

THE WELAND CANAL AND CANADIAN DEVELOPMENT

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AND
CANADIAN DEVELOPMENT

By

CARL FRANK PATRICK MEANEY, B.A.

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AUTHOR: Carl Frank Patrick Meaney, B.A. (McMaster University)

SUPERVISOR: Dr. Cyril Levitt

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ABSTRACT

A study of the Welland Canal Company in the years 1823 to 1833, and its implications for Canadian development. The role of the entrepreneur is emphasized, and this, it is argued, is the major force in economic development. The ethnic and geographic origin of the workers is examined, along with the conditions of work and the ways in which they are controlled. The division between industrial and financial capital that exists in Canadian today is, it is argued, one of the by-products of the way in which the Welland Canal was organized and financed.

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Dr. Cyril Levitt, who has been my thesis advisor, has put up with me for the last three years as an undergraduate, and then graduate student. Any sociological insight which I may display owes a great deal to him; any failing is, of course, my own.

Lastly, I wish to thank my father, the late Patrick James Meaney, who first suggested this project many years ago.

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INTRODUCTION

The events that took place during the building of the Welland Canal are 150 years in our past. When construction started, the Great Reform Bill of England had not yet been passed, and Upper Canada had only been settled for about forty years.

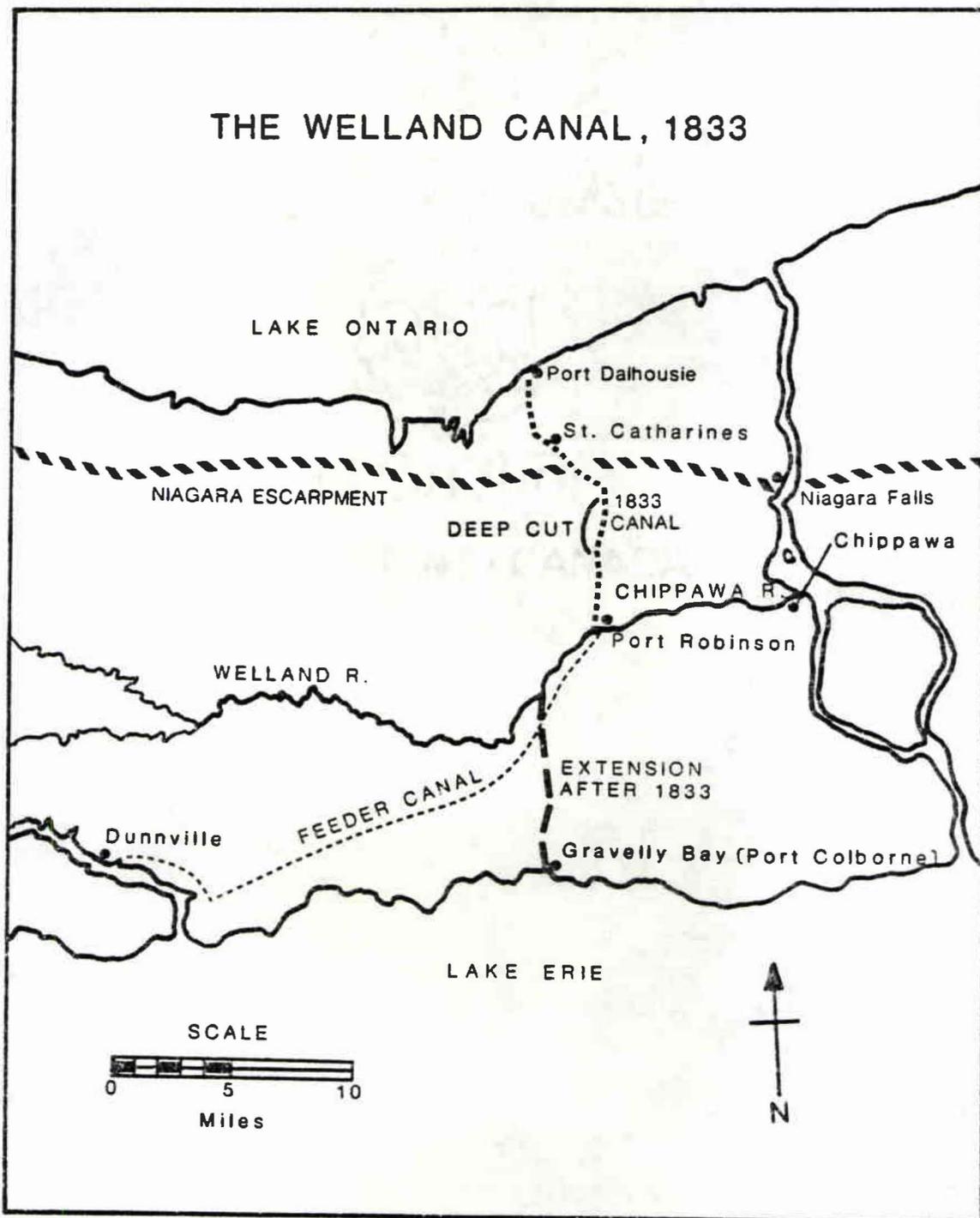
Many of the inhabitants of Upper Canada were United Empire Loyalists, who had fled from the American Revolution. It was only ten years ago that the War of 1812 had ended, and a great deal of anti-American feeling still existed. The "family compact" was the ruling clique, monopolizing the council that advised the Lieutenant-Governor of Upper Canada.

The family compact would be allied with the Welland Canal Company, thus earning the Company the enmity of William Lyon Mackenzie. Mackenzie would make a number of charges against the Company which led to an investigation by the legislature. The Third Report from the Select Committee on the Welland Canal (the "Third Report") is the report of that investigation. It is one of the primary sources for this thesis, along with the "Farmer's Journal and Welland Canal Intelligencer", (FJ & WCI), a pro-Canal newspaper.

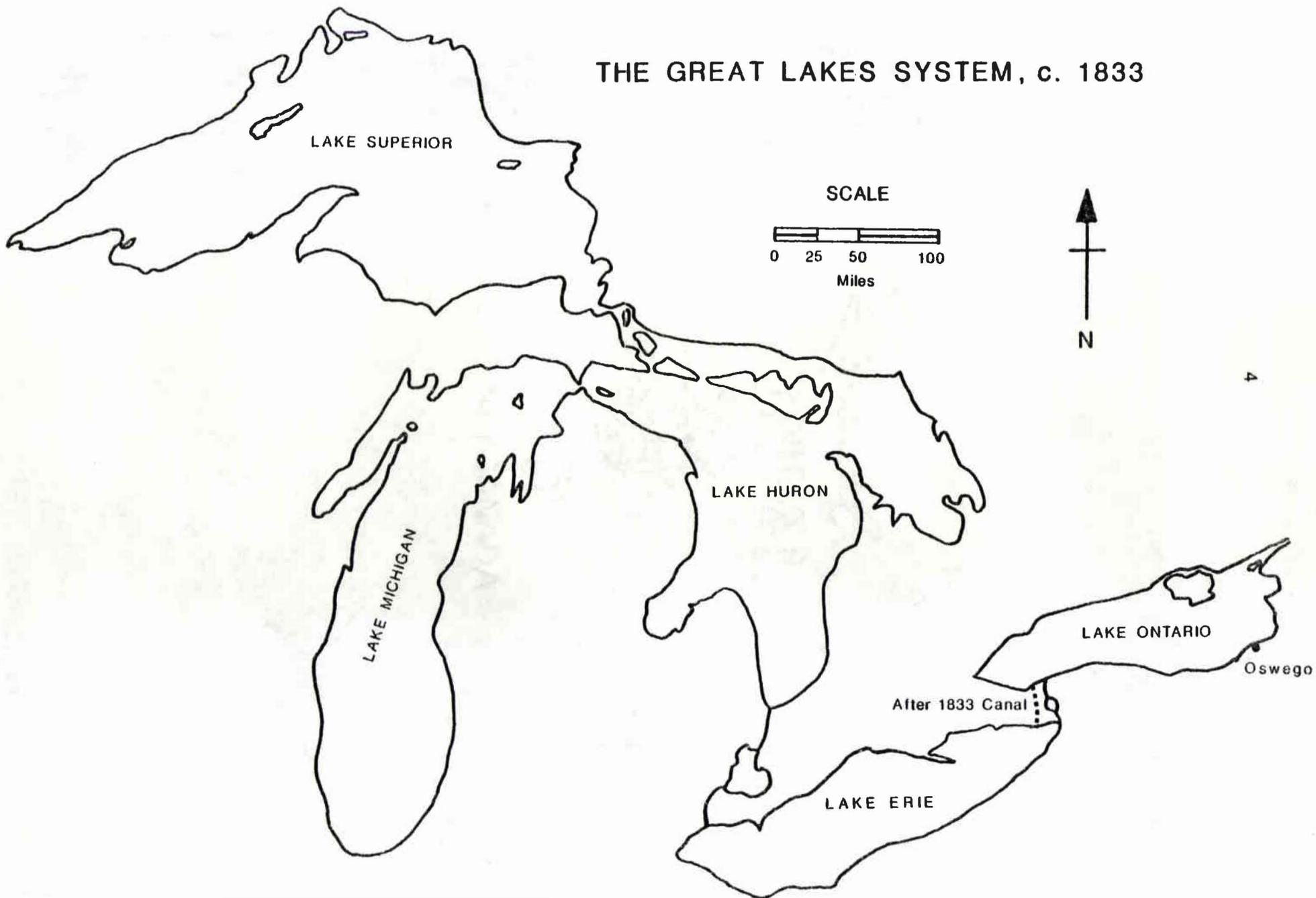
In 1824, the Erie Canal had been completed in New York State, diverting the trade of the west to New York. The Niagara Peninsula of Upper Canada had an economic waterway, the Great Lakes, on either side of it, but communication was blocked by the fault known as the Niagara Escarpment, or the Mountain. The Niagara River, when it reaches this fault, plunges down in a giant waterfall-Niagara Falls.

