant. Three documents are included. (1) Fleming addressing Australians and New Zealanders on Pacific cable virtues (2) Fleming to Lord Knutsford (Sec. of State for the Colonies) - on the evils of the Eastern & Eastern Extension Telegraph Co. proposal, (3) Knutsford to Fleming - acknowledging (2) and expressing U.K.'s "wait and see" policy.

Carter, Samuel III. Cyrus Field: Man of Two Worlds, (New York: Putman's, 1968).

TK 5611/F5C3 CARLETON UNIVERSITY.

This relatively recent biography of the moving spirit of the Atlantic cable, is entirely based upon secondary material (other biographies, general histories and histories of the submarine cable). It is a popular rather than academic publication and as such provides sparse annotation. Its explicative methodology does not go beyond the great man or human dominance of events approach. The book has a short chapter (#8; 94-105) dealing with Canadian land line telegraphs as they relate to submarine cable; i.e. the Newfoundland-New York connection. Not surprisingly the book adds little in the way of data or interpretation to that which is available in other sources.

A.9 Related Industry Histories: Canadian Telephone Literature

Patten, William. Pioneering the Telephone in Canada, (Montreal: Privately, 1926).

NATIONAL LIBRARY/QUEEN'S/BELL CANADA/CARLETON UNIVERSITY.

A very choppy book which jumps from biography to auto-biography to newspaper clipping, to chronological firsts, (first telephone exchange, first lease, etc.) to extraneous observations. What little unity there is derives from the sometimes tenuous link to the common subject, the telephone in Canada. Patten seems content to report events rather than analyze or explain them. The book, however, contains about fifty pages of material relevant to the telegraph industry in Canada and its relation to the telephone industry. The most interesting of this material relates to Bell Canada's purchase of the extant telephone plant in Canada from the major telegraph companies (which occurs in 1880, shortly before both MTC & DTC were merged into GNWTC in 1881); to Bell's need to set up its own equipment manufacturing arm; to their purchase of North American Telegraph Co. and entry into Morse transmission. There is not a great deal of statistical evidence presented with the exception of financial statistics for two years: 1881 (1st year of operation) and 1925 (year prior to publication). There are also recurrent references to the number of phones, exchanges, offices, etc. in these two years and also for 1915. Pages 46 to 97 contain most of the material pertinent to the telegraph.

Fetherstonbaugh, R.C. Charles Fleetford Sise 1834-1918 A Biography. (Montreal: Gazette Orinting, 1944).

HE 8870/B45S54 CARLETON UNIVERSITY.

This biography of Bell Canada's national organizer (a New England/Yankee sea captain) provides some interesting letters mapping Bell's strategy for gaining control of the Canadian telephone industry which prior to Bell's entry (1880) had largely been in the hands of the two largest Canadian telegraph companies; Montreal Telegraph and Dominion Télégraph, and Western Union (in the Maritimes). This is in marked contrast to the U.S. experience and provides further evidence of the telegraph industry's failure to assess the potential of other communications developments. It would seem that the only consideration the Canadian telegraph companies gave to selling their telephone plants and franchises involved the timing of the sale itself. Unfortunately annotation and identification of sources is sketchy at best.

Chalmers, Floyd S. "Lewis B. McFarlane, A Story of a Life and a Chapter in Bell Telephone History", Reprint from The Financial Post 1924.

LAW LIBRARY BELL CANADA, MONTREAL.

This reprint from the Financial Post briefly mentions MacFarlane's early experience with telegraphy. It does not, however, add anything that Patten (q.v.) has not covered.

A.10 Related Industry Histories: American Telephone Literature

Coon, Horace. American Tel & Tel. The Story of a Great Monopoly,  
(New York: Longmans, Green, 1939).

HE 8846/A55/C6 CARLETON UNIVERSITY.

Conn's title does not quite say it all, since he deals with the history of Western Union - AT&T relations a little more thoroughly than would a mere story teller. Although there are a few references to Canada the main value of Coon for Canadian research into the telegraph would seem to lie in the suggestions which arise concerning the inter-corporate inter-industry relations between the telephone and telegraph. Conn's bibliography is adequate but not exhaustive. His statistical information, if pervasive, is neither typically nor temporally complete, that is to say, some figures are percentile, some are absolute and nowhere is there a unified time series. The book is well written and despite its pre-war vintage shows sound and moderate judgement on issues and sources that are more frequently treated in a blatantly political manner.



A.11 Related Industry Histories: Canadian Railway Literature

Bonar, James C. Canadian Pacific Railway Company and its contribution towards the early development and to the continued progress of Canada. (Montreal, 1950), Vols. 1, 4, 6 & 7.

HE 2810/C2B6/1950 CARLETON UNIVERSITY.

Bonar, a one-time secretary of the CPR, wrote this autobiography of the CPR at the request of its president. It is reproduced in typescript. Volume I includes some short paragraphs about CP's communications business. The points made therein, however, are repeated though not greatly developed in Volume IV. The temporal scope of these comments runs from 1882 to 1949. Thus they include minor references to the operating and technical co-operation between CN and CP. Material relating to the nineteenth century period seems to rely heavily upon Flemings' Reports (q.v.). Financial and physical plant statistics are not numerous and are usually of the bench mark or watershed type, hence further research would be necessary if one wished to make annual or decadal comparisons. In his concluding remarks Bonar provides an interesting, although possibly inflated, fifteen point assessment of CP Telecommunications' contribution to the "progress of Canada."

Canadian National Railways. Synoptical History of Organization, Capital Stock, Funded Debt and other general Information as of December 31, 1960, compiled by Hopper & Kearney, (Montreal, CNR Accounting Dept., 1962).

PUBLIC ARCHIVES MANUSCRIPT DIVISION. (See Mssr. Vincent & Hally).

Worked up by members of CNR's Accounting Department, this is a very useful compendium of the legal and financial condition of, and relations between, most of Canada's telegraph companies which were merged and rationalized to form the Canadian National Telegraph Company in 1920. Although this CNT autobiography presents a great deal of factual material, it makes little effort to interpret or explain the facts it contains, except that it paraphrases the declaratory clause of the Act of incorporation of CNT.

Canadian Pacific Railway Company. General Publicity Department. Canadian Pacific Facts and Figures, (Montreal: CPR Co. 1937).

HE 2810/C2/A63 CARLETON UNIVERSITY.

Fournier is really only concerned with the railway problem which arose during the 20's in many areas where railway competition put severe strains on the industry's ability

to perform efficiently. Although Fournier seems to present a fairly sane analysis of the problem in Canada and backs it up with valuable tabular statistics on costs and revenues, he has deliberately excluded reference to the ancillary services of the two transportation empires in Canada. However, he does give a brief review of the CN-CP Act 1933, which of course resulted in selected pooling agreements between the two companies' telegraphic service departments.

Innis, H.A. A History of the Canadian Pacific Railway, (Toronto: McClelland & Stewart, 1923), Viii, 365.

HE 2810 C2T5 CARLETON UNIVERSITY.

In many ways this is more an economic history of Canada than of the CPR. In unveiling the CPR story Innis tends to stress the development of the regions with CPR eventually came to traverse and serve, instead of stressing the advance of CPR lui-même. The first hundred odd pages, however, make frequent references to the history of CP Telegraph and the role envisaged by contemporaries for the all-in-Canada telegraph system which Canadian Pacific was to establish. Innis reproduces the CPR charter as an appendix. This charter granted CP the power to operate a commercial telegraph system anywhere in Canada irrespective, or independently, of CP's railroad facilities. The result of this grant of power was to create an effective competitor for the then recently established Canadian Telegraph monopolist, the Great North Western Telegraph Company. This may be interpreted as evidence, albeit tenuous evidence, that the Canadian Government wished to encourage a competitive telecommunications market.

Stevens, G.R. Canadian National Railways, Volume 1, Sixty Years of Trial and Error (1836-1896), (Toronto: Clarke, Irwin, 1960), XVIII, 514.

HE 2810/C14S7 Vol. 1 CARLETON UNIVERSITY.

Stevens, G.R. CNR Vol. 2. Towards the Inevitable (1896-1922), (Toronto: Clarke, Irwin, 1962), Xii, 507.

Although a well researched, academic history of the CNR, Stevens' two volumes allot a disappointingly small amount of space to CNT. The bulk of this all too sparse material does not differ significantly from that in CNR's Synoptic History (q.v.). However, Stevens does have something to say about the motives for or conditions surrounding the various changes in ownership of telegraphic enterprises. These comments refer to Wiman's sale of GNWTC to Western Union (in 1892) and Western Union's sale to Canadian

Northern (in 1915).

Trout, Edward and J.M. The Railways of Canada for 1870-71, shewing . . . ., (Toronto: Monetary Times, 1871) & (Coles Canadian Collection; Toronto 1970), 213.

HE 2805/T73 CARLETON UNIVERSITY.

A useful compilation of early Canadian railway companies giving their histories, routes, mileages, and financial statistics. Included in the latter are stock and bond issues, earnings and operating expenses and construction costs. There does not, however, appear to be any specific telegraph information even though there are occasional mentions of telegraphy.

A.12 Histories and Analyses of Governmental Telecommunications Policy: Monographs

Borchardt, Kurt. Structure and Performance of the U.S. Communications Industry Government Regulation and Company Planning, (Boston: Graduate School of Business Administration, Harvard University, 1970).

HE 7775/B63 DOC and CARLETON UNIVERSITY.

The title is an accurate reflection of what this book sets out to, and does, do. From an historical point of view, Chapter II, has most relevance in that it effectively brings Goldin (q.v.) up to date. Pages 24-29 are the ones pertinent to the telegraph industry. The balance of the book is more theoretical - current policy alternatives - in nature. Borchardt is only concerned with the American scene and he has not provided a formal bibliography, relying instead on his footnotes.

Coddington, George Arthur, Jr. The International Telecommunication Union An Experiment in International Cooperation, (New York: Arno Press (NY Times, 1972).

HE 7700/C6 CARLETON UNIVERSITY.

The title accurately reflects the subject matter or main thrust of this study, in that the book is concerned with international (diplomatic) relations with respect to telecommunications. Specific references to the telegraph industry are few; to the Canadian telegraph industry fewer. As the bibliography shows, these references only concern national adherence to international conventions and hence say little about the industry itself.

Cook, T.G. Transport and Communications, (Edinburgh: Oliver and Boyd, 1971).

HE 243/A1C66 CARLETON UNIVERSITY.

This is one of the new breed "history by topic not notion" textbooks. It might be appropriate for an introductory, undergraduate history course. It has about three paragraphs on the telegraph industry which go from invention to tomorrow and emphasize the significance of the telegraph. It is better passed in noting than noted in passing.

Herring, James M. and Gerald C. Gross. Telecommunications Economics and Regulation, (New York: McGraw-Hill, 1936).

HE 206/H4 CARLETON UNIVERSITY.

From an historical/economic historical point of view this is a very sane and competent piece of work. The basic structure of the book is tripartite with sections on the growth and development of the several telecommunications industries, on rate-making and competition, and on regulation by the various governmental levels. Documentation is not extensive, but is adequate. The absence of a bibliography is disappointing. There is a great deal of in-text statistical data, but such material is also presented in tabular form. The specific chapters and sections on the American telegraph industry draw heavily on Western Union and Bureau of the Census material, particularly the 1932 census. These sections primarily map technical change and plant growth in the industry. There are isolated and largely insignificant references to the Canadian industry.

Irwin, Manley R. The Telecommunications Industry Integration vs. Competition, (New York: Praeger, 1971).

HE 7781/17 CARLETON UNIVERSITY.

Melody and R.E. McKee are contributing authors to this study. There is a good bibliography of the literature on integration, competition and regulation in the telecommunications industry. Although this reflects the thrust of the included articles, it tends to mask the contemporary and theoretic nature of them. The absence of an index reduces the usefulness of the book with respect to specific industries within the telecommunications field. There is a brief bit on Western Union which is mainly concerned with Western Union's entry into the data processing sector. There seems to be no obvious mention of the Canadian scene in Irwin and hence its usefulness would seem to be restricted to suggestions for areas and methods of research into the Canadian experience.

Lee, John. The Economics of Telegraphs and Telephones, (London: Pitman, 1913), 86.

HE 7693/L4 QUEEN'S UNIVERSITY, McNICOL COLLECTION.

Lee's main inquiry is into the comparative economics (and politics) of government and private telegraph and telephone systems. He holds, with the Queen's Bench, that voice and record transmission are variations, not distinctions, within the electric communication industry. In general the book is one of costs, not economics (as a discipline) and Lee's concern with value of service is more accurately described as the use of the services of telecommunications. He does make some interesting points, however, on the telegraph's

influence in reorganizing markets for perishable goods, etc., what he calls "balancing demand" (he means promoting regional equilibria). Most of Lee's data are English, German and American, he mentions Canada once in relation to zone tariff pricing.

MacLaurin, W. Rupert, with technical assistance of R. Joyce Harman. Invention and Innovation in the Radio Industry, M.I.T. Studies of Innovation, (New York: MacMillan, 1949).

TK 6547/M28 CARLETON UNIVERSITY.

By way of introduction this empirical and judicial study of invention and innovation in the radio industry, briefly treats similar subjects in other communications industries (telegraph 23-25; telephone 25-26). Although there is nothing on the Canadian experience, which is not surprising given Canada's propensity to import, the telegraph portion of the book makes the point that the telegraph industry has been a consumer not a producer of innovation and that it was not until 1916 - some 70 years after its invention - that the telegraph industry established its own research labs and hired other than construction engineers. (It might be interesting to find out if this decision was influenced by the brief (1909-1913) association of AT&T and Western Union). The book is generally well written and documented, while it also presents a certain amount of statistical material in tabular form.

Mathison, Stuart L. and Philip M. Walker. Computers and Telecommunications: Issues in Public Policy, (Englewood Cliffs, N.J.: Prentice Hall, 1970).

HE 7781/M3/1970 CARLETON UNIVERSITY.

Basically this study is a critique of FCC rulings with regard to the recent data processing offerings of the telecommunications carriers. With regard to the telegraph industry the book examines Western Union's recent introduction of SICOM and INFO-COM. It is a well organized, well argued book with a correspondingly well organized bibliography which reflects the books heavy concern with regulation and regulators. It appears not to have anything on the Canadian experience with regard to regulation or telecommunications.

Ulmer, Melville J. Capital in Transportation, Communications and Public Utilities Its Formation and Financing A Study by the NBER, (Princeton: P.U.P., 1960).

HE 2766/V4 DOC.

Ulmer makes several references to the American telegraph

industry, most of them in tabular form where he presents (a) ratios of industry output to national output; (b) growth of book value statistics.

Vail, Theodore, Newton. Views on Public Questions: A Collection of Papers and Addresses 1907-1917, (Privately Printed, 1917), 383.

AC8/V14 QUEEN'S UNIVERSITY, BUCHAN COLLECTION.

Collected and published by a group of Vail's friends for their own edification, this contains several of Vail's Addresses to AT & T shareholders along with other "writings". The subject of most of the papers is, of course, the telephone and its place in society; particular aspects of telephone policy which Vail addresses his "friends" upon include; competition, combination, telephone history, public relations and AT & T's stability. He does not appear to have anything to say here, at least, on telegraph and telephone relations.

Weiss, Leonard W. Case Studies in American Industry, (New York: John Wiley, 1967).

HC 106/W515/1967 CARLETON UNIVERSITY.

Weiss has a brief chapter dealing with the variations necessary to adjust standard models for cases of regulation. His note on the model for regulation of an unprofitable utility monopoly seemed promising with reference to the telegraph industry. It is, however, unclear that his single product firm model has any relevance to the multi-product (like CN-CPT).

A.13 Histories and Analyses of Governmental Telecommunications  
Policy: Periodicals

Goldin, H.H. "Governmental Policy and the Domestic Telegraph Industry", Journal of Economic History, VII, 1, (May, 1947), 53-68.

PER HC10/J64 CARLETON UNIVERSITY.

A refreshing article which provides some analysis of the facts it relates. It is a well written, well documented, concisely stated review of the telegraphs' sequential experience with emergence, prosperity, relative decline and poverty. As the title suggests the article's baseline is the interrelationship between government and industry and the very important, if not crucial, influence the former has had upon the fortunes of the latter. The article effectively ends in 1945/1946 and to some extent is brought up to date in Borchardt (q.v.).

McManus, John C. "Federal Regulations of Telecommunications in Canada"; (Mimeo: Ottawa, 1970).

DOC, ECONOMIC POLICY PLANNING BRANCH.