In an attempt to by-pass these falls and the rapids associated with them, the Welland Canal Company would successfully attempt to build a canal from Lake Ontario to Lake Erie. That undertaking is examined in this thesis.

THE WELLAND CANAL, 1833



THE GREAT LAKES SYSTEM, c. 1833



CHAPTER ONE
ENTREPRENEURSHIP

This thesis is concerned with the construction of the Welland Canal, which took place from 1823 to 1833 in Upper Canada. Obviously, it is thus concerned with history. The labourers, who provided one of the focii of this study, are not "leading characters" in history, so to that extent, this an essay in social history. Since the economic changes that take place in the area of the Welland Canal are part of the study, it may also be characterized as economic history. It is in fact, an attempt at an interdisciplinary study, using the methods of history and economic history in conjunction with the analytic techniques of sociology.

This means that, rather than describe the events as if they were in the process of some pre-determined unfolding, we will examine why particular events took place. With the labourers, for instance, we will examine not only the conditions under which they lived, but how workers who have never been employed for wages are controlled by Oliver Phelps. It was an empirical problem that was solved by trial and error, but those solutions may have universal validity.

Another question, and the central focus of this essay, is how and why development takes place. Harold Innis, in his pioneering studies of Canadian economic history,

(i.e. Innis, 1954, 1970, etc.) has focused on fish, fur, etc.:- the staples approach. He argues that Canada has developed into its present form because of a reliance on the export of raw materials. Innis says, for instance, "In a region with the extensive waterways which characterize the northern part of North America economic development is powerfully directed toward concentration on staples for export to more highly industrialized regions" (Innis, 1954, p. lx). While this may be true, the development of Newfoundland and Nova Scotia was very different from that of New England, while both had access to the greatest waterway of all, the ocean. Since Innis was writing about the cod fisheries, which were equally available to both the New England states and the eastern provinces, how can we explain the divergence in development paths? (Other developmental forces have, of course, been traced by economic historians studying other countries, but the one most often applied to Canada has been the staples approach.) Innis says of Canada:

...energy in the colony was drawn into the production of the staple commodity both directly and indirectly. Population was involved directly in the production of the staple and indirectly in the production of facilities promoting production. Agriculture, industry, transportation, trade, finance, and governmental activities tend to become subordinate to the production of the staple for a more highly specialized manufacturing community. (Innis, 1970, p. 385)

This statement is probably the heart of the body of literature associated with Innis and the staples approach. The settlers in North America need an export to England which will allow them to import goods which they are not able to produce. The export which they chose (the "staple") then imposes certain requirements on the society, for instance, transportation, financial arrangements, etc., and the whole pattern of development bears the imprint of these successive staples. Speaking of the beaver, for instance, Innis can say, "The lords of the lakes and forest have passed away" but their work will endure in the boundaries of the Dominion of Canada and in Canadian institutional life" (ibid., p. 384). The differences in the current state of economic development between the United States and Canada are thus a direct reflection of the different staples which have been historically traded by these two nations. The United States becomes an industrialized nation because, presumably, of the different nature of its staples, while Canada is moulded, by the staples and the institutions which serve them, into a resource oriented exporter. While industrialization has taken place "...economic development has been one of gradual adjustment of machine industry to the framework incidental to the fur trade" (ibid., p. 402).

From these quotations, it is easy to see why Mel Watkins can say "Methodologically, Innis' staple approach was more technological history writ large than a theory of

economic growth in the conventional sense" (Watkins, 1971, p. 50). Watkins is not criticising the staples approach, but propounding it in an essay entitled "A Staple Theory of Economic Growth". His article will

...argue that the staple theory can fruitfully be limited to a distinct type of economic growth; restate a staple theory so constrained in more rigorous form ...; contrast this staples theory with other models of economic development and finally, consider again the relevance of a staple approach to the Canadian case (Watkins, 1971, p. 52).

Watkins concludes his case by saying, "The basic determinants of Canadian growth are the volume and character of her staple exports ..." (ibid., p. 72).

Since I will argue that the "...staple or staples approach, or theory, or thesis..." (ibid., p. 49) has no relevance to the development that occurs with the building of the Welland Canal, it seems reasonable to examine Watkins' restatement of the framework.

The fundamental assumption of the staple theory is that staple exports are the leading sector of the economy and set the pace for economic growth (ibid., p. 53).

Since, as I will demonstrate, considerable economic growth had taken place before November, 1829, along the line of the Welland Canal, (when the first ships pass through) the "fundamental assumption" does not seem to apply. Watkins

does go on, however, to broaden the scope of the staples theory. "The central concept of a staple theory, therefore, is the spread effects of the export sector, that is, the impact of export activity on domestic economy and society" (ibid., pp. 53, 54). Three linkage effects are traced: forward, backward, and final demand. The linkage, or spread effect, that has been associated with the Welland Canal is the backward linkage. Watkins says,

...the most important example of backward linkage is the building of transport systems for collection of the staple, for that can have further and powerful spread effects" (ibid., p. 55).

Thus, the building of a transport system can be seen as a demonstration of the linkage created by the demands of staples. In 1823, when the construction of the Welland was first conceived, what was the staple? The fur trade was moribund, and, in any event, did not require expensive improvements such as a canal. Wheat and lumber would become the new export staples - but not until long after the events we are concerned with, that is, after 1833. Innis says, for instance, "The completion of the Welland Canal made possible the export of timber from the territory above Niagara Falls" (Innis, 1970, p. 394). While this is true, it is also true that the completion of the Welland Canal made it possible to export (or import) anything from the territory above Niagara Falls. The Canal was built as an improvement in communica-

tions which would expedite trade and make its' builders rich. It seems that the application of the staples thesis to the Welland Canal in the years 1823-1833 is an extreme example of "...a unifying theme of diffuse application rather than an analytic tool fashioned for specific uses" (Watkins, 1971, p. 50).

One of the best studies of Canadian economic history is "The Empire of the St. Lawrence", by Donald Creighton. We will examine in detail the contemporary views of this empire in chapter five, but for now it is sufficient to say that the empire of the St. Lawrence had, in 1821, reached the nadir of its fortunes, so that Creighton can state, "The far west was lost to Montreal" (op. cit., p. 201). He goes on "... the final period in the history of the northern commercial state opened in 1821 and closed in 1850 ...Its economic bases lay definitely in the new staples, timber and wheat" (op. cit., p. 205). In the case of the Welland Canal during the years 1823-1833, there was virtually no staples export, possibly because it falls in the beginning of Creighton's third period. A staples trade would develop, but it was not, I argue, the inevitable process which Creighton, Innis, and Watkins seem to imply. During the period 1823-1833, the Welland Canal area underwent what may be characterized as industrial development on the 'normal' pattern. In other words, there was no "...gradual adjustment of machine industry to the framework incidental

to the fur trade" (Innis, 1970, p. 402), but rather a spread of industrialization from the initial activity, which was canal-building.

What was the key element in the industrialization which took place around the line of the Welland Canal? I will argue that it was entrepreneurship that, in Schumpeter's words, shaped

...the whole course of subsequent events and their 'long-run' outcome. It is not true that (this type of response) dominate(s) only what the economist loves to call 'transitions', leaving the ultimate outcome to be determined by the initial data" (Schumpeter, 1947, p. 150).

If I may apply this to the Welland Canal, Schumpeter seems to be arguing that the men involved in this "creative response" are making things happen in a way that is not predetermined by the fur trade, staples trade, availability of labour, etc. Men are making history.

What, then, is an entrepreneur? Aitken defines it in this way in "The Welland Canal Company: A Study in Canadian Enterprise"

Entrepreneurship is a word with many meanings, and can be defined in different ways depending on the matters in which we are interested and the problems we wish to examine. ...Entrepreneurship refers to the functions performed by those who are responsible for the inauguration, maintenance, and direction of a profit-oriented enterprise. ...For our present purposes (i.e. examining the Welland Canal) the usefulness of the

concept lies in the fact that it focuses our attention sharply on the activities of the handful of men, partly co-operating and partly competing with each other, who made up the entrepreneurial group. The most conspicuous figure in this group, although he by no means dominated it, was William Hamilton Meritt" (Aitken, 1964, p. 111).

Aitken was, at the time he wrote this, editor of "Explorations in Entrepreneurial History", so we may consider this as an authoritative definition of an entrepreneur, particularly as it applies to the Welland Canal. It is, I argue, so vague as to be virtually useless for an analytic framework. If any person who functions in "...the inauguration, maintenance, and direction of a profit-oriented enterprise" (ibid.) is an entrepreneur, then running a corner store represents an entrepreneurial undertaking.

The statement by Landes, that "...enterprises perform differently under the same conditions of demand and technological opportunity. It is reasonable to attribute part of this variation to the quality of entrepreneurship and management" (Landes, 1977, p. 526), indicates that management is not part of the entrepreneurial function. Landes goes on to say "...the basic criterion (of entrepreneurship) is risk-taking" (Granick, quoted in Landes, 1977, p. 526). We now have another element, "risk-taking", added to "inauguration, maintenance, and direction" while direction seems to be eliminated from the qualities of entrepreneurship. We have

yet another elimination, for Schumpeter states,

The entrepreneur is never the risk-bearer. ...Risk-taking is in no case an element of the entrepreneurial function. Even though he may risk his reputation, the direct economic responsibility of failure never falls on him" (Schumpeter, 1961, p. 137).

While I could continue in this vein, eliminating all the criteria of entrepreneurship, it seems that Aitken, in saying that "entrepreneurship is a word with many meanings", is absolutely correct. Given a field which is amorphous, I am inclined to follow the entrepreneurial definition given by Schumpeter, in "The Creative Response in Economic History" (1947, p. 149, et seq.)

...the entrepreneur and his function are not difficult to conceptualize: the defining characteristic is simply the doing of new things or the doing of things that are already being done in a new way (innovation). ...It should be observed at once that the "new thing" need not be spectacular or of historic importance" (op. cit., p. 151).

Using this definition, I will argue that the introduction, by Oliver Phelps, of a labour-saving device in 1827, inaugurated a period of rapid development on the Welland Canal. This was a "creative response" to something that was "outside the range of existing practice" and as a result "change(d) social and economic situations for good" (ibid., p. 150).

William Hamilton Merritt, in his role of promoter of the Welland Canal, is an entrepreneur, but this is not so of his role as manager - he is uninspired. He introduces no "new way of doing things" although this is not true of Oliver Phelps. Phelps will, from his initial invention, introduce direct contracting and the use of foremen, rather than subcontractors. He will also use the newspapers in a new way, such as advertising techniques and letters to the editor. In response to an influx of untrained Irish peasants unused to the wage nexus, he will experiment with various forms of social control and economic discipline. His erstwhile partner, George Keefer, will branch out into retail stores and then into two mills, while Phelps will build two mills and a distillery. (It is in this area that I depart from Schumpeter, for it may very well be that an entrepreneur is a risk-taker, although Phelps, Merritt, and Keefer will make every effort to minimize their risks.) John Barentse Yates, the fourth major protagonist, is, essentially, a capitalist rather than an entrepreneur. He finances a major portion of the Canal, but in his promotional efforts he will take on the raiment of an entrepreneur. It is with the hydraulic rights of the Welland Canal that Yates will become a full-fledged entrepreneur, as he undertakes the mill-building activities which will be itemized later. Perhaps significantly, Yates will minimize his risk at this time, in contra-distinction to his earlier activities, by

putting up no cash.

Although this is, in fact, descriptive rather than analytic of the entrepreneurial functions, we will examine in detail the actions of Oliver Phelps and the others. From the behaviour of the four entrepreneurs involved in the Welland Canal, we will attempt to draw some general conclusions about the qualities of entrepreneurship and the nature of Canadian economic development.

It should be clear that the entrepreneur is not necessarily an inventor and Phelps' single act of invention was, in fact, duplicated by a competitor. It should also be clear that this is not a "great man" theory of economic development. Entrepreneurs exist at all times, but while they are prepared to do new things, the society itself may be resistant to change. The entrepreneur may be frustrated by a lack of capital, since the capitalists have no confidence in his vision, or by resistance of the workers. Any period of rapid social change will thus, all things being equal, facilitate entrepreneurial activities. Obvious examples of this interrelationship would be the American Revolution, the influx of settlers to North America in the nineteenth century, the French Revolution, the Meiji Restoration, and the Russian Revolution.

This is not an argument that revolution causes entrepreneurial activities, for one could equally draw up a list of events that did not lead to economic progress - but

the conditions to facilitate it exist in these upheavals.

In the Canadian case, rapid immigration through the nineteenth century would, to a very large extent, facilitate entrepreneurial activities. The supply of capital to entrepreneurial activities, must, therefore, in my argument, be the culprit in Canada's skewed development. The behaviour of the Bank of Upper Canada in its dealings with the Welland Canal Company indicate that the structural organization of Canadian banking was antithetical to entrepreneurial activities, as does the reliance on foreign investors.

One of the essential characteristics of an entrepreneur, that of being able to do things in a new way, means that his perception of risk is quite different from those who are caught in the old framework. In the case of Canadian development, this is particularly significant, for there are strong indications that Canadian capitalists and Canadian banks not only failed to see the new opportunities, but exaggerated the profits available from their past activities - in a word, they fell into a staples trap.

Although I have argued that the staples thesis is not an appropriate framework for developmental theories, it is most certainly true that Canada has exported staple goods. The capitalists and bankers will thus have an intimate knowledge of the staples trade, and will tend to underestimate the risks and overestimate the benefits of that trade. The same problem was, presumably, faced by the United States,

and overcome. In Canada, it was not. Again, one is faced with the prospect that the nature of the banking system in the two countries was sufficiently different so that the large Canadian banks could frustrate risk ventures, while the American small bank system facilitates them. (It also led to the failure of a great many American banks.)

It is probably impossible to look at the past without being influenced by the present. Thus, the staples thesis looks at the present dominant position of staple production in the Canadian economy, and then seeks its genesis, as Innis has done, in the fish and fur trade. Using the same technique, that is to say, looking at the present and then seeking an explanation in the past, one sees a very different position than that seen, by the "staples" school.

The Canadian economic picture in 1980 is not just a picture of staples industries, but of extensive foreign ownership of "Canadian" industries, and a banking sector that is astonishingly vigorous.

Fortune, which issues annual rankings of most business categories, ranks three Canadian banks in the "Fifty largest Banks outside the U.S.", and would include two Canadian banks in a world listing (Bank of Montreal, which would be the dropout, would rank 53rd in the world) (Fortune, July 14, 1980). On a profit basis, (rather than total assets, which is the basis of the Fortune rankings),

Canada has three of the twenty most profitable banks in the world. The degree of foreign ownership of these banks is negligible.

The "Fortune 500" list of the largest industrial corporations outside the U.S. has thirty "Canadian" entries. These include ten foreign owned corporations, such as General Motors of Canada, Ford of Canada, Imperial Oil, Chrysler Canada, Gulf Canada, Texaco Canada, etc. (Fortune, Aug. 11, 1980). The remaining twenty entries are largely staples-oriented, and frequently have a substantial degree of foreign ownership (e.g. Alcan Aluminum, Canadian Pacific).

The questions we should ask are, it seems to me, threefold: why the dominance of staples industries? why such a large degree of foreign ownership? why are Canadian banks so dominant, even on a world scale? It is obvious that a country that is as well endowed with natural resources as Canada will seek to exploit them, and large-scale mining, lumber, wheat and fish enterprises are to be expected.

It is the degree of foreign ownership of Canadian corporations, the lack of a large secondary manufacturing sector of the economy, and the huge financial sector, which can, in part, be illuminated and explained by looking at the history of the Welland Canal. The canal was not the only element in Canadian development, but it was a very significant one. It was the first private project in Upper Canada to have a cost in excess of one million dollars. It

was the first time that a significant degree of non-resident ownership occurred in an industrial project. It was largely responsible for the funded debt of Upper Canada. The financial problems of the Welland Canal were caused, in part, by the attitudes of the Bank of Upper Canada, and those problems would reinforce the conservative lending policies of the banks. The financial failure of the canal, which involved most of the elite of Upper Canada, would lead to a marked degree of conservatism amongst Canadian capitalists. This played a part in leading to the present dominant position of financial capital in Canada.