McManus' paper deals almost exclusively with the effect of CTC rules and rulings upon the structure and performance of the Canadian telephone firms. As the annotation reveals it relies heavily upon the Judgements, Orders, Rulings and Regulations of the CTC in testing for the effects such regulation may have induced. McManus also presents a strong critique of the Averich & Johnson model, at least insofar as one may seek to apply it to a widely held firm subject to regulation. The paper also looks at the economic rationale for regulation and makes a few observations, by way of conclusion, about possible future regulatory policy toward telecommunication firms. One observation worthy of testing is McManus' view that the telecommunications industry was the first and only industry since the fur trade to voluntarily (without government fillip) build an eastwest link north of the Lakes. Another interesting point is that TCTS leased CPT circuitry from 1932 to 1957 to establish its east-west link; yet the existence of TCTS may have significantly affected CPT revenues.

Vail, Theodore N. "Public Utilities and Public Policy" Atlantic Monthly, (March, 1913), 307-319.

PER/AP2/A8 CARLETON UNIVERSITY.

Here Vail argues that some utilities must be monopolies to



avoid vicious, destructive, duplicative competition. Moreover he argues for regulation of such monopolies but seeks to limit its area of competence to (1) excluding competition and (2) ensuring quality service. Vail was president of AT & T at the time this was written when AT & T was still in control of Western Union, hence the article, like Vail's theory of regulation, is more an exercise in public relations than a contribution to the theory of regulation.

A.14 General Political and Economic Histories: Canadian Texts

Careless, J.M.S. Canada A Story of Challenge, (Toronto: MacMillan, 1963).

Caves, Richard E. and Richard H. Holton. The Canadian Economy Prospect and Retrospect, (Cambridge, Mass.: Harvard University Press, 1961).

Cornell, Paul G., et al, Canada Unity in Diversity, (Toronto: Holt, Rinehart and Winston, 1967).

Easterbrook, W.T. and Hugh Aitken. Canadian Economic History, (Toronto: MacMillan, 1963).

Innis, H.A. Essays in Canadian Economic History, edited by M.Q. Innis, (Toronto: University of Toronto Press, 1956).

McInnis, Edgar. Canada A Political and Social History, (Toronto: Holt, Rinehart and Winston, 1959).

Raynaud, Andre. The Canadian Economic System, translator A.C.M. Ross, (Toronto: MacMillan, 1967).

To a man these Canadian histories have ignored the Canadian Telegraph Industry as a field for substantial or substantive comment.

A.15 General Political and Economic Histories: American Texts

Faulkner, Harold V. American Economic History, 8th edition,  
(New York: Harper & Row, 1960).

HC 103/F3/1960 CARLETON UNIVERSITY.

As one of the standard texts in its field, Faulkner is guilty of many of the standard weaknesses of such literature. Hence, he tends to put the cart before the horse when he comments on and stresses the complementarity of the railroad and the telegraph. Faulkner presents telegraph, telephone and postal industrial histories together which allows easy comparison but much as one would expect the information he offers is superficial, almost to the point of being extraneous. His bibliography is not very comprehensive, including only one F.C.C. document and nothing on Canada.

Faulkner, Harold V. The Decline of Laissez Faire 1897-1917,  
(Volume VII Economic History of U.S.), (New York: Holt, Rinehart  
& Winston, 1951).

HC 103/E25/v.7 CARLETON UNIVERSITY.

This, too is a general, although less standard, text. If it has the virtue of mapping the wide trend of the retreat from perfect competition in the standard "indicator" industries like steel - it has the vice of overlooking AT&T's growth and its acquisition of Western Union. It is, then, a nullity on the communications industry.

Harris, Seymour E. American Economic History, (New York: McGraw-Hill, 1961).

HC 103/H22 CARLETON UNIVERSITY.

Harris has chosen to ignore the communications industry as a factor in American Economic History.

Kirkland, Edward C. A History of American Economic Life, 3rd.  
edition, (New York: Appleton-Century Crofts, 1951).

HC 103/K5 CARLETON UNIVERSITY.

This is an unusual text in that it allocates more space than its competitors to the telecommunications industry. Despite the brief allusions to government-industry relations, and the inevitability of monopoly, the information and analysis suffers, with its competitors, from banality.

Shannon, Fred A. The Farmers' Last Frontier Agriculture, 1960-1897,  
(Vol. V Economic History of the U.S.), (New York: Holt, Rinehart  
& Winston, 1945).

HC 103/E25/Vol. V CARLETON UNIVERSITY.

Shannon has a brief note (in his agricultural history) on the effect of the telegraph on the staple producer and market in the Reconstruction South. His observation is that the telegraph allowed the producer to bypass the cotton factors and interact directly with the cotton exchange. Beyond this there is nothing of interest.

Soule, George. Prosperity Decade from War to Depression: 1917-1929  
(Vol. VIII Economic History of the U.S.), (New York: Holt,  
Rinehart & Winston, 1947).

HC 103/E25/Vol. VIII CARLETON UNIVERSITY.

As a general text on the period at hand (1917-29) Soule is not bad; his major concern, however, is to explain the appearance of the depression and, hence, the industries he reviews are "indicator" ones. He makes brief but insignificant mention of the telegraph and telephone industry with respect to the government takeover in 1918. He attributes the brief takeover to "threatened strikes" but says no more about why or where or when. Soule provides a good bibliography but not for the telecommunications industry.

Spence, Clark C. The Sinews of American Capitalism An Economic History, (New York: Hill and Wang, 1964).

HC 103/S697 CARLETON UNIVERSITY.

Spence cites most of the ordinary facts of telegraphic invention and extension. However, he inaccurately stresses the role of railways in the growth of the American industry. Amongst the textbook writers he makes the unique, if obvious, point that the Coast to Coast extension of the telegraph rendered the Pony express technologically obsolete. He has little in the way of bibliography.

Taylor, George Rogers. The Transportation Revolution 1815-1860,  
(Volume IV Economic History of U.S.), (New York: Holt, Rinehart  
and Winston, 1951).

HC 103/E25/V. CARLETON UNIVERSITY.

Taylor compares, or at least presents side by side, statistics of the telegraph and the U.S. Postal Service. He makes his telegraph revolution point by noting that before the telegraph a message was tied to, and hence could go no faster than the messenger. (This constraint is, of course, still operative albeit that it has paled to insignificance.

B.1 Canadian Government Documents and Publications

Canada. Department of Communications. Instant World A Report on Telecommunications in Canada, (Ottawa: Information Canada, 1971), 256.

DOC LIBRARY.

In a brief two pages Instant World takes notice of most of the major dates, events and companies in Canadian Telegraph history. In being brief, however, Instant World has slightly misrepresented some of the events it reports. For example, MTC and GNWTC did not amalgamate; the latter leased the former along with DTC and subsequently merged the two older companies. There is no source information for the material presented.

Canada. Department of Communications. A Review of the Public Message Telegraph Service in Canada, (Ottawa: Department of Communications, 1970).

DOC LIBRARY.

This contains an extremely terse allusion to the origins of CNT. Its main concern, however, is to trace and record the trends and developments in the telegraph industry during the nineteen-sixties as experienced by CPT and CNT. The result is a statistical (number of messages, of offices and revenue) and verbal record of the recent prolonged (4% plus per annum) decline of the telegraph business. The review further notes that the efficient management and plant of both firms suggests that the problem is with the market not the firms. The review concludes with a discussion of the policy alternatives available for solving the problem facing an industry which the review believes to be worth preserving. At the general level, the review acknowledges organizational contributions, however, there is no formal or particular annotation of its sources.

Canada. Department of Justice. Dominion and Provincial Legislation, 1867-1895, compiler W.E. Hodgins, (Ottawa: Government Printing Bureau - 1896).

KE 3/1896/A23 CARLETON UNIVERSITY.

This is a compilation of Ministry of Justice correspondence relating to controversial legislation in disputed jurisdictional areas. It contains two references to telegraphy. One is a short note defending the Dominion's disallowance of a Manitoba Act interfering with a telegraph charter. The other is a long discussion upon a proposed submarine cable.

Canada, Department of Public Works. Report of the Manager of The European and North American Railway for the year ending 30th. June 1868. (Saint John, N.B.: Willis & Davis, 1869).

HE 2810/E8/1868 CARLETON UNIVERSITY.

A nineteenth century "annual report" type document from a small railway company. It is of possible interest because it reports the salaries of the company's four telegraph operators.

Canada, Department of Public Works. Annual Reports (Blue Books) 1872-1917. (Ottawa: Queen's Printer).

RG II IV W52 PUBLIC ARCHIVES MANUSCRIPT DEPARTMENT.

Generally these reports running from 1867 to 1917 are exclusively concerned with government owned telegraph facilities. These facilities seem to have been acquired by the government because of their unremunerative nature, however most of these lines were operated for the Government by one of the Commercial undertakings. The Reports are very complete, assiduously detailing revenue and expenditure figures, line lengths, the number, names, and wages of employees, repair and extension statistics, etc. The 1882 Report is particularly valuable in that its six page Appendix 28 is a history of the government lines, and Appendix 29 reprints Fortin's (q.v.) letters on the subject of Coastal telegraphy. Unfortunately, most of the information these reports contain regarding commercial telegraphy borders on the extraneous. However, the twentieth century reports regularly have a small summary table giving line length statistics for the private companies.

Canada. Department of Public Works. Estimates, 1877-1949, Volumes 1-738, (Ottawa: Department of Public Works).

RG II V PUBLIC ARCHIVES MANUSCRIPT DEPARTMENT.

These do not materially add to the information in the Annual Reports (q.v.).

Canada. Department of Public Works, Langevin, H.L. British Columbia, Report of Honorable H.L. Langevin, (Ottawa: I.B. Taylor, 1872), 246.

RC-11 IV W52 NATIONAL LIBRARY - GOVERNMENT DOCUMENTS.

This is an exhaustive report on B.C.'s demands with regard to their continuation within the Dominion. One of these demands was that the Dominion establish telegraphic communication with

B.C. Langevin's recommended policy on this demand is found on pp. 37-40; it merely grants the demand. There is also some discussion as to what should be done about Western Union's lines in B.C. (pp. 201-03). The position is probably dealt with more adequately in Innis CPR (q.v.).

Canada, Department of Railways and Canals. Telegraph Statistics of the Dominion of Canada for the Year Ended June 30, 1912, (Ottawa: King's Printer, 1913).

NATIONAL LIBRARY.

This series runs to 1919, and most of their pertinent statistics have been consolidated in Urguhart & Buckley (q.v.) so in a way they constitute an inconvenient, if not redundant, source. However, the initial issue is not in this redundant category because of the effort made therein to present a short history of Canadian Telegraphy. Half of this was written by Robert Easson (q.v.), an "old telegrapher" usually given to anecdotal history. Here, however, his history is somewhat more formal. It is both concise and sound. The remaining half sets out the operating spheres, revenues, expenses, etc. of the then (1912) contemporary firms. The Report for 1912 concludes with a tabular presentation of comparative statistics of these same companies.

Canada. Government Telephone and Telegraph Service. Records, 1910-1948, Volumes 154-201, pp. 231-250.

P.G. II IX PUBLIC ARCHIVES MANUSCRIPT DEPARTMENT.

These have not been exhaustively examined, however, one suspects they are very similar to the DPW Annual Reports (q.v.).

Canada, Parliament. House of Commons. An Act to Incorporate "The North American Telegraph Company", 49 Victoria (1886) Cap. 94; off print.

LAW LIBRARY, BELL CANADA, MONTREAL.

This act is of little intrinsic interest, except that it does grant rather extensive powers to the company. The Company was set up by the Rathburn family of Desoronto, Ontario, but was subsequently sold to Bell Canada and hence Bell would seem to have the power to enter telegraph field which it was most interested in doing in about 1912 when the technology for simultaneous telegraph and telephone transmission became known. Bell still keeps the Company alive, although it seems to have been dissuaded from exploiting the powers the charter grants to its owners. The source of the dissuasion is unfortun-



ately unknown, although a certain amount of pressure is known to have been applied by the regular commercial telegraphy firms.

Canada. Parliament. House of Commons. The Canadian National-Canadian Pacific Act, 1933, 23-24 George V. Chap. 33 (165-179, sc. 1932-3), (Ottawa: Law Printer to the King, 1933).

KE 2/A2 CARLETON UNIVERSITY.

This is a curious Act which uses the languages of compulsion to express permissive authority. It is essential to consider this for it would seem to mark the government's departure from its former tacit policy of encouraging competition in the telecommunications market and its adoption of policies or pious expressions of sympathy for a non-competitive market. However, the motive behind this Act was to save costs (not jobs) during the depression and hence the departure from the competitive market ideal and policy may be illusionary.

Canada. Parliament. House of Commons. Consolidated Statutes of Canada, 1859, "An Act respecting telegraph companies", 22 Victoria (1859) chapter 67, (Toronto: Derbishire and Debasats for the Queen, 1859), 797-801.

KE 1/1859/A23 CARLETON UNIVERSITY.

More than anything else this Act would appear to have been aimed at unclogging the legislative schedule, by allowing potential telegraphers to incorporate without obtaining individual Acts of incorporation. It is important because it sets out the rules and regulations of telegraphy and has provisions for the protection of telegraphic interests. Moreover, in the early 1880's it is amended so as to limit the legal meaning of "telegraph" to its ordinary sense, denying that it included the ordinary sense of "telephone".

Canada. Parliament. House of Commons. Select Committee ... to consider the proposal ... (for Pacific Cable). Documents relating to the Proposed Pacific Cable (Confidential). (Ottawa: Queen's Printer, 1898).

NATIONAL LIBRARY - GOVERNMENT DOCUMENTS.

Like most of the material concerning the Pacific cable these documents assume that the CPR will form the link in the "All Red Line" between the Atlantic and Pacific. Equally like other Pacific Cable material, these contain no hard data referring to Canadian Telegraphy as such.

Canada. Parliament. House of Commons. Select Standing Committee

on Public Accounts. Report ... re certain expenditure for Yukon telegraph lines, (Ottawa: Kings Printer, 1920), 39.

HE 7818/Y8/1902 PUBLIC ARCHIVES LIBRARY.

This evidence taken before the House select committee on Public Accounts concerns certain discrepancies in the supply accounts on the Yukon Telegraph Service. The interference seems to be that several field employees of the Department of P.W. (under which the YTS came) were guilty of improprieties in handling government money. There is nothing very germane to the industry as an industry.

Canada. Parliament. Legislative Assembly. Standing Committee on Railroads and Telegraph Lines. Proceedings ... (Toronto: Lovell & Gibson, 1851).

HE 2802/1851 PUBLIC ARCHIVES LIBRARY.

There is nothing in this on the telegraph in Canada. The proceedings concern alternative routes for two Railway companies and the financial status of several others.

Canada. Parliament. Senate. Return to an address ... of correspondence ... between (several telegraph/cable companies) and the government ..., (Ottawa: Maclean, Roger, 1877).

1877 (30) PUBLIC ARCHIVES LIBRARY.

Correspondence from and to Thomas Swinyard (Managing Director of DTC) and MacKenzie (P.M. Canada) concerning the proposed merger of Anglo-American with Direct U.S. Cable Co. DTC & Atlantic & Pacific T. Co. object since their transatlantic connection is with Direct U.S. Cable and if the latter were absorbed by the putative monopolist their (DTC & A & PTC) revenues would fall and their capital expenditures would be wasted. Direct U.S. Cable's articles of association (corporate character) specifically prohibit such a merger. DTC seeks and gets clear statement of Canadian government policy on proposed merger: being one of active resistance to any violation of Statutes of Canada 1875, chap. 26 by Direct U.S. Cable to the point where the latter would forfeit all rights previously granted it. This would destroy Anglo-American's rationale for acquiring Direct U.S. Cable and constitutes a clear anti-monopoly position by Canadian Government. Correspondence begins 23: xii: '76, includes DTC & A & PTC's protest of 12: xii: '76 and ends 11.1.'77.

Canada. Parliament. Senate. Return to an address ... of correspondence between the government and the contractors for the construction of the Pacific telegraph, (Ottawa: MacLean, Roger, 1877), 26, tables.

1877 (31) PUBLIC ARCHIVES LIBRARY.

F.J. Bernard and agents' correspondence with the Federal government with reference to his contract to build the CP telegraph line: Tete Jaune Cache-Edmonton. The gist of the letters, telegrams etc. is that the government has ordered a delay in construction, and Bernard seeks relief for expenses he incurred in preparation for building. R. Fuller writes to Minister of P.W. concerning tenders for building and operating the segment of CP Telegraph between Pelly and Edmonton, and various claims that Fuller wants to make against government (Indians forcing work stoppage, etc.). The Bernard correspondence is more detailed; and contains myriad price quotations for wire, food, labour, etc. In as much as the correspondence reflects the government attitude to the CP Telegraph - government policy might be characterized as reluctant. The reluctance, however, may only reflect the prevalence of padded or unjustified contractor's claims.

Canada. Parliament. Senate. Select Committee to inquire into all matters relating to the Canadian Pacific Railway and Telegraph west of the Great Lakes. Minutes of Evidence, (Ottawa: MacLean, Roger, 1879), 133.

1879 (15) PUBLIC ARCHIVES LIBRARY.

This committee hearing concerns cost overruns on a section of the CPR which were due to radical changes in the engineering specifications. The authority for changing the original plan is not clear, but the initiative for the change came from the contractor. The Committee was not in the least concerned with the telegraph operations of CPR.

Canada. Parliament. Sessional Papers 1860-1924, (Ottawa: Queen's Printer).

NATIONAL LIBRARY - READING ROOM.

These, like the journals of the Legislative Assembly, have not been properly screened. However, two volumes of the 1905 collection are devoted to the proceedings of the telephone Committee. While these contain a good deal of extraneous comment on telegraphy and numerous comparisons of national telegraphic establishments they appear to have nothing to say on domestic telegraph policy, or the organization and behaviour of domestic telegraphic enterprise.

Canada, Parliament, House of Commons. "British North American Electric Telegraph Association" 13 & 14 Victoria 1850 ch. 119.

Canada, Parliament, House of Commons. "British North American Telegraph Co." 10 & 11 Victoria 1847 ch. 82.

Canada, Parliament, House of Commons. "British North American Telegraph Association" 16 Victoria 1853, 111 424-427.  
(Extends right to build west to Montreal from Quebec City and to U.S. border; over North Shore, or through Eastern township).

Canada, Parliament, House of Commons. "British North American Association". 18 Victoria 1855 ch. 208.

Canada, Parliament, House of Commons, "Bytown and Montreal Telegraph Company". 13 & 14 Victoria 1850 ch. 120.

Canada, Parliament, House of Commons. "Canada Grand Trunk Telegraph Line" (W. Waller). 19, 20 Victoria 1856 ch. 83, 314-16. (An act allowing William Waller to hold the telegraph property of the Canada Grand Trunk Telegraph Line (Buffalo to Quebec City) and hold as under 1852 Act and reconvey it if he wishes).

Canada, Parliament, House of Commons. "Canadian and British Telegraph Co." 22 Victoria 1859 ch. 101.

Canada, Parliament, House of Commons. "Montreal Telegraph Co." 10 & 11 Victoria 1847, chap. 83.

Canada, Parliament, House of Commons. "Montreal Telegraph Co." 18 Victoria 1855, ch. 207.

Canada, Parliament, House of Commons. "Montreal Telegraph Co." 20 Victoria 1857, ch. 75.

Canada, Parliament, House of Commons. "Montreal Telegraph Co." 23 Victoria 1860, ch. 112. (Act extending time for MTC to complete Halifax connection by 3 years and Atlantic Cable connection by 6 years).

Canada, Parliament, House of Commons. "Montreal and Troy Telegraph Co." 12 Victoria 1849, chap. 181.

Canada, Parliament, House of Commons. "New York, Newfoundland & London Telegraph Co." 18 Victoria 1855, ch. 209.

Canada, Parliament, House of Commons. "Toronto and Niagara Telegraph Co." 10 & 11 Victoria 1847, ch. 81.

Canada. Parliament. House of Commons. "Transmundane Telegraph  
Co." 22 Victoria 1859, ch. 100.

Canada. Parliament. House of Commons. "Western Telegraph Co."  
11 Victoria 1848, ch. 15.

Canada. Parliament. House of Commons. "Telegraph, Protection of."  
13 & 14 Victoria 1850.

B.2

Related Industry Documents

Bell Telephone - Telephone Historical Collection. File: Desoronto  
North American Telegraph Co. - Rathburn Co.

TELEPHONE HISTORICAL COLLECTION, BELL CANADA, MONTREAL.

This is an incomplete and rather dull file tracing the relations and negotiations between Bell Canada and the Rathburn Family concerning the latter's telegraph and telephone Company - the North American Telegraph Co. Beyond the significance to Bell of being able to operate a telegraph service (q.v. An Act ... N.A.T.C.) the information available here is of minor importance.

Colonial Conference (London, 1887). Proceedings of the Colonial Conference at London ... in relation to Imperial postal and telegraphic communications through Canada, (Ottawa: Chamberlin, Queen's Printer, 1888), 153.

HE 213/c76 PUBLIC ARCHIVES LIBRARY.

Although indexed under Canadian telegraph history, these documents and discussions really only concern who is to get the revenue from the proposal to increase the capacity of the telegraph plant between Australia and the U.K.: CPR or Eastern Extension T.C. There is nothing about the Canadian telegraph industry itself, except, of course, a testimonial to its existence.

Disturnell's railroad, steamboat and telegraph, book being ..., (New York: J. Disturnell, 1850), 108.

HE 2727/05/1850 PUBLIC ARCHIVES LIBRARY.

Primarily this is a bus schedule type of publication. It gives the rates and towns linked to the (a) Troy and Canada Telegraph Co.; (b) Magnetic Telegraph from Boston to St. John (N.B.); (c) New York and Boston Magnetic Telegraph Association; and (d) the Montreal Telegraph Company. Fuller information on the latter, however, is available in the MTC Minutes Books (q.v.).

Fleming, Sandford. Report and Documents in Reference to the Canadian Pacific Railway, 1880, (Ottawa: MacLean, Roger, 1880).

HE 2810/C2F6/1880 CARLETON UNIVERSITY.

Roughly five pages of this report are given to the telegraph. Fleming repeats his conviction that the telegraph should precede the railway (q.v. Report 1877) in construction, but

adds the rationale that this will save paying tariffs for using U.S. lines to reach B.C. The report discusses the merits of various proposed telegraph routes east from Fort William to Ottawa, and argues again for an all Canadian line on the basis of security and integration into an "all red line." Appendix 24 contains some correspondence on the subject of a Pacific cable.

Fleming, Sandford. Report of Progress on the Exploration and Surveys up to January 1874, (Ottawa: MacLean, Roger, 1874).

HE 2810/C2F5 CARLETON UNIVERSITY.

An almost exclusively topographical and botanical survey of Western Canada made with reference to railway problems and proposals. There would not appear to be anything more than incidental references to telegraphy.

Fleming, Sandford. Report on Surveys and Preliminary Operations on the Canadian Pacific Railroad up to January 1877, (Ottawa: MacLean, Roger, 1877).

HE 2810/C2F6 CARLETON UNIVERSITY.

Telegraph references in this report though not numerous are more substantial than incidental. The progress of telegraph building is reported and Fleming recommends that telegraph should precede the railway in all cases. He also argues that the telegraph will reduce the cost of railway building, will assist in settlement and is needed to link B.C. and the rest of the Dominion. The Appendix contains four CPR contracts for telegraph construction - two of these demand that the contractor clear a 132 feet right of way, the other two imply it.

Fortin, Pierre. Letters from ... on the telegraph and signal service system in the Gulf of St. Lawrence, on the U.S. signal service and on the Norwegian telegraph system, (Ottawa, MacLean, Roger 1881), 29.

1881 (8) PUBLIC ARCHIVES LIBRARY.

These letters are also available in the annual reports of DPW and Langevin correspondence. They are concerned that DPW or Canada establish and maintain an otherwise uneconomic system of coastal telegraph lines and signal stations in and around the Gulf of St. Lawrence. U.S. and Norwegian systems are described herein. There are several testimonials to the value of such a system (presumably with government subsidy) by merchants, underwriters and Boards of Trade (Montreal & Quebec). The idea, like most seeking to build unviable "public works", is sold mainly on its value to the safety of mariners and ships,

but also on its value to fisheries entrepreneurs as an information system and as a weather reporter. Fortin sought and received the co-operation of the MTC in working out his plans and a code for fisheries information. Fortin was a member of Parliament.

Grand Trunk Railway Company of Canada. Report of the London Directors. Accounts of the Company for half-year ending June 30, 1860, (London: Waterlow & Sons, 1860).

HE 2810/G7A22 CARLETON UNIVERSITY.

Another mid-century (19th) annual report-like document. (Six semi-annual reports). These contain some rather spotty financial data relating to the telegraph. It is not clear, however, whether these data relate to a public or private telegraph.

Innis, H.A., and A.R.M. Lower. Select Documents in Canadian Economic History 1783-1885, (Toronto: U. of T Press, 1933);

HC 115/163 CARLETON UNIVERSITY.

Though not really a text this is unique amongst Canadian research aids in that it actually takes notice of the existence of a telegraph industry in Canada. It is, however, brief notice, consisting as it does of a mere four pages containing newspaper reports of telegraph enterprise in Canada in 1837, 1846, 1861. The two '46 reports are from the Canadian Economist and report on the establishment of telegraph companies.

McNicol, Donald: compiler. Canadian Telegraph and Telegraphers.

TK 5126-C2 483 McNICOL COLLECTION, QUEEN'S LIBRARY.

Mainly brief biographical material on 200-odd Canadian born (most retire in U.S.) telegraph employees, drawn from application forms for membership in "Old Time Telegraphers Association." Most seem to have been born in Ontario, most worked for MTC or GNWT, most subsequently work and retire in the U.S. This group also contains an article by R.W. Weightman from the Journal of the IEE 1915-1916, on "Colonial Telegraphs and Telephones." This not particularly enlightening on the Canadian scene, even though several sections devote some space to the Canadian industry and the national infrastructure. Most of the information is semi-technical (i.e.) local circuitry and equipment. It is, however, most valuable for its collection of articles by R.F. Easson on "Early Telegraph Days in Canada" from The Telegraph and Telephone Age, Nov. 1914 - Feb. 1915. The group contains other magazine articles, but most of these are of an Horatio Alger type.



McNicol, Donald: compiler. Government Ownership of Telegraphs, Telephones Miscellaneous papers and pamphlets, 1905-1919.

HE 7645/A2G7 490 McNICOL COLLECTION, QUEEN'S LIBRARY.

Although this collection of clippings and papers on government ownership of telecommunication facilities includes some late nineteenth century opinion (1883, 1884, 1890) against government ownership and records some foreign experience (Italy-telegraph; Manitoba-telephone) with government ownership, the majority of it consists of Clarence McKay's sustained attack against such ownership. McKay owned the Postal Telegraph and was incensed with the government's takeover and gross mismanagement of telegraph land and cable lines during the war years (1913-1919). Burleson, the U.S. Post-Master General, bore the brunt of these attacks. McKay's position is simply one of bold face assertion.

McNicol, D. Scrapbook of Historical Telegraph, Radio & Electrical Letters.

TK 5241/M16 473 McNICOL COLLECTION' QUEEN'S LIBRARY.

This is mainly an autograph book and most of the letters it contains (minus the cut signatures) are those of the signatories saying how flattered they are to be included in McNicol's collection of telegrapher's autographs. One letter is of some interest in that, coming from the General Manager of CNT and dated 23 February 1921, it reports on the progress of integrating the old telegraph companies into a single structure. The report, however, is basically limited to saying that it is too early to tell what problems might arise or what economies may be envisaged.

Montreal Board of Trade. Telegraphy with the coasts ... the relation to ... shipping ..., fisheries, and signal service, (Quebec: Morning Chronicle, 1879), 57.

(2-109) P.A.L. PUBLIC ARCHIVES LIBRARY.

Printed in 1879 this booklet includes evidence taken before the 1876 House Select Committee on Submarine Telegraph; and an address by Fortin (q.v.) to Quebec Board of Trade on Coastal telegraphs; and selected correspondence from Meteorologists, Militarists, Merchants and Shipbuilders in favour of the scheme, and has a map annexed showing existing telegraph lines around the Gulf and Fortin's proposed extensions and additions thereto.

Urquhart, M.C. and K.A.H. Buckley: editors. Historical Statistics of Canada, (Toronto: McMillan, 1965) XV, 672.

DOC, ECONOMIC POLICY PLANNING BRANCH.

Within the "Transportation and Communication" section of this compendium, Urquhart & Buckley present 10 series of telegraph statistics. (Series 5350-9; explained and annotated p. 525; presented p. 561). The sources of this data are:

- (1) 1912-1919 Annual Report of Department of Railways & Canals - supplement on Telegraph Statistics.
- (2) 1919-1936 D.B.S. Telegraph Statistics.
- (3) 1937-1960 D.B.S. Telegraph & Cable Statistics.

Of the ten series, seven relate to the telegraph industry per se, three relate to cable activities. Not all the series extend over the entire period. The series include: 350-Operating revenue; 351-Operating expense; 352-Non-transmission revenues; 353-Cost of property & equipment; 354-Total telegrams transmitted; 355-Telegrams sent; 356-Telegrams from the U.S. Series 350, 351, 352, and 354 are complete 1912-1960; 353 runs from 1923 while 355 and 356 run from 1924.

The statistics are global, but a crude apportionment between major firms might be possible based on line mile statistics available elsewhere. More precise apportionment should be possible from Company records but for what period of time is unclear. Unfortunately, only selected telegraph series are comparable with the Post Office and Telephone series presented in the same section - "Transportation and Communication."

B.3 Telegraph Company Documents

Montreal and Troy Telegraph Company. Minute Book, February 1848 - January 1856, (Montreal: Manuscript), pages unnumbered.

RG 30 Vol. 10491 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

Running from April 1848 to January 1856 this volume traces the rather weak business of the Company and the growing influence of Hugh Allan in its councils. Allan first appears in January of 1850, the year MTC was approached by M&TTC to operate the latter's lines. Most of the business information concerns the construction, improvement and reconstruction of the river crossing. In 1855, a cable provides the solution to this very expensive problem. Since June 1856 is the last entry, one suspects that MTC completely took over M&TTC in that year.

Montreal Telegraph Company. List of Offices, (Montreal, 1870), 3.

1870 (40 P.A.L.) PUBLIC ARCHIVES LIBRARY.

A very brief synoptic history of the company; with message, word, pole mile, wire mile, office, employee, etc. statistics for 1870 or '71. This is followed by a list of all the places where the company has offices in Canada and the U.S.

Montreal Telegraph Company. Minute Books 1847-1938, (Montreal).

RG 30 Vol. 10484-5-6-7-8, 90 plus 91  
Vol. 10489 is under 35 year moratorium rule

PUBLIC ARCHIVES MANUSCRIPT DIVISION.

These seem to qualify as the best primary material available on the Canadian telegraph industry. Although they run from 1847 to 1938, and although the more recent volumes contain more information about the company's business, the first three volumes are probably the most valuable since they provide financial information about the company not available elsewhere and a good deal of information about the early telegraph industry generally and the role the MTC sought to play in it. The volumes covering the 60's through the 80's, if less than comprehensive on the subject, provide valuable comment on the competitive relations of MTC and DTC as well as continuous comment on the litigious relations of MTC and GNWTC. If they are the best source available, it must be noted that these Minute Books do have shortcomings from a research point of view. The major drawback to them is that they do not record all the company's decisions, nor do they present all the evidence before the directors when they made the decisions. An example of this sort of lacuna

would be where MTC has received an offer from another company, but the terms of the offer are not recorded whereas the decision to accept it is noted.

Montreal Telegraph Company. Minute Book. Vol. II 26 Dec. 1846 - 18 Nov. 1857. (Montreal: Manuscript), 230.

RG 30, Vol. 10484 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

Montreal Telegraph Company. Minute Book. Vol. III 22 Dec. 1857 - 10 Jan. 1887, (Montreal: Manuscript) 453.

RG 30, Vol. 10484 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

First 300-odd pages refer to events prior to the MTC lease in 1881 to GNWTC. That is to say that these two volumes cover the period of independent, competitive operation by the MTC.

Montreal Telegraph Company. Stock Book 1846-1872, (Montreal: Manuscript), pages unnumbered.

This is the transfer and stock register of the MTC. It records all the transfer, dividend (cash & stock) transactions of the company from 1847 (Dec. 1846) till 1872, thereafter it seems to be rather incomplete. It reveals a very high concentration of ownership among the Montreal merchant elite. Hugh Allan himself owning about 15% of the stock, after the initial 30 share per individual limit was relaxed.

B.4 Political and Commercial Personal Papers

MacDonald, Sir John A. Papers and Letterbooks.

MG 26 A PUBLIC ARCHIVES MANUSCRIPT DIVISION.

MacDonald's Papers and Letterbooks are similar to Laurier's in that they are over indexed (references to the telegraph being mostly in passing and very insubstantial). However, there are a number of interesting letters from Erasmus Wiman seeking information about what he thinks CPRT will do to the profits of his company (GNWTC). In opposition to these are a great many letters from Van Horne suggesting to MacDonald that government communications sent over Wiman's lines were insecure because the Commercial Unionist Wiman wanted to have advance information about MacDonald's National Policy plans. It should be noticed here that the Archives have xeroxed the MacDonald papers and since this was not always done very well many of the documents therein are close to illegible.