As the nineteenth century progressed, the need for large amounts of capital in entrepreneurial activities increased. The banking system thus could exert an ever-increasing anti-entrepreneurial bias, altering the course of development towards a more conservative stance.

In 1823, though, many options were still available.

CHAPTER TWO
MERRITT AND YATES

In 1818, William Hamilton Merritt was grossly over-extended in his financial dealings (Aitken, 1952) and his property on Twelve Mile Creek in the Niagara Peninsula was suffering from a lack of water, which provided both the source of power for his mill and transportation to the market of Montreal. Merritt thus organized his fellow property owners on Twelve Mile Creek, and together they looked for a solution. If the water of the Chippewa River could be channeled to the top of the 'Mountain', the flow through Twelve Mile Creek could be guaranteed. The survey they carried out showed that a cut approximately two miles long would be needed, and would have to be approximately twenty-eight feet deep (J.P. Merritt, 1875, p. 43). (In fact, through an error in Merritt's calculations, they had underestimated the cut required, which was approximately fifty-eight feet.) Clearly, an undertaking of this kind was beyond the resources of local merchants. They therefore appealed to the legislature for construction of a canal, which they presumed would run through Twelve Mile Creek.

The legislature surveyed another route that debouched through Burlington Bay, and found that it was well

beyond the technological and financial resources of Upper Canada. Merritt meanwhile slipped into virtual bankruptcy, and it was not until 1823 that he was financially solvent. Aitken, in 'A New Way To Pay Old Debts' (Aitken, 1952) suggests that the resolution of Merritt's problems was ethically dishonest. Be that as it may, in 1823, Merritt was once again able to turn his attention to the problems of water supply on Twelve Mile Creek. The same group of property owners, with a vested interest in any improvement in Twelve Mile Creek, hired an engineer to survey the route for a barge canal from Lake Ontario to the Chippewa, and then through the Niagara River to Lake Erie. Not surprisingly, the engineer's report stated that yes, the route down Twelve Mile Creek to Lake Ontario was indeed the best route for a canal between Lakes Erie and Ontario (Third Report, pp. 241-242).

The success of the Erie Canal in New York State had created what would subsequently become known as the 'age of canals' and no wonder, for "No sooner was one section finished and the water introduced than the tolls did more than repay the interest of the capital expended" (Third Report, p. 272), and they thought that it "...will yield a revenue to the State of three and a half million of dollars per annum" (Third Report, p. 275). Armed with these impressive statistics, Merritt launched the Welland Canal Company, certain that he could raise he could raise the money from the public, or, as

he put it, from "the merchants and capitalists in New York and the Canadas" (Welland Canal Papers, Archives of Canada). The legislature granted a charter to the Welland Canal Company in 1824, and a tumultuous period of canal building got under way. It would not be finished until 1833, for reasons which we shall examine later, but the ten year period would see the creation of a wage-labour force, the industrialization of the St. Catharines area, and the opportunity for Merritt to learn entrepreneurship in an on-the-job training program. The legislature of Upper Canada would create a national debt largely as part of the funding of the Canal, and William Lyon Mackenzie would point to the Canal as an example of the corrupt vested interests that his rebellion would overthrow.

The charter of 1824 authorized,

That the Directors of the Welland Canal Company shall have full power and authority to explore the country, lying between the River Welland, in the District of Niagara, and Lake Ontario, and between the said River Welland and the Grand River, or Ouse, in the said DIstrict, and to designate and establish, and for the said Company to take, appropriate, have, and hold, to and for the use of them and their successors, the line and boundaries of two intended canals, with their necessary locks, towing paths, basins, and railways the one to connect the river Welland with the said Grand River, as near the mouth as practicable, and also to select such convenient sites for such and so many mills, manufactories, warehouses, and other erections as

may be required by the said Company for the purposes thereof... (Third Report, p. 228).

Merritt set out to raise the money. All the post-masters of Upper Canada were appointed as subscription agents of the company, and Merritt sent out these letters.

CIRCULAR

St. Catharines

Sir,

The accompanying report and address to the public together with the proceedings of the meeting will point out to you the object of this circular; and I trust You will conceive it of sufficient importance to the Provinces in general, to merit your exertions in promoting so necessary an undertaking. We have drawn up two lists, as some decline being stockholders, but say they will contribute their aid in case it should be effected.

You will submit both to every individual you think has the means in your vicinity, and return them as soon as you can possibly get the minds of the people on the subject - and at all events, by the first day of October next.

As this is an object of such general utility, I have taken the liberty of appointing you agent for the Township of _____ and vicinity - without your previous concurrence. - If you decline acting, have the goodness to hand it to some respectable person

of your acquaintance, who will exert himself; and send me his name at your earliest convenience. Prompt attention will be paid to any communication you may make for further information.

I have the honor to be,
Sir,
Your obt. Servant,
W.H. MERRITT
Agent, Pro. Tem.

(Third Report, p. 215)

The inhabitants of Niagara (on-the-Lake), who fondly believed that a canal to bypass Niagara Falls would do just that, and re-enter the Niagara River, making Niagara-on-the-Lake its major port, were allowed to cherish this illusion, in the interest of stock sales, although Merritt had already made up his mind on an alternate route. On the 11th of January, 1824, he said, "I consider that I will be richly paid in the enhanced value of my property - in case I meet with no other consideration" (Merritt to Prendergast, Merritt Papers, Archives of Ontario). Almost exactly a year later, in a letter to his wife, he said, "Our canal is like money, it requires great exertions to get it and even greater to keep it. The Niagara People and the whole frontier have combined to take it from us, and I am determined (sic) they shall not have it" (12 January 1825, Merritt Papers, Archives of Canada).

Merritt was quite clearly, and on his own evidence, primarily involved in the canal to increase his property

values and make a profit from the route of the canal. As I will demonstrate, he consistently acted for his own interests, often at the expense of the canal and its investors, whose agent he was.

As promoter and entrepreneur of the Welland Canal Company, Merritt went to New York State, the site of the Erie Canal. He called on De Witt Clinton, ex-governor of New York, who was the leading promoter of the Erie Canal. He also called on John Barentse Yates, who was manager of the "literature lotteries", which position he owed to political influence, since the lottery was a state institution. Yates had been an aide to Governor Tompkins, and had served in the U.S. Congress from 1815 to 1817. Yates was also a county judge, and was frequently a member of the State Assembly. More importantly, however, Yates' brother, Joseph Christopher Yates, was, from 1823 to 1825, Governor of the State of New York. J.C. Yates and De Witt Clinton were political allies, and when Merritt persuaded J.B. Yates to subscribe for 600 shares, or \$30,000, in the W.C.C., he had guaranteed himself powerful political friends in N.Y. State. Since Merritt's father-in-law, Dr. Prendergast, was a N.Y. State senator, it can be presumed that Merritt had an entree to the political elite of N.Y.

Merritt also managed to sell Hovey 200 shares in the canal, or \$10,000 (J.P. Merritt, 1875, p. 64). Since Hovey

had been a major contractor on the Erie Canal, Aitken suggests that the share subscription was essentially a retainer to guarantee employment on the Welland Canal (Aitken, 1954, p. 50). This was probably true, as subsequent events will show, but Aitken is, I believe, wrong on his assessment of the reasons for Yates' investment. Aitken labours under the misapprehension that the funds that Yates invested were lottery funds, and thus concludes "...it will be obvious that on a correct view of the situation Yates should have been well advised to steer clear of any investment which threatened to freeze his resources" (Aitken, 1954, p. 50).

Aitken does not, however, show the source of the investment as being from lottery monies, and, in fact, there are no concrete grounds to believe that this was the source of the funds. How many of the shares belonged solely to Yates, or the extent to which he was the front man for a syndicate will probably never be known. The presence on the shareholders list of the New York Asylum for the Insane indicates that "fronts" were probably used. However, the shareholders' list shows Yates holding 600 shares, while his testimony to the Select Committee on the Welland Canal indicates a different holding. "I have in my own right \$128,500 (2,570 shares) and I own one-third of \$36,500 (730 shares), the other two thirds being the property of Archibald McIntyre and Henry Yates, besides \$25,000 (500 shares) owned by Mr. McIntyre

individually" (Third Report, p. 17). He also testified he owned shares "to the amount of 2,510 shares for himself individually: and in his own name, and his partners and friends, about 4,000 shares are held at this time..." (Third Report, p. 355).

Whatever the true details of Yates holdings, he was clearly the most influential shareholder in the Welland Canal Company, and he was about to use that influence to alter the plans for the Welland Canal.