Stephens, George and Canadian Pacific Railway. Letterbooks.

MG 28 M-20 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

These were not looked at in great detail because the indices available suggested they were mainly concerned with Railway matters.

Van Horne, Sir William and Canadian Pacific Railway. Letterbooks.

MG 28 III-20 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

Van Horne's telegraphic life and interests do not appear to be reflected in his letterbooks. Like the Stevens' letterbooks, Van Horne's pertain predominantly to railway affairs.

Allan, Sir Hugh. Papers.

MG 29 A-2 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

The manuscript division of the Public Archives holds about fifteen pages of Sir Hugh Allan reminiscences, none of these, however, concern Sir Hugh's telegraphic enterprises or activities.

Gisborne, F.N. Papers.

PUBLIC ARCHIVES MANUSCRIPT DIVISION.

Gisborne, a one time employee of the MTC and promoter of B.N.A.T.C., builder of some Nova Scotia lines, Atlantic Cable enthusiast and

subsequent Director of the Canadian Government Telegraph Service, was never highly regarded in the telegraph community. The few papers of his that the Public Archives hold concern office seeking and the Atlantic Cable project.

Fleming, Sir Sandford. Papers and Letterbooks.

MG 29 A-8 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

Most of Fleming's papers seem to involve his railway work. Those which concern the telegraph are, true to expectations, exclusively about the Pacific Cable and the "All Red Route/line."

Fleming, Sir Sandford. Scrapbook.

MG 29 A-8 PUBLIC ARCHIVES MANUSCRIPT DIVISION.

His scrapbook was not available for scrutiny, although the Archives do have it and it is generally available.

Henderson, Thomas. Scrapbook.

# 12015 TELEPHONE HISTORICAL COLLECTION, BELL CANADA, MONTREAL.

Obviously, Henderson's newspaper clipping reflects his status as Alexander Melville, Bell's agent for the Bell patent in Canada. However, some of the articles Henderson saved do involve the telegraph industry. Most of these concern MTC's acquisition of the Edison patent, DTC's acquisition of Bell patent rights or the use of telegraph wires to transmit telephone messages. The temporal scope of Henderson's collection is limited to the year 1877-1882.

Laurier, Sir Wilfred. Papers.

MG 26 G PUBLIC ARCHIVES MANUSCRIPT DIVISION.

Although the Index to the Laurier papers suggest that he had a great deal of interest in the telegraph industry, the papers themselves are remarkably uninformative. For example, the Index records several letters under "telegraph nationalization" but the letters themselves merely use the words and do not substantially comment on the proposal itself. Most of the letters one must admit, are merely replies to or acknowledgement of incoming mail.

McFarlane, L.B. Scrapbook.

#12016 TELEPHONE HISTORICAL COLLECTION, BELL CANADA, MONTREAL.

McFarlane's scrapbook, like Henderson's, is held by the Bell Telephone Company Historical Section. Like Henderson's scrapbook his main concern is with reports of telephonic news. McFarlane, however, had the virtue of keeping his scraps for somewhat longer than Henderson: his run from 1879 to 1906. Also, like Henderson, McFarlane was mainly interested in the telephone, but he did save several articles about the telegraph industry as well. Most of these involve MTC and DTC telephone activities, or really outstanding telegraph news such as the takeover of MTC and DTC by GNWTC.

B.5 Contemporary Newspapers

The Canadian Economist, (Toronto).

NATIONAL LIBRARY - NEWSPAPER ROOM.

Unfortunately the local holdings of this journal are rather sparse. Those few that are available are from either the late 1840's or the early 1950's. Because a consistent or continuous search was not possible and because the information available in the 1840's issues was merely factual and available elsewhere, one is willing to make neither quantitative reports nor qualitative judgements about the material the Economist may well contain.

The Canadian Monterey Times and Insurance Chronicle, (Toronto, Ont. 1867-1929), Vol. #1 and following.

P-267 NATIONAL LIBRARY NEWSPAPER ROOM.

This was the only journal that was conscientiously and continuously screened between 1867 and 1929. It is a highly valuable source of telegraphic developments from 1867 to the early 1900's, thereafter it becomes somewhat spotty in its coverage. The M.T. is most complete in its treatment of the Dominion Telegraph Company (DTC), consistently printing Annual Reports and stories of significant development within the company. Moreover, the M.T. kept up a running commentary of DTC affairs for its twelve years of independent operation. The M.T. reports of the Montreal TC the Great Northwestern TC and CPRT are less frequent, if fairly regular. Here, the MT sometimes publishes the Annual Reports and sometimes merely reports the thrust of them and it (the MT) is weakest with respect to CPRT developments. In the Middle 1880's the MT, while not losing interest in the Telegraph, becomes more interested in Railway questions. Then, in 1892-93, it runs a sixty odd series of editorials under the heading "The Telegraph in Canada" which, if largely anecdotal, recapitulates early MT reports and adds new information with the wisdom of hindsight. A complete run of the M.T. is available in the National Library's Newspaper Room on microfilm. The task of reading sixty years of newspaper on film is not an easy one particularly since the various volumes are not all indexed, nor are those that are, indexed reliably; but the information therein for the 1867-1900 period is thoroughly worth the effort. Indeed, apart from Company files the MT is probably the best source available on the Canadian Telegraph Industry. The M.T. is also a fine source for opinion on government policy towards telegraph companies but the opinion therein expressed is simply that monopoly is bad, therefore government monopoly is worse. Such opinion is usually backed up by reference to the comparative



experience of the European and North American telegraph systems. See Appendices A and B in this paper for the research notes made while surveying articles in the Monetary Times.

The Globe, (Toronto 1840-1867).

CARLETON UNIVERSITY MICROFILM ROOM.

Whatever one may think of the quality of the current Globe and Mail Financial Sections, one can be sure that its predecessors had few pretensions to being business journals. However, the Globe was screened for the period prior to 1867 (M.T. appears) for reports of telegraphy's development. The Globe is fairly reliable in noticing new developments in telegraphy for the period, but the information it provides is rather sketchy. Most of its material commenting on the telegraph is reprinted verbatim and rather uncritically from American newspapers so that it is not very reliable as a source of Canadian opinion.

Telegraph and Telephone Age, Edited by D. McNicol (1914-20)  
(New York: J.B. Taltavall).

TK1 T2 McNICOL COLLECTION, QUEEN'S LIBRARY.

Selected issues of this "trade" paper are available in the McNicol Collection at Queen's. In the issues available there, most of the Canadian material was reprints of Monetary Times editorials or articles. Material that appears to be original with this journal is exclusively concerned with personal and personnel news. (Mr. X is promoted: Mr. Y has moved to ... etc.).

The Journal of the Telegraph, (New York).

TK 1/T265 Vol. 5 & 6 1871-72/72-73 McNICOL COLLECTION,  
QUEEN'S LIBRARY.

This, too, is in the McNicol Collection. But only two volumes of it are available, being Vol. 5, 1871-72, and Vol. 6, 1872-73. It would appear to have been a predominantly technical journal which filled out its pages with personal and personnel news items. Its rare comments of foreign telegraph news are reprints from other journals. In the case of Canada these reprints are drawn from the Monetary Times.

The Scientific American.

NATIONAL RESEARCH COUNCIL.

Only a few issues of this journal were examined. The rationale

for this was that its articles - which dominate indices to periodical literature - are, or appear to be, exclusively technical in nature.

B.6

Catalogues and Indices

Porteous, J.P., compiler and M. Sherlock, editor. Catalogue of the McNicol Collection of books on Telegraphy, Telephony and Radio contained in the Douglas Library, Queen's University. (Kingston, Douglas Library, Queen's 1942), 42.

SPECIAL COLLECTIONS, QUEEN'S LIBRARY.

Canada. Department of Justice. Laws and Statutes of Canada. An Index for Local and Private Acts - Dominion of Canada, 1867-1941. (Ottawa: King's Printer, 1942).

NATIONAL LIBRARY.

Hancock, John W. A Synoptical Index of the Consolidated Statutes of Canada and Upper Canada. (Toronto: W.C. Chevett, 1865).

NATIONAL LIBRARY.

APPENDIX "A"

This appendix presents the research notes made while reading the 1892-93 Monetary Times series on "The Telegraph in Canada." Some forty-three articles appeared in the series from April 22, 1892 to November 10, 1893. Each research note is preceded by the issue date and page number. In addition, a glossary of abbreviations is provided for various proper names used throughout the notes in both Appendix "A" and "B".

GLOSSARY OF ABBREVIATIONS

A&PT	-	Atlantic & Pacific Telegraph Company
AR	-	Annual Report
AUTC	-	American Union Telegraph Company
BNATC	-	British North America Telegraph Company
CDTC	-	City & District, then Canadian District Telegraph Company
CPR	-	Canadian Pacific Railway
CPRT	-	Canadian Pacific Railway Telegraph
CPT	-	Canadian Pacific Telegraph
DTC	-	Dominion Telegraph Company
DUSC	-	Direct United States Cable Company
E.D.	-	Electric Dispatch Co. (Canadian Telephone Company)
GNWTC	-	Great North Western Telegraph Company
GPO	-	General (U.K.) Post Office
GTTC	-	Grand Trunk Telegraph Company (International TC)
HTC	-	Halifax Telegraph Company
MT	-	Monetary Times
MTC	-	Montreal Telegraph Company
M&TTC	-	Montreal & Troy Telegraph Company
MUT	-	Mutual Telegraph Company
NBETC	-	New Brunswick Electric Telegraph Company
NSETC	-	Nova Scotia Electric Telegraph Company
NYT	-	New York Times
PT	-	Postal Telegraph Company
PTC	-	People's Telegraph Company
THNSTCEMT	-	Toronto, Hamilton, Niagara, St. Catherines Electro-Magnetic Telegraph Company
U.K.	-	United Kingdom
W.U.	-	Western Union Telegraph Company

The research notes follow:

1. April 22, 1892, p. 1278.  
First telegraph's MTC (wrong); building progress; revenue progress; operators at various offices; early users - merchants; early competitors; DTC only successful one.
2. April 29, 1892, pp. 1310-11.  
Newspaper users; early personnel of MTC. Montreal & Troy Telegraph; MTC absorption M&TTC, Grand Trunk T; Niagara; Prescott-Bytown Construction characters.
3. May 6, 1892, pp. 1342-3.  
Reception by sight, then by sound, early sound operators memories of: William Cassel (MTC operator to board member), Norman Bethume M&TTC; MTC; GNWTC. Early troubles of connecting Montreal with mainland lines.
4. May 20, 1892, pp. 1398-9.  
Memories of Townsend, an "old timer of Canadian telegraphy remembers." Much of it is unreliable; mainly Jack was at X, then Y, then Z; Arnold was at T, U and finally V.
5. May 27, 1892, pp. 1429-30.  
More solid corporate information, but interspersed with personal reminiscences of personnel - those of Wm. Cassels.
6. June 10, 1892, p. 1489.  
Mr. H.P. Dwight supervises construction of an extension to MTC of a line along Great Western Rwy. from Suspension Bridge & Hamilton to Detroit. (1853-55). Balance of article is gossip about hotels and Scotsmen Dwight might have encountered in the West of Ontario.
7. June 17, 1892, pp. 1524-25.  
Great Western TC built in 1853, died when MTC built along GW Rwy; International TC - Toronto-Hamilton built in 1851-52 - MTC buys it out; 1852 MTC buys THNSCEMT & Kinocles line to Buffalo from Lewistown.
8. June 24, 1892, pp. 1558-59.  
After a very terse review of the invention; memories of Norman Bethume, (Ottawa superintendant of GNWT) an early MTC operator; concerning training him & others as first Canadian operators & opening of offices along the MTC line.
9. July 8, 1892, pp. 14-15.  
Further reminiscing by Wm. Cassels, and some of Mr. Adam Brown. In 1850 a fourth line (MTC, BNATC, M&TTC) - Montreal and Bytown TC (pres: Edward McGillivray) - entered Montreal. It was only connected during limited hours, and was used mainly for export lumber and import pork etc. information.

10. July 22, 1892, p. 78.  
Mostly taken from Reid's Telegraph in America.
11. August 5, 1892, p. 130.  
In 1866(?) the People's Telegraph began building in Quebec to compete with the MTC; MTC eventually absorbed it; personal reminiscences for the balance.
12. August 12, 1892, p. 159.  
Canada Mutual Telegraph set up in 1880's and when W.U. handed DTC lines over to GNWTC in 1881, many DTC personnel went the CMTC; balance is reminiscences.
13. August 19, 1892, p. 181.  
Reminiscences of Angus Grant and A.B. Smith.
14. August 27, 1892, p. 217.  
Once again MT leans on Reid's Telegraph in America this time to give the facts of the development of Maritime lines; NS government line built 1849, 125 miles and by 1851, sold to NSETC; NBETC in 1849 connects to NSETC - in 1856 NBETC leases for 10 years to HTC.
15. September 2, 1892, p. 245.  
Again borrowing from Reid, to tell story of Halifax - N.Y. developments in communications.
16. September 9, 1892, p. 283.  
W.H. Drummond like tales of French-Canadian ignorance and "Southern darkie" tales of like nature; supposedly recollection.
17. October 28, 1892, pp. 493-4.  
A sane review of the tentative, then midly successful efforts to establish an "opposition (to MTC) company" by Toronto interests - being, of course, the DTC. Most of the information seems to come from MT back issues. The history of this opposition is carried to 1876, after DTC had absorbed People's TC (1872), planned for a cable connection (1875) and paid a 6% dividend 1876.
18. November 4, 1892, pp. 523-4.  
A continuation of the story of DTC's challenge to MTC. The last paragraph seeks to compare MTC to earlier information respecting DTC for 1877:

	<u>MTC</u>	<u>DTC</u>
Offices	1,537	n.a.
Poles	12,193	4,090
Wire	20,402	7,824
Assets	2,355,000	927,904
Capital	2,000,000	611,820
Receipts	514,122	177,081
Expenses	346,000	123,956
Dividend	7½%	n.a.

19. November 18, 1892, pp. 581-2.  
Continuation of the story of competition in Canada between MTC and DTC. This takes the companies from the year of declining revenues 1878 - DTC 177,081 to 169,837; the opening and failure of MTC-DTC pooling negotiations; Jay Gould's conception of American Union; DTC gives 99 year lease to AUT for 5% on paid up capita price competition as AUT-DTC rate cut to 20¢, MTC forced to follow (Oct. '79) then Feb. 1881 WU & AUT & A&PTC merge.
20. December 2, 1892, pp. 642-3.  
MTC and DTC competition then amalgamation under the GNWT hat; Easson tells something of early press reactions; relations and usage of telegraph.
21. December 16, 1892, pp. 698-9.  
Description and explanation of submarine telegraphy; description and explanation of troubles, etc. attendant upon amalgamation of MTC and DTC in GNWTC.
22. January 6, 1893, p. 791.  
Public business combined with railway business was too great when done over lines used by railways, hence after mid 1850's separate lines were installed; January 1882, Canada Montreal T.C., set up with lines from Niagara, Thorold St. C. Hamilton Toronto and one from Montreal through Eastern Townships to U.S.; voting on "enabling to lease" set for MTC in 1882; 99 to 48 in House 35 to 11 Senate; impose price ceiling of 25¢; stories of multiple function of telegraph operators and Railway Telegraphers generally.
23. January 27, 1893, pp. 880-1.  
All personal memories of early and later (1886, etc.) days on the Canadian telegraph.

24. February, 1893, pp. 945-6.  
 First article on CPR. Charter giving CPR telegraph rights. CPT went beyond mere railway places, as it branched off to nearby towns, linked up with the Postal T. and Commercial Cable in the U.S. at several points between New England and Washington. CP lays cable to Vancouver Island, and build lines in N.S., N.B., etc. to compete with GNWTC (or acquire lines). Builds own system along railways which they had acquired but along which GNWT already had lines. Note of DTC Annual Report. At CP's beginning, they had 366 offices; 140 in Ontario; 2 in Quebec; 90 Manitoba, 34 in B.C.; remainder in NWT.
25. March 3, 1893, pp. 1040-41.  
 Some further cribbing from Reid - about early U.S. lines, and their foibles. Then switches to CPR: its telegraph most modern in its plant & techniques; Van Horne was one who thought RWY should have its own telegraph and offer commercial service as well; CPR not opened to public until September 13, 1886, however, because it had been needed for construction, etc. purposes, limited public use from 1882; telegraph in '81 and '82 went up ahead of the Rwy roadbed; description of railway dispatching by telegraph.
26. March 10, 1893, pp. 1071-2.  
 MT challenged for its source, acknowledges Reid and then proceeds to repeat some of Reid's stories of the early American telegraph.
27. March 17, 1893, pp. 1105-6.  
 Better entitled Telegraph in Chicago. Reprints a letter from H.P. Dwight written in 1853 and talking casually about telegraph life and people.
28. March 31, 1893, pp. 1167-8.  
 History of early CPR and Government telegraph lines; 1875 Contracts; 1877 Victoria-Saanich by Cable to U.S.; April 1878 Fort William to Edmonton completed(1,100 - 1,200 miles) but only worked up to Battleford (970 miles); Edmonton to B.C. slow to be finished; these lines followed the original CP route which was much further north than the subsequent "real" route. The government owned this advance line of telegraph; stories of how to string wires on tress etc.
29. April 14, 1893, pp. 1226-27.  
 The early telegraph in the West, was operated by the contractors who built them, the contractors also received whatever revenue the lines generated until 1882 when government took possession of most of them; CPR got the lines in the B.C. interior which had initially been built by or for the Dominion Government; maintenance reminiscences.



30. April 21, 1893, pp. 1257-8.  
Straight reminiscences of George Burnett, mainly about working in the U.S. for W.U. and maintenance and use of galvanometer.
31. May 12, 1893, p. 1339.  
Discussion of technical advances in insulation and electrical power/current sources - battery to motor-generator; glass plate "sandwich" insulator to the earthenware/porcelain and glass inverted "U's".
32. May 26, 1893, pp. 1410-1411.  
A review of Sir Sandford Fleming's 1879 and 1880 Reports. MT mention Fleming's charge that the existing lines were not satisfactory, since the contractors did not take requisite care in operating them. His suggestion that government should take them over is reported without comment. Hard life of the surveyors stories.
33. June 9, 1893, pp. 1468-69.  
More hardship of surveyors. MT rebukes Canada for not honoring its engineers/explorers sufficiently. Percy Collins and the Overland Route (to Europe).
34. June 23, 1893, pp. 1536-7.  
Reputedly humorous stories of telegraph errors, etc.
35. June 30, 1893, p. 1575.  
Letter from Truro, N.S. saying more on Maritimes is needed if "Telegraph in Canada is to fit."
36. July 14, 1893, p. 46.  
Half an answer to the Blue Nose of Truro (30 June 93, p. 1575); brief history of the Atlantic Cables, Field & Gisborne's activities; the N.S.T.C. (1st pres. was Samuel Cunard) although it had 1770 miles of wire and 53 offices (in 1856) made little money and leased 1860 to Amer. T.C.; 1866 to W.U. and in 1872 W.U. bought its lines.
37. July 21, 1893, p. 73.  
Review of and reminiscences about the strike of 1883.
38. July 28, 1893, pp. 107-108.  
Continuation of strike story of 1883.
39. August 4, 1893, pp. 137-8.  
The effects of the strike of telegraphers 19 July 1883 and some reminiscences of times with skeleton staff. Officially ends 17 Aug. 1883, but many strikers gave up very early and went back to work.
40. August 18, 1893, p. 197.  
Supposed memoirs of Maritime telegraphy, but really memories of a trip through Nova Scotia.

41. October 27, 1893, pp. 514-15.

This more properly should be entitled Telegraph in U.S. as it answers a reader's request for information on W.U. - mostly from Reid.

42. November 10, 1893, pp. 577-8.

Again Telegraph in U.S. would be a better title for this article. It is also in response to the reader's request for information on W.U.

APPENDIX "B"

Appendix "A" provided research notes based on a specific series of articles; appendix "B" presents notes made on numerous other articles, comments, and editorials respecting the Canadian telegraph industry which appeared in the Monteray Times over the period January, 1868 to September, 1899. Each research note is preceded by the issue date and page number. See page 103 for the glossary of abbreviations for company names.

1. January 23, 1868, pp. 188-189.

This editorial article considers the case for and against government ownership and operation of telegraph. It argues that the benefits of such ownership are said to be cheap rates, extended lines, no profit motive, cheaper to run because Telegraph merged in Post Office. It then replies that private enterprise has an excellent web of lines - (reaching smaller communities than elsewhere); that cheaper rates would lead to a loss and tax subsidization; that MTC (the monopolist) paying 10% p.a. is no different than building societies (i.e. fair return); that the post office would be in a position to see messages and this is undesirable (for patronage reasons); that current profits would be lost in government red tape; and that if the current Monopolist's rates are too high, it would be better to regulate like the railways.

The article compares Swiss and Belgium telegraph experience with Canada to show more offices per capita in Canada and hence more service under free enterprise. The article also alludes to benefits from competition and remarks that Telegraph industry has no barriers to entry, etc. Next issue January 30, 1868 has a brief follow up. MTC obviously complained about the inference of its high rates, points out that without competitive pressures it had reduced its rates 30 to 35% as well as having extended its service (p. 202).

2. March 5, 1868, p. 265.

MTC having been offered a bonus by Kincardine agrees to build an extension line to it. Also MTC lowers rates for places east of Quebec, as much as 75¢ for the ten word standard messages, and 5¢ for subsequent words. Rate to and from Halifax lowered by 60¢.

3. June 18, 1868.  
"The Government and the Telegraph": This is a very similar piece to the editorial of January 23 (q.v.). The occasion for its writing was the UK government's take over of UK telegraph. The main thrust of article is to prevent such an event in Canada and such is based upon: (1) no government money to buy out MTC, hence have to borrow at 6%, hence must earn at least 6% hence unlikely to reduce rates without subsidy; (2) danger of putting telegraph into hands of party in Power; (3) danger to privacy; (4) no recourse again government in courts, only in election. On July 9, 1868, MT notes that U.K.'s proposed take over, was sent back to committee on 3rd reading.
4. August 27, 1868, p. 19.  
Notice of the prospectus just issued by DTC and list of officers and directors.
5. September 10, 1868, p. 54.  
An editorial to welcome DTC as the vindication of the two previous articles arguing that competition in a free market is the best enforcer of fairness in things economic. The argument is briefly restated and filled out with a few more statistics.
6. November 19, 1868, pp. 214-15.  
Editorial: seeking to clear DTC of allegations of shadyness raised in the Montreal Press. This issue also has prospectus for DTC and an announcement of MTC price cut.
7. November 19, 1868, pp. 214-15.  
Editorial: On the emerging DTC and an assessment of its motives as charged in the Montreal Press. The Montreal Press had violently attacked the DTC venture - which à la M.T. was launched specifically to reduce telegraph rates by competition - as another speculation or attempt to defraud by Josiah Snow, the promoter, seller and absconder of the Grand Trunk Telegraph Co.

The M.T. after a review of the DTC proposal, quotes the scurrilous history of Snow and the Grand Trunk, and then calls upon the prominent directors of the D.T.C. to come forward and deny any association with Snow and any collusion with the M.T.C. in regard to price maintenance.

The short lived nature of other Canadian Telegraph ventures and the strength of M.T.C. are noted. It would seem that the Montreal Press was being used to construct barriers to entry into the Telegraph field, not by changing the price or capital structure of the industry, but by undermining investor confidence in such competitive ventures as the D.T.C. Note that the Grand Trunk failed in 1852.

8. November 26, 1868, pp. 234-235.  
Letters from William Cayley, President and H.B. Reeve, Secretary of D.T.C., answering the allegations of Mr. Dwight an M.T.C. employee and author of the Trade Review attack on D.T.C.; Cayley makes the point that M.T.C. has reduced its tariffs twice since the D.T.C. came into existence in July-August 1867; November 24 M.T.C.'s stock price still in the 130-136 range.
9. December 10, 1868, pp. 264-5.  
Editorial: On the origin of the DTC. This piece furthers the investigation into the probity and motives of the D.T.C. The MF finding that Snow and son were associated with the first certificate of Articles of Association; that Reeve subsequently comes into the 2nd and 3rd certificate apparently as a substitute for Snow; that Snow was a household word for swindle in Canada and hence the directors do not inspire confidence by denying knowledge of the name. Goes on to admonish the new and honest directors of the DTC and rejoice that they have learned a lesson, etc.
10. December 24, 1868, p. 298.  
Another piece fretting over the dangers to civil and individual rights if a party government system were to gain control of Telegraph. The point is advanced that before such a take-over the government must prove that private companies have failed to serve the public needs. Evidence suggests that innovation in UK and US has led to reduced tariff and more reliable service and both were in the public's best interest.
11. December 31, 1868, p. 315.  
Letter of resignation from two directors of DTC with the rationale for resignation being the investigation showing the enterprise to be less than laudable. (McInnes & Stuart); MTC stock 136-139.
12. January 28, 1869, pp. 377-8.  
The old theme of government keep out, or stay away. This time the argument based on lower average message cost, more offices and more telegraphs in the free enterprise system as compared to the government systems in Europe.
13. April 8, 1869, pp. 538-9.  
An article, reporting new developments at the DTC. The contract with Reeve to build 2,000 miles of double wire line for \$250 a mile, is exposed as leaving Reeve a "clear profit" of \$200,000. (This is calculated against "The People's Line" Ottawa to Quebec whose price was \$150 per mile). The Public and particularly the subscribers of DTC stock are reminded that some things are worse than unbridled monopoly.

14. April 29, 1869, p. 588.  
Two articles reporting on stockholder unrest and refusal to answer calls for paying up their subscribed stock. Neither adds much to the article of April 8 (q.v.) except one mentions that E. Wiman of Trade Review was responsible for revealing DTC weakness.
15. September 10, 1869, p. 53.  
Note that S. Reeve had abandoned his much exposed contract with DTC for building its lines.
16. September 17, 1869, pp. 69-70.  
DTC.- letters to M.T. announcing end of Reeve's contract and that future building will be by public tender; signed by Cayley, President of DTC. Letters also announce that DTC, through the Atlantic and Pacific have been connected to the French Cable Co., and hence offer a service to Europe comparable to MTC.
17. September 24, 1869, p. 85.  
Proposed link by American Co. between U.S. and the North West - Breckenridge to Fort Gary. Thus establishing telegraph connection between Canada and Red River. Note page 86; Anglo-American and Atlantic cable announce lower rates due to success of French Cable Co.
18. October 8, 1869, p. 117.  
Editorial calling for directors of DTC to reveal more information than their two circular (open) letters (q.v.) announcing the termination of Reeve's contract and his association with DTC. "Confidence once rudely shaken, is not to be restored by the simple statement of one fact", etc.
19. October 29, 1869, pp. 161-162, and p. 167.  
Report of a special meeting of DTC designed to put shareholder malaise at rest and encourage positive responses to subscription calls; Cayley gives a fair explanation of Company's position and prospects and seems to win confidence; Discussion of connection with Mr. Joseph's "People's Line" Ottawa - Quebec at Kingston so as to meet demands of DTC's American contractual alliances; letter from a DTC stock subscriber, complaining of company's further payment to Reeve's and seeking M.T.'s advice.
20. January 14, 1870, p. 337.  
DTC report a surplus of income over expenditure of 391.07 (21,067.50 - 20,676.43) at Second Annual Meeting; vigorous pursuit of Ottawa and Montreal connection was agreed to; substantial amount of original subscribed capital remained outstanding.

21. January 14, 1870, p. 341.  
Editorial comment on Second Annual Meeting of DTC: shareholder resistance is still strong (to calls for cash); that the existing DTC lines operate at a loss; that People's Line, despite MTC opposition was successful because of its organization along business (not speculative) lines); calls for several wealthy men to pay for Ottawa and Montreal extension out of their own pockets and hence increase shareholder confidence.
22. March 11, 1870, p. 470.  
Editorial: Notes take-over of British telegraph system by U.K. government; observers that now U.K. wants both efficiency and public satisfaction from its telegraph system. Rejoices that such has not happened here and moralizes that: "what people are able and willing to do themselves, through public companies, or otherwise, had better be left for the people to do."
23. May 27, 1870, p. 645.  
Editorial Re: Payment by Telegram: argues against the advance and advantage of the telegraph; telegrams are not legally binding (as of above date) and hence, payment must be made in time for checking on a check prior to a due date; Quotation: "Payment by telegraph is a custom to be deprecated in the interests of careful, prudent trading, ...".
24. June 3, 1870, p. 664.  
An article lifted from the Montreal Gazette: describing and to a degree eulogizing the use of the telegraph in a fire alarm system; "a large part of the saving on insurance is due" to the telegraph.
25. July 29, 1870, p. 820.  
Editorial: Urging Toronto to spare no expense to install fire alarm Telegram as Montreal had already done and save \$100,000 in fires that previously could not have been put out.
26. August 5, 1870, pp. 837-38.  
Editorial concerning Telegraph Enterprise: This begins with a quote from the "Bruce Herald" which thanks the MTC for its promptness in connecting the Bruce to the outside world; MT then goes on to consider MTC's importance in Canadian development; MTC's 25 years of blemish free, enterprise and its very able Western Superintendent; no point is made about competition, or rates.
27. January 13, 1871, p. 426.  
Editorial: MTC managed so well that "we shall never be badly off in the matter of telegraphs" whatever happens to rivals; statistics for 1870: addition of 821 of pole miles, 1920 wire miles, and 86 offices.

28. January 13, 1871, p. 427.  
MTC history from "advance sheets" of Dominion Directory for Montreal: Founded in January 1847 with capitalization of 60,000, 540 miles, Quebec-Toronto, 9 offices, 35 employees, 33,000 messages; November 1870, 7,800 pole miles, 12,147 miles of wire, 640 offices, 996 employees, 1,060,000 messages, 133,092 Atlantic cable messages, service from Sackville, N.B. to Sarnia, from U.S. States of Vermont, Maine, N.H., N.Y. and Michigan; intend to put wire along Intercolonial; No reduction of tariff to 25¢ for the standard 10 word message.
29. January 20, 1871, pp. 448-49.  
DTC Annual (3rd) Report: 147 miles of line, 6 offices from Suspension bridge through Clifton, St. Catharines, Hamilton, to Whitby, Oshawa; as of last year 1870: now Oshawa - Montreal 327, Prescott - Ottawa 59; Hamilton to London 78; Toronto Grey & Bruce Railway 18 for a total of 482 miles; DTC does not want to compete with People's TC so negotiates a connection; directors report a quarterly profit of 22% (Oct-Dec. 70) and net assets of \$106,723.
30. May 26, 1871, p. 806.  
Editorial: Comments on the remarkable success of the government's operation of the telegraph in UK. What makes the success of government enterprise worth so much comment is that by the M.T.'s measure, the Canadian Telegraph system is still superior and is so by virtue of its ownership being private.
31. December 29, 1871, p. 508.  
Note that People's Telegraph has "amalgamated" with the Dominion Telegraph but nothing more on this point.
32. January 12, 1878, p. 549.  
MTC, having just moved into an "imposing edifice" to accommodate its "expanded business", merits the MT's attention. Most of this attention is given to the "imposing edifice" and the "internal appointments", but record is taken of MTC 1871 expansion in which MTC opened 150 new offices making for a total of 895: Ontario -430, Quebec - 215, United-States - 130, New Brunswick - 66, Nova Scotia - 54, line now approximately totals 15,000 miles.
33. February 23, 1872, p. 677.  
Note that annual meeting of DTC had been held in early February; operating statistics include: pole mileage - 1,176, wire mileage - 2,265, offices - 83; MT notes that report failed to mention any financial facts about the company.
34. July 12, 1872, p. 34.  
DTC declares 2nd dividend of 5% on year June 30, 1872.



35. December 13, 1872, pp. 473-4.  
Editorial: Noting the "extraordinary increase of telegraph lines in Canada." The telegraph has grown with the railways but also keep far in advance of them; thanks, according to M.T., to Sir Hugh Allan (President of MTC, member of the Board of CPR, President of Allan Shipping and innumerable railways)); lines build "ahead of demand" - at least of a demand that would be profitable - and this is the "policy of success"; 1872 statistics include: addition of 1,300 pole miles, 4,000 wire miles and 200 new offices with total plant now being 10,300 pole miles, 18,000 wire miles and 1000 offices. New line up the Ottawa 150 miles beyond Ottawa; why given Allan's interest in MTC and CPR, does MTC end up in CNR?; MTC built along: Canadian Air Line, Canada Southern, Hamilton & Lake Erie, Wellington, Grey & Bruce, Toronto & Muskoka, Intercolonial; Canada still, on a per capital basis, has twice the telegraph stations of UK.
36. January 10, 1873, p. 570.  
MTC's new issue of stock equals \$250,000; 5% half-year dividend plus 25% stock dividend to be disbursed from new issue; the 25% stock dividend, is really 25% of the newly issued stock, to be disbursed among existing stockholders.
37. February 7, 1873, p. 673.  
Editorial: The English experience with government ownership is proving unfortunate - private initiative has been killed and complaints of frequent poor service go unanswered.
38. February 21, 1873, p. 722.  
Note of DTC's Annual Meeting: Emerged from the shadow of its shady beginning; total offices grown from 33 in January 1871 to 147 in December 1872; DTC paid 7½ per cent in dividends during 1872.
39. January 23, 1874, p. 726.  
MTC issues another \$250,000 of stock.
40. February 27, 1874, p. 857.  
DTC growth in 1873 shown in pole miles going from 2,177 to 2,585 and wire miles from 3,942 to 4,574; it was planned for '74, to add 500 pole miles and 1,000 wire miles; DTC complains to its shareholders that it cannot put its lines along railways because MTC has exclusive contracts with the most important ones; MT thinks this to be a serious obstacle to DTC's apparent suggestion to ask Parliament to alter the MTC - railway contracts.