On the 15th November, 1824, contracts had been let for a barge canal, and on the 30th November, 1824, the first sod was turned (J.P. Merritt, 1875, p. 65). Although construction had started, the Americans, and we may presume, Yates in particular, wanted a change in plans. Rather than building a barge canal, with an inclined rail up the escarpment, the Americans wanted a ship canal. They said "...we ought to keep in view, sloop, as well as Boat navigation...we beg leave to recommend...to make the Canal large enough for sloop navigation...for unless the work contemplated is rendered truly efficient for the purpose of an extensive trade, the stockholders cannot look with confidence to realize those advantages...anticipated" (Letter from U.S. Stockholder December 22, 1824, Third Report, p. 235). Merritt was primarily concerned with the water power and the increase in his land values that the canal would generate, so he had no reason to oppose a change

in plans that could possibly improve his position. However, Merritt seems to have obtained a quid pro quo for this agreement. He approached the legislature for a new charter, one that would increase the capitalization from £37,500 to £200,000, sufficient to convert the canal from a barge canal to a ship canal. The quid pro quo, however, was that the route was now specified by the legislature,

...it has been found that to descend the mountain by the route prescribed...would be attended with great difficulty and expense, and that a new route has been surveyed and reported upon which will diminish the distance and expense and afford a more easy and practicable descent; ... - Be it therefore enacted...the route along which that part of the said canal shall be conducted shall be as follows - that is to say: by Sharer's ravine and Dick's creek to the valley of the Twelve Mile Creek, as the said route has been surveyed and reported upon by Mr. Clowes and Mr. Roberts, Engineers, or as nearly thereto as circumstances will permit, and that from the said Twelve Mile Creek to Lake Ontario the same route shall be pursued as has been prescribed by the act last mentioned, or as near thereto as circumstances will permit (Third Report, p. 290).

The voting procedure was also changed. It had originally stated,

That each stockholder shall be entitled to a number of votes proportioned to the number of shares which he or she shall have held in his or her own name at least three months prior to the time of voting, (except at the first election) according to the following rates - that is to say,

at the rate of one vote for each share not exceeding four; five votes for six shares; six votes for eight shares; seven votes for ten shares; and one vote for every five shares above ten (ibid., p. 233).

but became a maximum of four votes for one hundred shares or more (ibid., p. 290).

The result of these changes was "there are only eight stockholders in the province qualified to be directors" (ibid., p. 358), and of course, that voting control was virtually meaningless if no other directors could be chosen. We can infer that Merritt made a deal with the "Family Compact" so that they would provide the bulk of the directors, and thus gained support in the legislature of Upper Canada. As his son subsequently put it,

...where corporate aid was required it cannot be forgotten that the gentlemen in York known as the Family Compact were able and patriotic assistants toward the scheme. Foremost on the roll stand the late Lord Bishop of Toronto, Dr. Strachan, J.B. Robinson, Chief Justice; Mr. Dunn, and numerous others; and last, though in etiquette first, were Lord Dalhousie and Sir Peregrine Maitland, whose names, with the others, is hoped will be forever identified with the realization of the whilom dreamer, W.H. Merritt, and the Welland Canal (J.P. Merritt, 1875, p. 125).

Yates thought that the decision to route the canal to Twelve Mile Creek was surprising; he testified later "(1) ...thought originally under all the circumstances it would have been more prudent to take the canal to Niagara; but that

as the route was settled by Act of Parliament, ... (1)
assented to it" (Third Report, p. 356).

However, everyone, with the exception of the residents of Niagara, was reasonably happy. The change in the charter gave the Niagara shareholders the chance to quit - and they did. This letter is fairly typical, but more forthright than most.

To the President, Directors & Co. of
the Welland Canal.

Gentlemen,

In consequence of our wise
Legislature having defined the route
of the Welland Canal I beg leave to
trouble you to order that my name may
be forthwith struck off the list of
subscribers to that Stock.

Yours, &c.
D. McDOUGALL, (L.S.)

Witnessed by
GEORGE MACAN, (L.S.)
JOHN MARTINDALE, (L.S.)
June 3rd, 1825
(ibid., p. 285)

De Cou, one of the initiators of the survey of 1818
and 1823, also withdrew,

Trorold, (sic) June 8th 1825.

To the President and Directors of the
Welland Canal Company.

Having taken Stock in the Welland
Canal merely for the purpose of
promoting that desirable Work, which

is now in a prosperous condition, I beg to take advantage of the late amendment to the Act to withdraw my name from the Books, and request that the amount 18, 15s., being 10 percent on the 10 Shares held by me, be refunded, as I should not have subscribed thereto under present circumstances.

Yours Gentlemen, very respectfully,
JOHN DE COU, (L.S.)

Witness,
ROBERT DE COU.
(ibid., p. 285)

The fact that the new route would no longer pass through his property may have had an even more influential effect! Merritt now had to raise a total of \$800,000, and "...our board of directors being fully aware of the magnitude of the sum we had to raise, determined...the money should be procured. With this view, I was sent to Montreal and Quebec, having to take in New York on my return. \$200,000 was apportioned for New York, and a like sum for Upper and Lower Canada. The remaining \$400,000 in London" (J.P. Merritt, 1875, p. 74). When Merritt and Dunn attempted to sell the shares in N.Y., they could have sold them all! Dunn later testified "...I accepted subscriptions to the amount of \$75,000, and might, I think have got the whole amount if it had been wished for" (Third Report, p. 251). The fact that Merritt and Dunn didn't take advantage of this opportunity indicates that the quid pro quo extracted by the family compact was British control of the Welland Canal. Indeed, Dunn testified that it was McGillivray

"...a Director appointed by the Act, at whose instance, in a great measure, half the stock had been reserved for the London market..." (ibid., p. 251). He was, of course, a representative of the family compact.

Merritt, having visited Lower Canada and N.Y., left it to someone else to visit Britain.

Henry Boulton, the provincial solicitor general, a director of the company, was selected to be the emissary of the company. Boulton performed this task with a notable lack of success, probably due to his lack of preparation, although Bishop Strachan, the leader of the family compact, prepared a brief for him (ibid., p. 298). Boulton was totally unsuccessful.

In January of 1826, before the reports of Boulton's failure were known, the government made its first financial commitment to the Welland Canal Company. The legislature lent the company £25,000 at six per cent interest. The loan had originally been promised in February, 1825, apparently as part of the package Merritt had negotiated, for at the time there could not have been much need for a loan.

By 1826, however, since only £100,000 had been subscribed, some urgency attended the request for a loan. The company did not have the £100,000, it had subscriptions for £100,000, and this difference was critical. Shares were sold on the basis of 2½% or 5% down (accounts varied), with

calls for additional 10% installments on notice of not less than ninety days. Thus, a prospective shareholder could promise to take stock and then default if bad news changed the outlook, or if he suffered personal reverses. On many occasions the purchaser delayed the down payment, and then defaulted. Because of this system, the number of shares sold changes at each report. The total that was actually raised from the £100,000 that was subscribed was about £90,000 (ibid., p. 346), but even this was raised over a long period of time. The contracts for the revised canal had been let on July 1st, 1825 (J.P. Merritt, 1875, p. 74) and by the end of the year the company had a substantial problem with its cash flow. The £25,000 was thus necessary to alleviate the problem, so it was a bonus to the company that they received, in addition, a land grant of 13,000 acres in the Wainfleet marsh (which would be the site of the feeder canal) as an incentive for success (Third Report, p. 365). The need for an increased cash flow was so great that Merritt went to New York, in February of 1826, despite the loan, and got the stockholders, and principally Yates, to agree to 8% per month payments on subscriptions (J.P. Merritt, 1875, p. 80). Unfortunately, it wasn't enough, and in June of 1826, Yates was trying to borrow "£30,000 or £40,000 in New York" (ibid., p. 80). Yates was unsuccessful, but clearly the problems were connected, not with the assets of the company, but with its cash flow.

This can be seen from the annual report of 1826, for the company had only expended a grand total of \$260,000 or £65,000, versus subscriptions of £100,000 and a loan of £25,000. Today, of course, bank financing would be available, but that course was not open to the Company. As Aitken sums it up,

To understand this it is necessary to bear in mind that relations between the Company and the Bank of Upper Canada, which was the only major source of credit available in the province, were never harmonious and on occasion could degenerate into something approaching open hostility. Credit could be obtained in limited amounts on the directors' signatures, or on the security of government debentures, but never on the basis of the Company's property or shares. Believing their proper business to be the issuing of notes by the discounting of commercial bills and accommodation paper, the bank's directors declined to extend credit to a canal company on the basis of real estate or unmarketable stock. The consequence was that the Welland Canal Company was chronically starved of short- and medium-term credit. Loans on personal security helped to tide the Company over more than one emergency, but involved a degree of risk unwelcome to most of the directors. Confronted with this highly conservative lending policy, the directors perforce had to adopt whatever makeshift expedients were open to them (Aitken, 1954, p. 118, 119).

Since the Bank of Upper Canada was both the bank of the family compact, and that bank's president (William Allan) was a member of the board of the Welland Canal Company, the company had no alternative to floating long term loans,

usually with the government (or using Yates for short term financing).