41. February 27, 1874, pp. 858-59.

DTC's 5th Annual Report includes statistical information:

<u>Year</u>	<u>Pole Miles</u>	<u>Wire Miles</u>	<u>Offices</u>
1869	147	147	6
1870	629	1,116	35
1871	1,510	2,933	106 (includes purchase of PTC)
1872	2,177	3,942	164
1873	2,585	4,574	251

DTC seeks to issue \$100,000 in new stock; railways unable to give DTC access to their right of ways, because of exclusive contracts with MTC include: Grand Trunk, Great Western, and Northern Railways. And it looks as if MTC was about to obtain the same privilege from the Intercolonial - making DTC expansion to Maritimes impossible; note that in Ontario "Public roads" are sufficiently good to make railway right of ways unimportant to DTC's ability to extend its facilities to numerous villages; DTC meeting deplores these exclusive contracts, and considers and urges that Parliamentary action be taken to get equal access for all telegraphs to railways.

42. March 13, 1874, pp. 911-12.

Editorial: This is a scathing attack on DTC's proposal to request legislation giving it equal access to railway rights of way; MT attacks the proposal because it would confiscate MTC's customers built up over time by good corporate citizenship and not by legislation; because it would leave railways open to extortion by other "telegraphers"; because it would establish a dangerous precedent for whining infant industries; and because it would prevent DTC from "rolling up its shirt sleeves and doing a job for itself."

43. May 8, 1874, p. 1133.

Note that the Dominion Government intends to use "largely the lines of the Dominion Telegraph Co." One half of Government's business is equal to \$20,000 so this should have "a favourable effect on its (DTC's) revenue".

44. May 13, 1874, p. 1166.

Government forced by B.C. to take over and work B.C. telegraph lines. These are found to be costly - maintenance and working costs far greater than revenue over the 630 odd miles with 21 offices.

45. February 19, 1875, p. 949.

DTC Co. adds 500 miles to its total pole miles and proposes to spend \$100,000 on further expansion; capital to be raised by new stock issue.

46. February 19, 1875, p. 950.  
DTC's 6th Annual Report indicates additions of 517 pole miles, 1,239 wire miles for a total of 3,102 pole miles, 5,807 wire miles and 305 offices. DTC proposes to raise a definite \$100,000 by stock issue to expand in Ontario and Quebec.
47. February 26, 1875, p. 979.  
Purkis, who was warmly thanked at 6th Annual Meeting as being largely responsible for the DTC's success, in his capacity as General Manager, resigns over differences with the DTC's secretary; M.T. finds it surprising that the resignation was "so readily accepted."
48. March 26, 1875, p. 1090.  
Editorial concerning Marine Telegraph Bill: Against monopoly (Anglo-American; Cyrus Field); support for competition, predicting that if Direct Cable Co. gets its Bill (resistance in Senate - put up by Field) rates will be further reduced from the current 50¢ per word to 25¢ and then hopes for 10¢ a word.
49. May 7, 1875, p. 1253.  
Note that Anglo-American had transferred its land line in Nova Scotia and cables in Newfoundland to W.U.
50. September 3, 1875, p. 265.  
Editorial concerning Government Management of Telegraph: U.K. telegraph system; extract from "Times" generally mourning the losses of the government enterprise and attributing them to the fact of government enterprise; Quotation - "Government management is necessarily expensive management."
51. December 17, 1875, p. 689.  
DTC note of a special meeting (15 December 1875) held to get authorization to increase capital stock by \$300,000; the new money was to be used to secure "a more immediate connection" through the Maritimes with the Direct Cable Co.,
52. December 24, 1875, p. 717.  
A further note on DTC's planned extension to the Maritimes and expansion of capital by 300,000; regular DTC stock off 10% because of rumour that the new issue will be a preference one; MT advises against preference issue and predicts success of the extension and hence recovery of the regular stock price.

53. March 10, 1876, p. 1045.  
Note remarking on change in DTC management, connection with Europe through Direct Cable Co. and dividend payment; M.T. thinks the change in management and cable connection are good and bode well for the future but dislikes the large dividend payment when the company lacks a contingency fund; DTC is doing good service by fragmenting monopoly power.
54. January 12, 1877, p. 782.  
Note that MTC held its annual meeting and report following financial statistics: Profit for the year - \$151,563, gross receipts down by \$41,000, gross expenses down by \$16,000, and contingency fund - \$210,422.
55. January 12, 1877, p. 786.  
Notes proposed merger between Direct U.S. cable and Anglo-American; M.T. is fiercely against this move, because it would recreate the monopoly which the Direct Co. was set up to combat and the public need for transoceanic communication was such that a monopoly should not be allowed to squeeze the public.
56. February 6, 1877, p. 899.  
DTC's Annual Report: 300 miles added to pole plant in Maritimes; Direct contract ratified, if Direct sells out, it must buy DTC maritime plant and pay \$150,000; small increase in DTC's traffic; dividend at 6% leaving \$3,349 in coffers; M.T. thinks DTC is strong and should improve.
57. April 13, 1877, p. 1069.  
City & District Telegraph Co., has its first annual meeting in Montreal, and changes its name to Canadian DTC. It runs a strictly local telegraph service for alarm or service messenger.
58. September 14, 1877, p. 333.  
The Telephone - an editorial welcome to it and an excellent technical description of the phone - in layman's terms; M.T. thinks the phone needs improvement at the moment before there is general or everyday use by business but anticipates that improvements will not be long in arriving; note is taken of Bell, but also of other inventors.
59. November 30, 1877, p. 648.  
M.T. reports several cases concerning Telegraph Company liability for errors in telegraphy or delivery; the transmitter is not liable because the sender and receiver must verify telegrams for themselves.

60. December 21, 1877, pp. 728-9.

"Railways and Telegraphs" - a repeat of an 1874 editorial destroying DTC's plea that the legislature enact a bill providing free access to railway rights of way for all telegraph companies, thereby abolishing "monopoly" and cheapening telegraphy; M.T. again argues that MTC has no more a monopoly than the early bird who gets the worm; MTC's exclusive rights on the Great Western, Grand Trunk and Intercolonial are contractual arrangements; DTC could do the same by offering similar or better deals to railways; but safety, commerce, and morality and law demand that free access not be granted; DTC was raising the nationalism theme as well - a foreign firm operates the telegraph in the Maritimes and therefore DTC should be given railway rights of way.

61. January 17, 1879, pp. 899-900.

MTC Annual Report: 1878 additions include pole miles 106, wire miles 594; offices 32, but messages decline by 84,027. On pooling arrangement, Sir Hugh said no regrets and is now of no special interest but went on to note that MTC valued its plant lower than DTC, that MTC had a lower working expense to revenue ratio than DTC and that as MTC had 900 officers (telegraphers) on commission, it did not seem that any real saving could appear in its labor costs by pooling; Hugh Allan, however, also said that if a pooling arrangement ever came up again it would have to be in an entirely different form; Research Comment: undoubtedly noted by E. Wiman and explains GNWT ease at taking over MTC & DTC; Hugh Allan refuses to publish shareholder list; though not on principle - suggests he is trying to hide the ownership; ~~the~~ financial statements included:

Income Statement

Asset Statement

Income:

Messages	\$436,020
Reports	31,574
Interest	11,045
Rent	6,662
	<u>485,302</u>

Poles (12,299) valued	\$737,940
at \$60 a mile	
Wire miles (20,996)	839,840
at \$40 a mile	
Offices (1,569)	196,125
at \$125	

Expenditures:

Furniture	10,521
Fuel & Lights	9,146
Battery	8,939
Repairs	44,886
Stationery	11,374
Salaries	234,552
Rent & Taxes	19,854
Misc.	3,929
	<u>343,204</u>

Real estate and misc.	298,131
Total:	<u>2,363,273</u>

Net Income	142,097
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62. February 15, 1878, pp. 963-5.

DTC 9th Annual Report: For the first time includes a financial statement; it considers the Company's position vis-à-vis Direct U.S. Cable and Atlantic and Pacific who were in breach of contracts with DTC; against D.U.S.C. DTC engaged eminent counsel "in UK to guard DTC against the "joint purse" venture of DUSC and Anglo-American Co.; Alter construction plans, because A&P enters joint purse with W.U., and hence does not need a Canadian connection in Maritimes. DTC will build from Quebec to Moncton thereby linking their Maritime network with their Canadian network; financial statistics included in report:

	<u>Gross Income</u>	<u>Working Expenses</u>	<u>Net Income</u>	<u>Paid up Capital</u>
1872	\$ 69,178	\$ 52,428	\$ 16,750	\$ 287,925
1873	106,208	85,589	20,619	370,585
1874	125,652	93,829	31,823	487,785
1875	146,397	107,879	38,514	595,268
1876	146,555	106,990	39,565	611,187
1877	177,081	124,397	52,684	611,820

For new Moncton line, capital to be increased to \$850,000; DTC has been going out and getting railway rights of way privileges particularly on new railways like: Hamilton and North Western Railway and Montreal, Ottawa & Western Railway.

63. September 20, 1868, pp. 371 and 375-6.

This article is based on a letter received by NYT from E. Wiman, and contains some general and flattering comments about telegraph progress, which are built around a set of comparative statistics as follows:

	<u>MTC</u>	<u>DTC</u>	<u>W.U.</u>	<u>TOTALS (approx.)</u>
Wire miles	20,602	8,224	4,452	30,376
Pole miles	12,193	5,090	1,818	19,101
Offices	1,387	300	140	1,827
Revenue	514,122	177,081	n.a.	750,000

Wiman's letter, appears in the same issue, and financial statistics are taken from his letter; MTC statistics are also cited:

	<u>Pole Miles</u>	<u>Wire Miles</u>	<u>Offices</u>	<u>Capital</u>	<u>Dividend</u>
1847	500	500	15	\$ 60,000	10%
1850	700	700	30	60,000	10%
1860	1,700	1,900	n.a.	370,000	9%
1870	8,449	12,400	n.a.	1,000,000	10%
1875	11,917	20,100	1,200	1,925,000	10%
1878	12,117	22,402	1,387	n.a.	n.a.

64. October 18, 1878, p. 502.  
 A report and comment on a "projected scheme" for making a common purse of MTC & DTC receipts. MT points out that pooling arrangement would decrease competition and increase earning power; that in U.S. WU & A&P did the same and experienced economy of operation in small towns etc. by closing surplus offices but over high volume routes new competitors came forth, forcing WU/A&P to lower its rates and this might be duplicated in Canada, if scheme goes through; that whatever happens, no monopoly is to be tolerated that does not pay heed to the public interest.
65. November 8, 1878, p. 603.  
 Note that DTC & MTC pooling arrangement, not yet completed.
66. December 20, 1878, pp. 775-6.  
 Note that pooling arrangement rejected "by at least one of the companies" and negotiations have been broken off; in MT's opinion this is just as well for the public.
67. January 3, 1879, p. 841.  
 Editorial concerning the Telegraph Pool: Based upon the factual arrangements known to MT and presented in the report; DTC was the initiator and had as arbitrator a Capt. Mayne of Direct US Cable- which itself had amalgamated despite government legislation (in favour of competition and hence in favour of DUSC) and claims of anti-monopoly; this is strange because DTC sought support on an anti-monopoly platform; MTC was to get 70%, DTC 30% of receipts; MTC and particularly Hugh Allan, sought to get out or get better terms and he and Gibbs (president of DTC) have bitter duel.
68. January 18, 1878, pp. 844-5 (p. 273).  
 MTC Annual Report: First meeting where reporters were allowed held on January 10; Report states receipts, expenses, assets, liabilities; talks of future prospects but vaguely; a question is asked about a proposed merger of MTC & DTC which had been rumoured and Hugh Allan denies any merger talk; Financial Statement follows:

Income Statement:

Other Statistics:

Income:

Expenses:

Messages	\$461,737	Instruments	\$ 10,472
Reports	32,741	Fuel & Light	9,439
Interest	12,553	Battery	8,875
Rents	<u>7,089</u>	Repairs to	
	514,122	lines	41,641
		Stationery	11,780
		Salaries	239,652
		Rent	13,249
		Taxes	6,384
		Misc.	<u>3,954</u>
			<u>345,450</u>

Total Assets:	\$2,355,509
Capital Stock	2,000,000
Plant Assets:	
Pole miles	
(12,193)	731,580
Wire miles	
(20,402)	816,080
Offices	
(1,537)	192,125

Net Receipts 168,671

69. February 14, 1879, pp. 1022-1024.

DTC Annual Report in 1878: Financial Statistics indicate Gross Revenue of \$169,837, a decrease of \$7,244 from 1877, Working expenses \$122,245 an increase of \$2,152 from 1877, Net revenue of \$47,592, Dividend payments at 5½% of \$35,257. Maritime unit completed with DTC only telegraph company linking Upper & Maritime Canada directly; T.N. Gibbs makes a great play concerning nationalism and no need to retransmit by "foreign" companies; long section on MTC indicating pooling merger talks and then plans for absolute amalgamation and higher share with motive being the depressed state of commerce; Gibbs claims DTC's earning decrease is a function of A&P closing down offices once it had joined W.U.. DTC has an amended charter and wishes shareholders to ratify DTC intention to have it enacted by Parliament.

February 21, 1879, pp. 1048-49.

An unfriendly four column piece, blasting DUSC for its past behaviour - a path of broken promises - and subsequent impertinence in asking for a private act to re-charter itself; of interest is the comment of M.T. on the anti-monopoly nature of the Marine Telegraphs Bill (1874). Basically M.T. accuses DUSC of promising to break the Anglo-American Co. monopoly on transoceanic Cable in very bad faith and points to the effective merger of DUSC and A.A.

June 20, 1879, p. 1566.

A note of great interest on the Corporate fortunes of MTC & DT; W.U. has just declared a stock dividend of 17% paying out the last of its treasury stock; a new competitor takes the field American Union Telegraph (Jay Gould & Tom Scott) which proposes to lease the lines of DTC; MTC stock takes a sharp fall because of this offer to DTC, but also because a Montreal bank held a lot of MTC stock which it "threw" out on the market.

July 25, 1879, p. 127.

A hard hitting attack on DTC's directors' business sense and national sensibilities; DTC in granting American Union Telegraph (Jay Gould) a 99 year lease in return for 5% per annum have lost all control over the business (cannot advance Canadian interest or even protect what is already conceded to be in the Canadian interest) and yet agree, on AUT's default, to repossess the business - with no other penalty - and without achieving the American connection DTC needs. To hand DTC over to "certain cute American" is a denial of the very name "Dominion" and a betrayal of the public who gave DTC support as augmenting Canadian convenience and thrift and hence abandons the field to the old monopolist, MTC since AUT will not behave in the Canadian interest.



73. October 10, 1879, pp. 441-2.

AUT through its lessors, DTC, has lowered the price of a telegraph from 25¢ to 20¢ between any of the DTC's offices; the next day MTC (see page 448 of MT) lowered its rates, not only in towns where MTC & DTC compete directly, but for all of its 1500 odd offices; MTC stock drops from 92 to 82. MT suspects that Jay Gould wishes to put MTC in a position where it cannot make a profit, so MTC stock will drop further and Gould can then buy it up; such a strategy could turn DTC lease into a valuable property, if Gould could gain control of MTC and merge the two; M.T. crows "I told you so" to DTC directors and suggests American control of Canadian companies, despite apparent short term advantages, is attended by long term evils.

January 2, 1880, p. 781.

A note that MTC declares a semi-annual dividend of 4% and despite decreased rate (see: M.T. 10 Oct. 70, pp. 441-2) receipts from general business increased, while newspaper revenues decreased somewhat.

January 16, 1880, pp. 840-41.

MTC's Annual Report for 1879: A large meeting in which there was strong vocal, but insignificant voting, dissent; operating increases in 1879 include: pole miles up 177, wire miles up 239, offices up 50, and messages up 41,696 for respective totals of 12,477, 21,236, 1,619, 1,724,030; a five year review of financial statistics included:

	<u>Revenue</u>	<u>Expenses</u>	<u>Net Revenue</u>
1875	\$550,493	\$373,403	\$177,089
1876	508,919	357,356	151,563
1877	514,122	345,450	169,671
1878	485,302	343,204	142,097
1879	478,435	335,573	142,861

Note that message increase was in last two months (Nov. & Dec.); revenue decrease attributable to DTC's "uncalled for and unnecessary" price reduction; income statement for 1879 included:

	<u>Revenues</u>	<u>Expenses</u>	
Messages	\$438,716	Instruments	\$10,796
	25,160	Fuel & Lights	9,488
	9,160	Battery	5,557
	<u>5,396</u>	Repairs	42,807
	478,435	Stationery	8,984
		Salaries	233,169
		Rent	13,826
		Taxes	6,713
		Misc.	<u>4,228</u>
		Net Revenues	<u>355,573</u>
			142,861

Note that pooling arrangement over, due to AUT's "purchase" of DTC with DTC being no longer Canadian; Telephone - "general use as a means of verbal telegraphic communication ... within moderate distance"; MTC has supplied 690 phones and intends to acquire District Telegraph for \$10,500; dissent over this intended purchase because revenues falling, bad management and high salaries.

76. March 12, 1880, p. 1076.

MTC applies to Parliament for an amendment to its charter to allow it to: "make arrangements for the lease, purchase, pooling of receipts, etc., with other lines"; use and develop telephone lines; purchase short lines for its North-Western business.

77. April 16, 1880, p. 1233.

A&PTC files a bill in Chancery, seeking damages from DTC for injury received from DTC's failure to perform certain duties according to the A&PTC and DTC contract of 1874; DTC's failure is due to its having leased all its plant to American UT; A&PTC, however, is in league with W.U. who is in league with MTC hence probably a nuisance action against Gould and AUTC.

78. June 4, 1880, p. 1432.

Note that AUTC's proposed rate reduction, will be matched and bettered by W.U.; nothing on Canadian end of the AUTC's business.

79. October 8, 1880, p. 392.

Note on the battle for control of W.U., between current management (President Green) and Jay Gould (President of AUTC) who it is thought now held Vanderbilt's W.U. stock; M.T. excuses this note, by pointing to AUTC's holding of DTC's lease and W.U.'s extensive connection with and interests in MTC.

80. January 28, 1881, pp. 870-71.

Large speculation in MTC stock, due to proposed merger of W.U., AUTC, and A&PT in U.S. and possible U.S. takeover of MTC; MT says any takeover will be fiercely resented and that government ownership would be preferable to American; MT mentions the financial statistics and criticizes MTC's habit of using uniform values for all offices, miles of pole and miles of wire. MT considers that absence of a source of revenue report suggests that MTC's sale of telephone interest to Bell is being hidden in current revenue and hence padding it; MT knows price Bell paid was \$75,000 with \$25,000 in stock; this, however, was never public knowledge - suggests good sources.

81. January 28, 1881, pp. 872-73.

MTC Annual Report 1880: Sir Hugh notes stock fluctuations, debt freeness of MTC, increase in business and sale of telephone to Bell; total pole miles 12,703, wire miles 21,568, offices 1,674, and messages 2,112,101. Financial totals for 1880: gross revenue \$550,840,

expenses \$358,676 for net revenue of \$192,163; contingency fund increased to \$166,010. On telephone Sir Hugh said little, except that to run a phone operation would need a separate organization and in view of Bell already being so organized he thought it pointless to compete with it (Bell) nor could one and make a profit; Researcher's Note: it seems Sir Hugh is padding MTC's revenue so if he has to unload he can sell high.

82. February 11, 1881, p. 930.

Note is taken of the fusion of W.U., AUTC and A&PTC into W.U. pure and simple; M.T. notes some hostility among businessmen, who are setting up competing lines over trunk routes.

83. March 25, 1881, p. 1120.

A note that Gulf of St. Lawrence telegraph system is complete and the weather, ice etc., warning system should be of great value to navigation.

84. May 13, 1881, p. 1321.

The thrust of the article is that Canada is better served by the telegraph and telephone than Britain in terms of price and per capita facilities. Moreover, the Canadian business is in private hands whereas UK business is in G.P.O.'s hands and is monopolistic; therefore, free enterprise is better than government ownership and we should resist any and every effort leading thereto.

85. June 3, 1881, pp. 1414-15.

Mainly a history of past efforts to successfully lay wires underground; the rationale behind the article appears to be the increasing maintenance costs of the telegraph companies in repairing their outside plant and the overcrowding of wires in the cities; some of the solutions advanced are briefly considered (for technical note see MT 27 May 1881, p. 1390). It is a strong editorial to see in the 19th century, where "progress" never stopped for want of technology derived from man's genius.

86. June 17, 1881, pp. 1478-9.

This article seeks to do two things, explain the rationale for consolidation, and then expose the monopoly "bug bear" that such a consolidation may bring forth; the explanation is two fold: (a) first while the public wants cheap service capitalists want a "fair" return, so when competition led to decreased rates, returns fell and the solution was to amalgamate (and raise the rates back up to 25¢); (b) when competition and low returns forced DTC to lease to AUT Canadian competition still made sense since MTC was linked to W.U. but when the American "parents" merged and became W.U., W.U. was in the position of owning the competitor of at least an ally if not a subsidiary; hence, DTC & MTC should merge but to give W.U. its fair return GNWTC is set up to takeover both. The

monopoly "bug bear" is laid to rest by the simple argument that given freedom of entry (MT thinks freedom to incorporate equals freedom to enter) profit opportunities will be exploited by new competitors if monopolists don't act in public interest; hence a monopoly is not a monopoly. W.U. to guarantee MTC 8%, DTC 6% and both to operate separately under own names; note MTC special meeting July 16, 1881.

87. July 15, 1881, p. 67.

Noting that the time for MTC and DTC to decide on amalgamation has come; provided no price increase is imposed then there is no objection to such amalgamation; 25¢ is accepted as the price of ten words to anywhere in the Dominion - not the 20¢ of competitive days.

88. July 22, 1881, p. 100.

A note recording some comments from MTC's special meeting on July 16, to consider amalgamation; basically the position is that an injunction has been brought against MTC to prevent the amalgamation; MTC admits that it cannot lease to GNWTC unless every MTC shareholder concurs; there is some doubt that GNWTC has the power to operate a monopoly.

89. August 19, 1881, p. 212.

Noting the injunction against MTC was withdrawn that 23,204 shares were for amalgamation 1,081 against; MT thinks that Mr. Wiman as president guarantees a management of energy and spirit; MT notes the GNWTC will stick to 25¢ for 10 words to the public and 25¢ for 100 to the press. MT also expects that the new company unhampered by crippling competition, will undertake the construction of many long awaited extensions and renewals.

90. August 26, 1881, p. 243.

A new suit filed against MTC by a stockbroker seeking damages for lost business but not a chance of success; amalgamation will go ahead; note that recent strength in DTC stock is attributable to W.U. guaranteeing 6% per annum, instead of 5% under the lease to AUT.

91. September 2, 1881, p. 275.

Note that lease from MTC and DTC to GNWTC is complete. Rates 25¢ for 10, 15¢ for 10 under 12-miles, nights 25¢ for 25 words. Rationalization still to be worked out. GNWTC officers: Erastus Wiman, New York (Director of W.U. and Wiman & Dunn NYC) O.S. Wood, Montreal (former superintendant of MTC), Frederick Roper, Toronto (former secretary of DTC & auditor AUT). Other directors: Wm. McDougall, Ottawa, Allan Brown, Hamilton, Wm. Gooderham, Toronto (DTC), James Hedley, Toronto, Richard Tuller, Winnipeg, D.H. Bates, N.Y., A.S. Irving, Toronto; note to correspondents ridiculing idea of running a competing line from Halifax to NYC (page 275). Advertisement for a business college which explains

it does not teach telegraphy because of a long time excess supply of telegraphers and because this surplus is about to be increased due to amalgamation.

92. September 23, 1881, pp. 368-9.

A note that consolidation is a difficult and unpleasant task since it involves firing former staff but that under Mr. Dwight (MTC manager) it can be expected that the process will be done both smoothly and humanely etc.; further note that yet another W.U. competitor has formed in the U.S. - being Mutual Union TC - and that it seeks to develop in Canada too; however, apart from provisional directors and appointment of Hosmer (DTC manager) as manager nothing is being done in Canada.

93. November 11, 1881, p. 574.

Note on the Mutual Telegraph's construction contract which reputedly offered \$1,100 per mile or \$14,000,000 for 13,000 miles of line in the contract. Most new wire cost \$300 - 400 to build; Mr. Erastus Wiman (of W.U.), fearing the extortionary purpose of this contract arranged for it to be "procured" and exposed as such; MUT could build, run briefly at low rates and then merge with W.U. with W.U. being forced to pay \$14,000,000 (in stock) for MUT and promoters become corresponding rich. The scheme only works if promoter and builder are in collusion if not the same people.

94. December 2, 1881, p. 668.

GNWTC: Wm. Gooderham is made Chairman, with Toronto as head office and Montreal as organization and construction headquarters; GNWTC builds 450 new miles along new railways and into "remote districts" and had rebuilt "many" old lines; GNWTC is using quadruplex over its main trunk lines and doing same business at 25¢ as MTC and DTC did at 20¢; capital of \$500,000 (par value \$100) with 4,025 shares Canadian owned and 975 U.S. owned (this pleases M.T.).

95. March 10, 1882, pp. 1109-1110.

Under a theme of "my god everything is rush, rush, rush in our modern bustling continent" M.T. briefly reviews technical improvements (duplex and quadruplex drawing most attention) and comparative continental development of the telegraph (Asia, Africa, Europe, America). MT still impressed by the fact that Canada has the lowest population to telegraph office ratio in the world; MT takes this as evidence of excellent service, not under-population.

96. March 17, 1882, p. 1147.

Note that GNWTC and WU are initiating a "money order" service (wire money) and that GNWTC is effecting a junction in the North West with the Government telegraph lines and to extend its service area.

97. April 14, 1882, p. 1264.

Editorial concerning Cheap Telegraphy: This piece responds to two current proposals to provide cheaper, more efficient telegraphy in Canada by (a) a co-operative venture or (b) by governmentalization; M.T. to (a) says if DTC and MTC found the 20¢ rate unprofitable, even disastrous, what is cheaper about a co-op venture that would make 20¢ a viable rate. MT after listing the inputs concludes the project of the Canadian Cooperative TC is visionary (CCTC was exclusively in Wellington County, Ontario). With regard to (b) MT states that F.N. Gisborne's proposal that Government could run entire system for 12½¢ is equally visionary even though Gisborne is Supervisor of Government telegraph; he doesn't know what he is talking about. MT quotes a letter from Wm. Cassils (MTC - Quebec manager) which ironically says that had F.N. Gisborne been around the Montreal-Quebec lines of both MTC and BNAT Co. in 1854-6 (which he was - Gisborne managed BNATC) he would remember that BNATC initiated a 12½¢ rate to gain business from MTC over the Quebec route but was forced to sell out to MTC at less than cost; MTC only survived because it charged 25¢ over its other lines.

98. May 19, 1882, pp. 1417-18.

Editorial concerning Telegraph Legislation: A report of MTC's successful effort to get an Act empowering it to lease its operation to GNWTC; MTC needed this since its original charter made such a power (to lease) doubtful and this doubt was the subject of serious litigation. The Act also set 25¢ as the maximum rate allowable in Canada for points between Detroit and Sackville, N.B.; the charter to MTC, in effect was to benefit of GNWTC, but did not cover W.U. lines in Maritimes, although rates over DTC into Maritimes from Canada could not exceed 30¢; M.T. rejoices that a proposal in Committee to nationalize telegraph was defeated but sadly notes that government imposition of a price ceiling (at the going rate) was possibly unfair to telegraphers, and would certainly not encourage new entrants into telegraph field. Hence destroying MT's argument that freedom of entry meant no exploitation.

99. June 23, 1882, p. 1570.

Note on GNWTC's excellent election coverage; R.F. Easson, Press Superintendent of GNWTC, is to be congratulated. (R.F. Easson wrote the history of telegraphy in the first telegraph statistics publication).

100. August 4, 1882, p. 121.

Note on a New Cable project "European, Canadian, American and Asiatic Cable Co." proposing such a cable and a rate of 9d. (current rates were around 4-7 shillings) a word; M.T. in quoting Sandford Fleming's inability to find any evidence of contracts this Company claimed to hold, suggests it is a speculative venture designed to squeeze extant companies; it seems F.N. Gisborne is involved in the company despite his government position.

101. December 1, 1882, pp. 602-3.

A report on GNWT's rebuilding and inspection during the past year (1882). Duplex and quadruplex installations are noted, as is a cautious proposal to build or lay a Lake Superior cable.

102. December 1, 1882, pp. 605-6.

GNWTC 2nd Annual Meeting: This report is without financial or plant statistics; it concerns itself mainly with reporting maintenance and upgrading activities; it also reports on some investment activities that might be undertaken - Superior Cable, acquiring the government lines to Edmonton (see Sandford Fleming's report on CPR surveys), and building landlines along north shore of Superior; GNWT claims better lines and service than possible under old régime of MTC and DTC and attributes need for upgrading to prior state of competition which allowed plant to depreciate to pay dividends. GNWT claims it met its obligations to MTC and DTC 6%; GNWT claims it is to public advantage that it obtain the government built telegraph to Edmonton and hence expects a good outcome in the current negotiations. Communications, by land line north of Superior is to be undertaken, though population is sparse and local business unprofitable; Superior Cable possible too. New contracts for connection and reciprocal business entered with W.U. Directors foresee strong US competition for business of the North West and hence will make economic decisions not national ones in regard to Superior and Edmonton proposals.

103. February 9, 1883, p. 882.

Two notes: one argues no government is as responsive as private interests to private demands; another argues that private monopoly is better than public monopoly, since the latter is never subject to the discipline or chiding of competition (free entry).

104. July 20, 1883, p. 68.

Note that while demands are for shorter hours and more pay, the MT thinks the Canadian operators have had it better than those in US.; hence MT finds it ludicrous that Canadian telegraphers who have what the Americans lack, should go out on strike at the behest of those Americans.

105. July 27, 1883, p. 99.

Same comment, Canadian strike not warranted except to prevent operative transfers to US; note that brotherhood is in weak position with oversupply of willing novices and scarce and exhaustible strike funds.

106. August 3, 1883, p. 127.

Note no developments in strike; Quotation: "it has failed though the brotherhood refuses to admit as much."

107. August 17, 1883, p. 179.

Long article on the Knights of Labour and their disruptive goals based on and generally illustrated by telegraphers strike; repeats that diminishing strike funds, ample supply of new labour, arbitrary Union, with no power, suggests failure.

108. August 24, 1883, p. 200.

Epitaph of the strike repeating MT's earlier points and the same comments on the future of unionism (it will continue) and on its effects (mediocrity - equal wages leads to equal work, so the craftsman falls to the level of the journeyman or apprentice).

109. September 14, 1883, p. 296.

Note that on 1 Sept. 1883, CPR opened a commercial telegraph service: Winnipeg to beyond Swift Current 50¢, Winnipeg up to Swift Current, 40¢, within Manitoba 25¢, serving Winnipeg, Brandon, Portage la Prairie, Emerson and all "important stations on the railway". GNWT is competing in Manitoba, Brandon, Emerson, Portage la Prairie and plans further extension; CPR is building through Rockies to connect with Government Telegraph there in B.C. and with W.U.

110. November 2, 1883, p. 492.

New cable to be laid, it is much lighter than earlier ones to connect with Postal Telegraph; note on Government Telegraph Service in UK reporting Jevon's account of the difference between Postal and telegraphic service; it costs almost the same to carry 100 letters as it does one whereas, each telegraph sent costs the same so volume will not help to increase profits.

111. January 11, 1884, p. 772.

MTC Annual Meeting: Reports revenue \$319,243, Expenses \$81,338 for a net Revenue of \$237,905. Total asset \$2,152,823; Andrew Allan has succeeded Sir Hugh as Chairman and President.

112. February 8, 1884, p. 881.

The old eulogy is dragged out again, Canada has 45,728 miles of wire and 2,250 offices with a population of 3.5 million which means 1 office for every 1,800 people (in US 1 for every 3,700); article follows publication of Department of Public Works Blue Book for 1883.

113. February 15, 1884, p. 918.

DTC Annual Report: lessee (Western Union) has paid 6% as required to DTC; Gibbs (President) dies, Swinyard is President but Erastus Wiman takes Gibbs' place on Board. Stock price is down, but Swinyard cannot explain since 6% is guaranteed; researchers' note: he might have looked at other interest or dividend rates - albeit there was a depression on.