Merritt was a promoter of the first order, for it was, without question, due to his efforts that the canal was built, but he seemed unable to learn about cash flows and asset management. As mentioned earlier, he had bankrupted himself in 1818, when his liabilities exceeded his assets (Aitken, 1952). He would later go bankrupt again in 1845, (J.P. Merritt, 1875) demonstrating perhaps a lack of administrative ability. This was, paradoxically, at once a curse and a boon to the shareholders in the Welland Canal. Managing their affairs as ineptly as he managed his own, the estimates for the Canal increased from year to year. However, with considerable sang-froid, Merritt continually used his overspending to leverage the government into increasingly deep involvement in the affairs of the Company. The loan of 1826 was the thin end of the wedge, for it gave Merritt a virtually open-ended commitment from Upper Canada, who now had a vested interest in the affairs of the Company. If an entrepreneur is a promoter, Merritt had learned his lessons well: if an entrepreneur is a manager, Merritt's failures served the company well!

Merritt's position as business agent of the Welland Canal Co. is thus rather laughable, but at least Merritt himself was wise enough to avoid a large financial commitment to the company; he had only 20 shares, or \$1,000, invested.

As agent, he would show, personally, a large and positive cash flow. Take his expense accounts, for example, which he submitted as evidence to the select committee of the legislature of Upper Canada investigating charges made by Mackenzie. He was to receive about £2,000 in expenses between 1824 and 1833, or about £200 per annum, and lived quite well on it (see, for example, an itemized expense account, Third Report, pp. 92-94).

In addition to a generous expense account, Merritt was paid a bonus of £500 in 1825 for "the important services rendered to this undertaking (i.e. organizing the Welland Canal Co.)" (ibid., p. 266). He was also receiving a salary of £300 per annum, which was increased to £400 per annum in 1827 (ibid., p. 373). If this improvement in his finances were not enough, the company awarded him £600 for his mill and property, and then gave him the use of the mill for free, along with any money spent on improvements, to be returned to him! "By advancing the capital to put it in operation, he is to have the use of it till the Company...take it...in which case they agree to pay...his...expenditure in repairs" (ibid., p. 377). Merritt had, by the time the first canal was finished in 1833, received a salary of £3,700, a bonus of £500, and a settlement for a worthless mill of £600 - a total of £4,800, along with a generous expense account, all for the modest investment of £250! (ibid., pp. 266, 372). Merritt was joined by virtually the whole local community in

his financial interest in the canal, as the following article demonstrates,

It appears to me that we, of the District of Niagara, should surely be the last to grumble at the expense attending the canal, or to find fault with those who are willing to promote it for there is very little money now stirring among us but what is in one way or other drawn from the works that are going on there: ...Farmers, blacksmiths, wheelwrights, and most other industrious classes in my neighbourhood have felt the benefits of it, and I defy any of them to prove that they have felt the weight of an additional penny in their taxes, in consequence of that loan...for there is £50,000 more to circulate mainly in our neighbourhood besides the large sums from the U. States and elsewhere, that we should not have seen a farthing of, but for this vote - because, the stock taken by the Government will give both confidence and respectability to the undertaking, and insure its completion; ...No, no, my good neighbours, let us know when we are well, and take our share of good luck while it is going, ...I myself heard from Mr. Leonard, at the Deep Cut, that he had paid out more than A THOUSAND DOLLARS IN A WEEK for Oats and Hay, solely for the horses employed on the canal. This does not sound like ruin to the farmers at any rate who get \$12 per ton in cash for their Hay, and 2s.6d. per bushel for their Oats, all of which they might eat themselves if they liked, if it was not for the canal, before they would get any such prices for them.

I will say nothing about the advantage of the canal when it is completed. I think, myself, the longer they are about it the better for us; ... (FJ & WCI, 28 Feb. 1827).

Merritt, too, was caught in this ambivalence of feeling, although he seems to have done all in his power to

promote a rapid completion of the Welland.

The newspaper that is the source of these quotes was another entrepreneurial activity of Merritt, for the "Farmer's Journal and Welland Canal Intelligencer" had been started in 1826 with Merritt's money and one Leavenworth as editor/printer.

One great object Mr. Merritt had in view when he assisted in establishing the newspaper in St. Catharines entitled the "Farmer's Journal, and Welland Canal Intelligencer", was to circulate general useful information around the country. In the address to the public, it states:- "Our principal object will be to publish a correct and accurate statement, from time to time of all interesting and important matters relative to the Welland Canal, which is now rapidly progressing under the most favourable auspices: to endeavour to the utmost of our limited talent, to draw the public attention to the splendid plans now in embryo, for the improvement of general navigation in this colony: to awaken a spirit of inquiry and enterprise in regard to canals and other improvements of vital importance to our prosperity and happiness: and to develop by every proper means, the various resources of this fertile land we live in (J.P. Merritt, 1875, p. 78).

The paper was established, of course, as a propaganda organ for Merritt and the Welland Canal Co., since the local newspaper had been the "Niagara Gleaner", which was violently opposed to the canal passing through Twelve Mile Creek, rather than Niagara. At the end of 1826, this was the situation:

1. The company was, once again, out of money.
2. Physical work on the canal was proceeding well, and it looked as if construction could be finished within the year.
3. Yates had such a large investment in the company that he could be compelled to act as a short term banker.
4. The family compact could and did ensure that the government of Upper Canada would act as a source of long term loans.

Merritt tried to persuade the government to subscribe for stock in the company which they did in early 1827, but they insisted on being paid interest - in effect, another loan. In a real coup, Merritt did manage to persuade the legislature of Lower Canada to purchase £25,000 worth of stock! (Third Report, p. 348).

Unfortunately, the contractors on the Deep Cut, Ward Hovey, abandoned their contract as of June 1st, 1827 (ibid., p. 376) and Oliver Phelps took over. Ward, Hovey's virtual bankruptcy and abandonment of the canal meant that they surrendered their 510 shares in the Welland, offsetting to a considerable extent the new subscriptions (ibid., p. 358). The Deep Cut, which will be discussed in detail later, was the major cause of delay in the completion of the canal. Contracts were meanwhile let for construction of what would

become the feeder canal connecting the Chippewa and the Grand River. By the end of 1827, work on the canal was still incomplete, and the company was once again out of money. Merritt went to London, where he negotiated a loan from the British government of £50,000, managed to get the company a write-up in "The Times" and sold the remaining shares in the Welland Canal Company (J.P. Merritt, 1875, p. 96). The new shareholders included the Duke of Wellington and Alexander Baring of Baring Brothers, the investment bankers, as once again Merritt demonstrated his ability to form alliances with the elite, this time of England (ibid., p. 108). (Merritt's abilities as an observer of the condition of the working class can be assessed by his comments on his visit to England, "I was prepared to meet...extreme misery... saw nothing but peace, plenty, good humour, and not an individual who had not good clothing and shoes" (ibid., p. 94-95). The condition of the working class in England is not normally considered to be so 'good humoured' by other sources and thus Merritt's observations on the conditions of the workers on the Welland Canal, which we will consider in a later chapter, deserve our scepticism.) The deal made by Merritt for the loan of £50,000 was not completely welcome, for at the board meeting of December 15, 1828,

The Directors then proceeded to take into consideration the terms upon which Mr. Merritt had obtained the Loan of £50,000 from England:

Whereupon it was Resolved, that the Board cannot forbear an expression of regret at finding that this Loan has been only made upon condition that the grant of 1/9 of the cost of the Canal heretofore engaged to be paid by the Government shall be relinquished, a condition amounting in effect to the requiring a bonus of ¥27,000 for the Loan of ¥50,000, while the payment of full legal interest of 4 per cent per annum upon the whole Loan is exacted, and the repayment of the principal in ten years, while the Canal and tolls are in the mean time to be pledged to the Government.

This arrangement is so unreasonably disadvantageous that the Board cannot believe it possible after the Canal shall be actually completed, the Government will refuse to accept the payment of the balance between the grant first proffered and the Loan of ¥50,000, as an extinguishment of the whole Loan.

The ample power given to the Agent of the Company under a very pressing exigency enabled him to enter into the stipulation above mentioned, and the Board cannot hesitate to confirm it - but on behalf of the Stockholders generally and especially of those whose deep stake in the Company would make the arrangement with the Government, if literally carried into effect, almost ruinous to them, the Board has felt it necessary to record the sentiment with which they have confirmed the arrangement (Third Report, p. 399).

The grant referred to was as follows:

...His Majesty would be willing to afford to the Welland Canal Company his royal aid and assistance, to the extent of £16,360 sterling, being the one ninth part of the sum represented to His Majesty as the estimated cost of the said Canal, upon condition of the

locks thereon being constructed of at least 22 feet in width; and also upon His Majesty being secured in the use of the said Canal, for all vessels and boats when engaged in conveying Governemtn stores, without payment of any duty or toll; ... (ibid., p. 361).