114. February 29, 1884, p. 977.  
Editorial concerning Canadian Government Telegraph Lines: gives details of location and operation/operator of government lines; CPR operates government line from Port Arthur to Winnipeg on which section the Government had spent about 60% of its entire telegraph expenditure. (This would indicate that GNWT did not get the Government lines to Edmonton as it hoped. Government still operates lines from Winnipeg to Edmonton itself); GNWT operates lines for Government on both sides of Lower St. Lawrence. W.U. operates Government lines in Nova Scotia; throughout Government system operating expenses are larger than revenue by varying amounts.
115. May 2, 1884, p. 1233.  
Government system on St. Lawrence falters as government lets GNWT contract lapse; Montreal agitates for return of shipping and whether telegraph service.
116. July 25, 1884, pp. 98-99.  
Long article on emergence of Postal Telegraph, M.T. notes this is the strongest to do battle with W.U. yet to appear; Quotes Wiman on probable success of P.T. but Wiman is a W.U. director. Note on telephone and emergence of competitors to Bell; M.T. notes (it must read the ads Bell puts in M.T.) that it has seriously misjudged Bell if they fail to prosecute for infringement.
117. September 19, 1884, p. 324.  
GNWTC Annual Meeting: nothing much except that lines in good order and pick up in general business activity led to "perceptible" improvement in company revenues in last two months; Wiman re-elected president.
118. November 28, 1884, p. 611.  
Yet another eulogy to the extensive Canadian Telegraph plant and the old index number of people per office is trotted out to show Canada leads the world in telegraphy.
119. January 9, 1885, p. 779.  
MTC Annual Report: total assets do not change; GNWT has paid the required 8%; built 240 new miles of pole plant, and maintained lines in best condition they have ever been in.
120. February 13, 1885, pp. 290-21 (cf 915 MF comment).  
DTC Annual Report: The majority of the report of this non-operating company is given over to the exposure and explanation of the terms of its lease to: first, American Union TC as of June 12, 1879 and second, by assignment from AUT to W.U. dated July 12, 1881 and third, by sub-lease from W.U. to GNWTC on Aug. 6, 1884 (97 years). Note the sub-lease to GNWT only involved DTC's Ontario and Quebec lines with lines in Maritimes being retained by W.U. which gave W.U. access to all Cables to Europe and control of landings; W.U. had bought (at depressed prices) 5,626 shares in

DTC; Gen. Eckert (Vice-President of WU) has joined Wiman on DTC Board; DTC stock moves up strongly after this meeting.

121. September 18, 1885, p. 324.

GNWTC Annual Meeting: Gross revenue (July 84 - June 85) less than year earlier and company attributes this to general business decline; Telegraph is claimed to be excellent index of prosperity and business activity; GNWTC built some extensions along new railways; Northern Pacific Junction (Gravenhurst to Callandar); St. John's Railway (P.Q.) but 1884-5 operating expenses less than year earlier.

122. January 29, 1886, pp. 862-3.

MTC Annual Meeting: Stock is now being held more widely; price has steadily, though slowly been moving up from 110 to 130; GNWT has paid quarterly dividends totaling 8%; GNWT has added 172 miles to MTC line.

123. February 12, 1886, p. 920.

DTC Annual Meeting: nothing to report; GNWT paid via W.U. as required.

124. June 18, 1886, p. 1438.

Note disproving a rumour that W.U. was trying to get CPR to take over its lease for MTC and DTC; M.T. notes that while it is known CPR authorities "have large views as to its telegraph system in the future" they are not so stupid as to pay a higher price for a losing proposition than the reputed seller originally paid.

125. August 6, 1886, p. 154.

Announcement that probably by September CPR will enter telegraph service; CP connects to Postal in US.

126. September 10, 1886, p. 300.

A report of CPRT and Postal's exclusive inter-connection contract; a description of their proposed route; this alternative system welcomed by the public, if not by W.U. and GNWT; CPR initially to build from Quebec (City) to Vancouver and push quickly ahead into Maritimes.

127. September 17, 1886, pp. 328-9.

CPR opens (on Monday 13 Sept. 86) its commercial telegraph service; it has 140 offices in Ontario, 2 in Quebec, 90 in Manitoba, 100 in N.W. Territories and 34 in B.C. for a total of 366 offices. CPR's rates are generally equal to those established by DTC and MTC and now charged by GNWT: 25¢ in Ontario and Quebec, 75¢ from Ontario to Manitoba, \$1.00 from Ontario to Assiniboia, and \$1.25 to British Columbia; CPR will compete with GNWT and both the Government lines in the West to some extent, "but only if it gives good service will it attract customers, etc."

128. October 8, 1886, p. 417.  
GNWT Annual Meeting: Company claims to have built 160 odd miles of new plant (but it is over same area of routes over which it built last year); Company then notes CPR's inauguration of CPTC and indicates that CPR had bought many railways over or with which MTC or DTC had exclusive telegraph rights GNWT wants MTC to fight CPTC & CPR over this issue, since CPT was now running the telegraph over those newly acquired railways. (Canada Central; Prescott & Ottawa; Credit Valley; South Eastern).
129. January 31, 1887, p. 841.  
A two column comment, on GNWTC's delayed rental payment to MTC for the last quarter of 1886; the delay was part of GNWTC's effort to get MTC to take action against CPR for the latter's violation of MTC's contract for exclusive telegraphy over the rights of way of Credit Valley, South Eastern and Canada Central railways, recently bought by CPR and over which CPT was doing public business; CPR's inauguration of telegraph service reduces GNWTC's income hence threatening its ability to pay MTC and DTC. An adverse comment on E. Wiman's (President of GNWTC) public opinion that CPR was "unbusiness" like in seeking to obtain all Canadian wires; MT heralds competition and predicts disaster for telegraph revenue.
130. February 25, 1887, p. 986.  
DTC Annual Report: 6% fully paid by W.U., DTC's lessee; W.U. ownership of DTC exceeds 25% as it increased its shareholding from 5,626 to 5,766; unlike MTC relations with lessee or sub-lessee, DTC's relations with both W.U. and GNWT are "most cordial."
131. January 20, 1888, p. 907.  
MTC Annual Meeting: property in good shape and well insured; GNWT has added plant to the tune of \$166,000; 8% has been duly paid MTC and distributed.
132. February 24, 1888, p. 1058.  
DTC Annual Report: 6% duly paid by W.U. property in good shape.
133. May 4, 1888, p. 1366.  
Report from "Electrical World" on the progress and profit of American Bell.
134. June 8, 1888, p. 1515.  
A report and comment upon the long distance performance of both mediums of transmission - voice and record - a ten minute test between N.Y. and Boston, telephone 346 words, telegraph 330; MT's conclusion is that telegraph more reliable in bad weather and coming within 4½% of telephone's achievement is a great triumph.

135. December 7, 1888, p. 648.

Bell has a contract with Canadian Telephone Co. (Electric Dispatch Co.) saying that Bell will not go into or divert the business (messengers) pursued by Electric Dispatch; Bell gave GNWT a phone (at least installed one for cash) because GNWT was setting up a messenger service; E.D. seeks to prevent GNWT from competing by requiring Bell to monitor all calls to GNWT; Judge says no; business between subscribers is not subject to Bell's control.

136. December 28, 1888, p. 735.

Report of MTC and GNWTC's dispute over MTC's responsibility to obtain and maintain "quiet possession" of what it leased to GNWTC (e.g. exclusive telegraphy rights on certain railways); MTC took no action to enforce its rights against CPR so GNWTC now seeks to reduce the rent it pays from 8% to 6% since the property it is leasing has been lessened (This right is guaranteed in Civil Law of Quebec - where lessor fails to provide the promised possession, lessee has redness of decreasing rent).

137. February 15, 1889, pp. 934-5.

DTC Annual Meeting: Swinyard, President of DTC, reports that rumours of a GNWTC or W.U. approach to DTC asking for a reduced rental are unfounded; W.U. and DTC are enjoying the "most cordial" relation, in evidence of which Swinyard reveals that W.U.'s stock in DTC was given to him as proxy to vote as he saw fit; dividend paid; property in good shape.

138. June 28, 1889, p. 1519.

W.U. had contract with New Brunswick Railway granting the former exclusive telegraph rights over latter's right of way; CPR sought to put its telegraph facilities on same line. W.U. refused, CPR went right ahead; W.U. seeks injunction preventing CPR from breaking the exclusivity of W.U.'s rights. CPR argues foreign corporation has no right to property in Canada but W.U. wins and injunction is granted. See also (MT, 5 Oct. 88, p. 361).

139. September 27, 1889, p. 379.

GNWTC Annual Report: Nothing except suit against MTC continues.

140. February 14, 1890, p. 1000.

DTC Annual Report: Dividend paid over by W.U.; property inspected by President and found to be in excellent condition.

141. May 23, 1890. p. 1452.  
A report and comment on GNWTC's Winnipeg manager's proposal that GNWTC should establish offices in B.C. and compete with CPR. He proposes that east-west traffic be carried south first and then east or west on W.U. lines; M.T. despite its nationalism, welcomes the competition which will keep CPR honest.
142. January 9, 1891, p. 843.  
MTC won the suit against GNWTC (on appeal) and GNWTC owes MTC \$70,000 (which is in trust) for 2% on back dividends.
143. February 13, 1891, p. 1003.  
DTC Annual Report (22nd): Dividend paid as per the lease by W.U.; lines in good shape.
144. January 22, 1892, p. 877.  
MTC Annual Report: Dividend now being paid at full 8% after Supreme Court of Canada dismissed GNWTC's appeal from Quebec Superior Court; Company property in excellent condition.
145. February 19, 1892, p. 1001.  
DTC Annual Report: 6% paid by W.U. as per lease; note Charles A. Tinker, and A.G. Ramsay are on DTC Board; they also appear on Board of GNWTC.
146. March 11, 1892, p. 1096.  
Announcing Wiman's resignation as President of GNWTC (he had held it since 1881, when GNWT was formed) because of differences with other directors and his bullying of MTC both privately and publicly. Also for his political views (Wiman was a commercial unionist and expected great profits from GNWTC if commercial union between Canada & U.S. went ahead; M.T. thinks Wiman had been unnecessarily belligerent and hence alienated business patronage from GNWTC.
147. March 18, 1892, p. 1128.  
H.P. Dwight named president to succeed Wiman at head of GNWTC; MT thinks this is a good thing being an admirer of Mr. Dwight, and believing him to be the "father of the telegraph in Canada"; Dwight came to Canada in 1847 and joined MTC at that time.
148. April 29, 1892, p. 1312.  
Note on proposal to extend Halifax-Bermuda Cable directly to the West Indies providing an all red route to W.I. and enhancing Canadian-W.I. trade possibilities.

149. December 22, 1892, p. 730.  
 Bytown to Montreal line is said to be owned by Dodge, Dickenson & Co. by the author "M" - who is speaking of 1855; he says it was a private line (e.g. not a commercial venture like MTC); most of the article is reminiscence of "M's" memorable moments of employment on MTC. "Sebastopol", Civil War gold speculation Lincoln's death, and Atlantic Cable; "M" is a Mr. Mackenzie. Note that after the middle 1850's O.S. Wood (MTC manager) found that the press of public business was such that separate wires were strung for railway and commercial business.

150. January 13, 1893, p. 824.  
 MTC Annual Report: Effort by two shareholders to have MTC's surplus distributed was defeated; MTC self-congratulatory on defeating GNWT's effort to reduce rent paid.

151. February 10, 1893, pp. 949-50.  
 DTC Annual Meeting: Thomas Swinyard gives brief review of DTC's history; 13 July 68 set up, 10 Aug. 68 original profiteering directors replaced, July 1879 lease to American Union (10,051 miles, 550 offices) at 5%, 1881 W.U. & AUT merge and W.U. assumes lease at 6%, (W.U. keeps Maritime lines, GNWTC gets Quebec and Ontario); changed Annual Meeting to 1st Wed. in July.

152. December 22, 1893, pp. 771-73.  
 Stories about the co-operation of telegraphers and shipping people to get the last news to market, before the ship sails into port; MTC sets up Farther Point News Station and Farther Point dominates the story, written by Robt. Easson.

153. January 19, 1894, p. 902.  
 MTC Annual Meeting: Nothing to note.

154. August 31, 1894, pp. 278-82.  
 "How Poushie laid the Cable" and "Early Telegraph in the West" by R. Easson: Reminiscences of Erza Cornell, James Poushie (MTC lineman) in the Western States and foibles of early telegraphy.

155. September 14, 1894, p. 351.  
 Some statistics concerning Post Office:

	<u>1873</u>	<u>1883</u>	<u>1893</u>	<u>1894</u>
Offices	4,418	6,395	8,346	8,664
Miles of postal route	n.a.	44,643	61,832	n.a.
Number of letters (,000)	n.a.	62,800	114,267	n.a.

156. December 21, 1894, pp. 802-806.  
"Stage Coaching, Telegraph, etc. in the Early Fifties" by R. Easson: Reminiscences of little interest with respect to the Telegraph per se.
157. April 12, 1895, p. 1325.  
On the occasion of a review by Mr. Arnold Morley (Postmaster General, U.K.) of British System. M.T., avoiding private vs public enterprise arguments eulogises the growth and efficiency of the UK Telegraph system; office, instruments and wire miles grow as price falls from average price of 25.2d to 7 3/4d. per 15 words.
158. July 19, 1894, p. 82.  
DTC Annual Report: W.U. has affirmed that it will pay off the 60,000 pounds of bonded debt in January '96 as provided for in the lease to AUT, subsequently assumed by W.U.
159. October 11, 1895, pp. 471-72.  
"Electric Experiences" report of meeting of Canadian Electrical Assoc. and paper on Telegraph in Canada given by H.P. Dwight's son: a dull synopsis of a chronological paper on Telegraph history - nothing concerning telephone competition or even telegraph competition; N.B. Electric T.C. Calais to St. John, Jan. 1849; St. John to Amherst N.S. 1850; Grand Trunk Railway forced Grand Trunk T.C. to change its name to International T.C.; G.T.T.C. began 1852 from Buffalo to Quebec succeeded by Provincial TC Buffalo & Quebec.
160. January 17, 1896, p. 922.  
MTC Annual Report: nothing worth noting.
161. August 21, 1896, p. 245.  
DTC Annual Report: W.U. by its lease of 11 Feb. 1881 and AUT's lease of June 12, 1879 pays off debt of 60,000 pounds as required.
162. September 18, 1896, p. 410.  
Note award to Mr. "X" for inventing a telegraph instrument capable of sending and receiving 1,000 to 2,000 words per minute; invention in Russia of device allowing telephony up to 1000 miles without noticeable depreciation of volume or tonal quality.
163. October 2, 1896, p. 458.  
Report of CPR Railway telegraphers strike but no reason given for dispute; M.T. suggest that CPT operators be employed to avoid "commercial and physical disaster."

164. January 22, 1897, p. 981.  
MTC Annual Report: nothing of note; 8% paid with respect to 17 Aug. 1881 MTC and W.U. agreement for lease; W.U. paid 1st dividend in Oct. 81.
165. November 5, 1897, p. 600.  
A note of complaints made to Van Horne by B.C. residents of bad service; MP notes that while other routes than the CPT exist they are even less adequate; Van Horne promises new lines and cables; route to Yukon - not through the Caribou MT thinks, but Hosmer of CPR is inspecting possible routes. (See also MT, 19 Nov. 97, p. 659); CPT to use route surveyed by George Kennan in 1865 for overland route; CPT will complete the line by the end of 1898.
166. December 31, 1897, pp. 861-2.  
Hosmer's (CPT Western Superintendent) claims that CPT will build telegraph to Dawson, Yukon (for gold rush) sends M.T. running for its copy of Reid so it can tell the story of the earlier effort (1865-66) to put a telegraph through the B.C. interior to Alaska.
167. December 31, 1897, pp. 864-5 and see 830 too.  
Testimonial dinner for Mr. H.P. Dwight on completion of his 50th year in Canadian telegraphy; included in this report is a series of reminiscences of Robert Easson covering his early career and its connections with Mr. Dwight's - very flowery and flattering; Dwight went from General Manager to President of GNWT; Easson to Superintendent of Press room.
168. July 22, 1898, p. 117.  
Note that Rocky Mountain Postal T.C. sold to Postal T.C. itself and hence connects to and connects with CPT; GNWT and W.U. are extending their lines in B.C. to compete with CPT (and connect with the East through W.U. in the U.S.); GNWT opens 1st office in Victoria.
169. September 8, 1899, pp. 305-6.  
Yet another tale of the perils of exploration with regard to W.U. and Collins effort to build an overland telegraph to Europe through B.C.; nothing very much more than adventure.