The Canal Company obviously thought the British government was committed for 1/9 of the cost, rather than only £16,300. They would not receive anything.

Because the loan was so "unreasonably disadvantageous", its contraction would probably have led to a complete break between Merritt and the Board, except for a catastrophe which had occurred on the ninth of November, 1828. The Depp Cut had hit a bottom in quicksand, and the whole cut was collapsing (J.P. Merritt, 1875, p. 112). It was clearly impossible to complete the canal using the Chippewa as a feeder, for further excavation of the Deep Cut had to be abandoned. The board decided to erect a dam on the Grand River, use the canal section between the Grand and Chippewa as a feeder canal, and pass the water by aqueduct over the Chippewa Creek to the Deep Cut (Third Report, p. 397).

The increased need for money necessitated by the new plans presumably smoothed matters between Merritt and his fellow Board members, and the feeder and aqueduct were put under contract in January, 1829, along with two additional locks which would now be necessary (J.P. Merritt, 1875,

p. 117). Since Merritt had, at the time he contracted for The British loan, no idea that a collapse would take place at the Deep Cut, his action is hard to understand.

Although the company was short of money, they had managed to raise £100,000 from the public coffers, including the £75,000 from Upper Canada, and there was no reason to believe that the coffers would be closed: - indeed, the commitments of Upper Canada virtually guaranteed (if the family compact did not) more aid in an attempt to salvage their investment! The Company had given up a claim on £27,000, for a loan of £50,000! In addition, the Canal was encumbered with a lien.

Sickness plagued the workmen who were constructing the feeder canal, delaying completion again, and by July the Company was once more out of money. The Board persuaded the Lieutenant Governor, Sir John Colborne, to guarantee a personal loan of £10,000! With these funds, the canal was completed in October, and water was let into the canal.

On the 29th and 30th of November, 1829, the first ships passed through the Welland Canal. The Buffalo "Republican" put out an extra,

The first vessel from lake Ontario.

To the surprise of the citizens of Buffalo and Black Rock, the lake schra. Ann & Jane of York, U.C. and R.H. Boughton of Youngstown, arrived in our harbour, on Wednesday last,

having on board the enterprising projector of the Welland canal, William Hamilton Merritt, with a company of gentlemen (whose names the subjoined certificates disclose). The British vessel led the van. The locks were passed on the 30th of November, just five years from the commencement of the important work. The question is not, whether this work will increase or diminish the receipts of the Erie canal - we trust that we possess too much national pride, to complain of the success of even a rival work, began by our neighbours before ours was completed. Its progress to its termination, is now flattering, and the news we now communicate, that of the passage of the first vessels from lake to lake, surmounting the declivity which causes the fall of the Niagara, must be cheering, indeed, to the stockholders, and gratifying to the inhabitants of Upper Canada (FJ & WCI, Dec. 9, 1829).

The Canal, although it had officially opened, was not yet in its final form: - one with a direct route to Lake Erie, rather than through the Chippewa and the Niagara River. Meanwhile, although the Canal opened in May for the 1830 season, technical problems closed down operations almost immediately, and it was not until the end of the season that the canal was finally open (FJ & WCI, Nov. 10, 1830). Since Merritt's stock buyers in the U.K. had, on news of the collapse of the Deep Cut, largely reneged on their commitments, Yates was sent to England to sell the shares once again. He managed to get subscriptions for 1,108 shares of the 1,667 that had reverted to the company

- an admirable attempt.

Meanwhile, Merritt and the Canal Company had approached the legislature once more for yet another loan. The select committee which considered the request for both a \$25,000 loan and a 50% increase in capitalization included Mackenzie among its members, and rejected the requests. The first reason (of ten given) was "Because the Province is already deeply in debt, which has been chiefly contracted on account of this undertaking" (Third Report, p. 434). The Provincial debt now stood at \$130,000, of which the canal company was responsible for \$75,000 (cited in Aitken, 1954, p. 163). With the help of the family compact the committee was over-ruled, and another \$25,000 joined the mounting debt of both province and canal company. Since the company owed the contractors and labourers \$10,115, at the end of 1829 (FJ & WCI, Jan. 13, 1830), a large portion of the money was already spoken for. Nothing daunted by the current failures of the canal, or mounting debts, a route to Lake Erie was surveyed (Third Report, p. 442). Once more the legislature came through with a loan, this time for \$50,000 early in 1831 (J.P. Merritt, 1875, p. 129), and the Canal Company was now responsible for \$150,000 of the provincial debt of \$205,000. However, this time there were conditions "...the money could not be used for any other purpose than the Canal extension of Lake Erie" (ibid., p. 129).

Construction of the last leg of the Canal went slowly, due to a shortage of labour (*ibid.*, p. 131). The canal operated inefficiently once more, due in part to a lack of funds for maintenance (*Third Report*, p. 487). However, the company had found another source of money. They had sold "The real estate and hydraulic privileges... (of) the Company" (*ibid.*, p. 487), and John Barentse Yates had bought them. The transaction appears to have been a bona fide one (*ibid.*, p. 488), but Yates got, of course, favourable terms. He gave the company a bond for £25,000, due in ten years, and promised to pay £1,500 per annum in interest. The company tried hard, but was unable to raise a loan using, as security, the hydraulic bond owed by Yates.

In 1832, a cholera epidemic virtually halted construction on the extension to Lake Erie, and the legislature refused to grant another loan. This may have influenced Merritt to enter politics for he was elected to the legislature in the fall of 1832 (*J.P. Merritt*, 1875, p. 136). In 1833, the new leg to Lake Erie was open. A canal connected Lake Ontario to Lake Erie and the first Canal was complete. At the end of 1833, the capitalization of the company was approximately as follows:

<u>Loans</u>	<u>Provincial Currency</u>		
	£	s	d
Govt of U.K.	55,555	11	2
Govt of Upper Canada	100,000	0	0
 <u>Stock</u>			
		s	d
Govt of Upper Canada	57,500	0	0
Govt of Lower Canada	25,000	0	0
Private Residents, United States	69,625	0	0
" " U.K.	30,137	10	0
" " Lower Canada	13,825	0	0
" " Upper Canada	3,712	10	0
" " New Brunswick	500	0	0
 TOTAL LOANS	 155,555	 11	 2
TOTAL STOCK	200,300	0	0
TOTAL INVESTMENT	355,855	11	2

A private company had managed had managed to get 67% of its financing from the governments. Upper Canadian investors, with only 1.8% of the equity, controlled a company that had 49.8% of the equity foreign owned. (Perhaps there is a lesson in this for today, with the frequent complaints of foreign control.) However, there was a price for U.S. participation, or at least that part of it that Yates was responsible for. The hydraulic rights that Yates had obtained were, in 1834, bought back by the Welland Canal Company, apparently at government urging (Third Report, p. 553). Yates was about to make a killing. All land already sold by Yates at the date of closing, plus 200 acres comprising the town plots of Port Colborne and Allanburgh, were to be retained by him. The Company was to cancel Yates' bond for £25,000. In addition, however, the Welland

Canal Co. paid Yates £17,000, or \$68,000, as an incentive to close the deal! The Select Committee, which was generally friendly to the Welland Canal Company (with the exception of Mackenzie), said, "This transaction to your committee is inexplicable, no statement that they have heard has satisfied them of the justice or even expediency of an arrangement which, if applied to the ordinary transactions of life, would not only be deemed ruinous but the result of insanity.... Your committee are of the opinion that it is well worthy of the consideration of your Honorable House how far it would be advisable to take immediate steps to cancel the whole agreement" (ibid., p. 7). Since Yates died in 1836, and a rebellion occurred in 1837, nothing was done.

The shareholders were bought out by the government in 1843, with provision for interest from the day that the individual shareholder had paid for his stock! (Aitken, 1954, p. 109) All the private shareholders did quite well out of the Welland Canal Company, but Merritt and Yates had done very well indeed! Yates had his £17,000 profit, but Merritt had a great deal more. The canal had propelled him into politics, increased the value of his land, taken a worthless mill off his hands, paid him a generous expense account, and he had collected £4,200 in salary and bonuses. In addition, the canal was better constructed from Lake Ontario to his property. As a contemporary source put it, "After passing the village of St. Catharines, the locks are

diminished in dimensions to those for a boat canal. The reasons for this alteration do not seem very obvious. Why not continue it a ship canal throughout, of the dimensions commenced with? ...There must be some private interest of individuals at work" (John Mactaggart, in Sinclair et al; 1974, p. 67). Merritt and the landowners on Twelve Mile Creek were, of course, the "private interests" behind the quality of construction to St. Catharines. The Canal was, however, complete.

The impact of all these events on the president of the Bank of Upper Canada, William Allan, can only be imagined. The original cost of the canal had been projected at £37,500. It rose almost immediately to £200,000 with the change from a barge to a boat canal. By 1833 the canal had cost £356,000, about ten times the initial projection, and almost twice the revised projected cost. Perhaps even worse, from a banking point of view, the canal revenues would not cover the operating expenses.

Allan was not only the president of the Bank of Upper Canada, however, he was also a director of the Welland Canal Company, and a member of the "family compact". As a member of the family compact, he would have had to at least acquiesce in the creation of the funded debt of the province to keep the canal solvent. In an age of rigid financial orthodoxy, this must have been anathema to Allan (and, of course, to his brother bankers).

As a director of the W.C.C., Allan would have been aware of the incompetence of Merritt in financial matters, and of the substantial benefits reaped by Merritt and Yates. Perhaps even worse, he would have been intimately familiar with the profiteering indulged in by Phelps and Keefer, which went well beyond the pecadilloes of Merritt and Yates.

The overall result must have been to cause Allen to be devoutly thankful that his bank was not involved in the canal financing, and to stay away from visionary schemes - even when those schemes succeeded, as the Welland had done, if one takes a wider view of the social benefits involved.

We can only speculate about the reactions of Allen, but we do know what happened over the next forty years. Bank capital was essentially not available to entrepreneurs in new industries, at a time when the industrial revolution was in full spate, in the rest of the western world. In the Welland Canal Company and the attitudes that were displayed by the banking system we have, I believe, cause and effect.

CHAPTER THREE

OLIVER PHELPS

Oliver Phelps was, like Merritt and Yates, born in the United States. He came to Canada in September, 1824, when he was 45 years old, as a partner of Ward and Hovey, a partnership that they would, as we shall see, have cause to regret. Phelps had been a contractor on the Erie Canal at Lockport, N.Y. and was experienced in lock construction (Unpublished funeral oration, St. Catharines Museum) and thus appeared to be an ideal choice as a partner in the contracts for the Welland Canal. Ward, Hovey invited Phelps to Canada "...stating that there was a prospect of making money on the canal" (Third Report, p. 85). Phelps was, in fact, already a man of some substance when he arrived in St. Catharines, being worth \$11,950 (ibid., p. 84). (The amount may in fact, have been very much smaller, since Phelps was being accused of making a fortune illegally on the Canal. He thus wished to maximize his stated net worth when he first came to Canada. This is, perhaps, an appropriate time to warn the reader that I believe that Phelps lied under oath, stole from the company, was an hypocrite, probably paid off Merritt for contracts, and double-crossed his partners. I shall attempt to substantiate

all these charges, but the reader is forewarned.)

Ward, Hovey, and Phelps became the major contractors for the Welland Canal from its commencement, having the contract for the tunnel that was to bring water and barges from the Chippawa to the brow of the Mountain (ibid., p. 227). On July 1st, 1825, Ward, Hovey and Phelps received the contract for 34 locks on the revised ship canal, while Ward, Hovey, had the major contracts in the Deep Cut (ibid., p. 85). Phelps appears to have become, by 1826, the sole contractor on the 34 locks (ibid., p. 87) but it is not clear how he arrived at that position. It is clear, however, that the group immediately sub-contracted the canal locks (ibid., pp. 74,79). Phelps et al contracted to build thirty-four locks at \$2,200 each, but Phelps was eventually to receive \$116,412 (ibid., p. 45), or an average of approximately \$3,400 each. The original sub-contracts called for payments of \$1,050, \$1,000, \$1,600, \$1,050, \$1,000, \$1,000 and \$1,000, respectively, for locks sub-contracted by William M. Doty (ibid., pp. 77, 78). These are the only details of lock sub-contracts which have survived, and Phelps presumably supplied all material. At any event, he entered into a contract with George Keefer, President of the Welland Canal Co. in the previous year, and currently a director, for Keefer to supply Phelps with lumber at \$35 per 1,000 board feet (ibid., p. 80). They entered into this contract in 1825, when Phelps had been in

St. Catharines for a year. Evidence showed that Phelps consistently paid Keefer \$40 per thousand feet, giving Keefer a bonus of \$5 per thousand, for example in May, June, July, August, September, October, and December of 1827 (ibid., p. 32).

Mackenzie, who thought he could convict Phelps, Keefer, and the Canal Company of wrong doing asked Phelps, "Did you pay him a higher price than you paid others for the same kind of timber in equal situations? (Answer) I did not ...Mr. Keefer was a stranger and I did not know he was in the direction (sic)" (ibid., p. 80).

Since the population of St. Catharines in 1827 was only 384, of whom only 138 were males over the age of 21, (FJ & WCI, Jan. 3, 1827), it seems impossible that one of the major contractors on the canal should not know the ex-president of the Welland Canal Company, when they both lived in a tiny village! In any event, Phelps' generosity in overpaying Keefer was not extended to the other sub-contractors: - apparently Squires, a Phelps sub-contractor, felt that he'd been employed "...at a low price..." and when Phelps managed to increase the contracted price, Squires was not allowed a proportion of that increase (Third Report, p. 44). The only conclusion possible on that evidence is that Phelps paid Keefer bonuses hoping to enlist him as an ally on the board, notably in increasing the estimates on the locks. The friendly tribunal of 1836 concluded, "Upon

the evidence adduced, your committee are unable to arrive at the conclusion contained in this charge, that Mr. Keefer received undue advantage from that contract, although it is not improbable he may have done so" (ibid., p. 7). On another of Mackenzie's charges, that favouritism prevailed in letting out contracts, "...your committee are of the opinion that the direct evidence ...is but slight; but viewing the evidence upon the whole investigation, your committee have no doubt but that the most improvident contracts have been entered into, and some of them most shamefully performed, to the serious injury of the company" (ibid., p. 6). Since by 1830 Phelps, as we shall see, had obtained the contract for the locks, the Deep Cut, the Aqueduct, four more locks, and five miles of feeder canal, the committee had to be pointing at him. (And indeed, one of the charges mentioned Phelps.) Phelps certainly believed they were when he said, "...it is unreasonable and cruel that my name should be cast out as evil ...in all this vast work I have acted faithfully and honestly, as I expect to answer to it to my God..." (ibid., p. 91).

Phelps' appeal to God was typical of the man, for he claimed to be deeply religious. He had had, in his youth, a revelation, for "...on the 19th August, 1799 ...did God open my eyes to behold the glory of the Lamb" (Unpublished funeral oration, St. Catharines Museum). Phelps had become, in modern terminology, a "born again" Christian. When he moved

to St. Catharines he founded the local Presbyterian Church, which met in his mill, until in 1834 he was instrumental in having a church built (Tuer, 1931, p. 17). Trotter, a fellow contractor, when asked about the building, testified "...There was a large house of worship there, he partly built it with tunnel timber. This timber was used for the siding of the house" (Third Report p. 166). When he was asked "Where did Phelps get the timber for his large store?" He answered, "The principal part of the timber for the frame and cellar was this tunnel timber ..." (ibid., p. 167). The tunnel was, of course, the one that was originally planned in place of the Deep Cut, and Phelps had helped himself when the tunnel was abandoned. By using this lumber, Phelps had stolen from the Welland Canal Company.

In 1831, Phelps, his wife, and nine others drew up the "Articles of Faith" of the Presbyterian Church of St. Catharines, which included as article six,

That all who shall finally be saved, "were, from the beginning chosen unto salvation" through sanctification of the Spirit and belief of the truth (Tuer: 1931, p. 19).

The "Protestant Ethic" has become a virtual catchphrase, but is, of course, elucidated in "The Protestant Ethic and the Spirit of Capitalism" by Max Weber. Weber traces the degeneration of the initial Protestant Ethic through the writings of Benjamin Franklin, a contemporary of Phelps. By the early nineteenth century, argues Weber, it

was only necessary to appear pious in public life, while one's private life could be unprincipled. It would be hard to think of a better example of both than Oliver Phelps, with his belief in predestination. Phelps clearly believed in outward signs of inward grace, for his accumulation of worldly goods and his religious experience of 1799 would mark him as one of those saved. Article seven of the constitution emphasized the path of heaven, for it stated, "We believe that salvation is wholly of Grace..." It was not deeds, but grace exhibited by outward signs, which was the route to salvation, and Phelps was not called upon to be charitable to his employees.

Interestingly enough, it was not until 1830 that Phelps organized the temperance movement in St. Catharines; until then he had been building a distillery (FJ & WCI, Jan. 20th, 1830). Since, as I will argue later, Phelps had used liquor as a form of control of his workers, it was a fortuitous coincidence that at the same time he also was perfecting better ways of controlling his workers! Phelps was, I argue, an hypocrite, whose religious beliefs fit the needs of the moment: - lying under oath about Keefer; building the church (and his store) with stolen lumber; starting the temperance movement and abandoning his distillery building just at the time that his need for large supplies of liquor dropped and his sophistication as a manager increased.

Phelps was not, however, a man without redeeming features. He was probably the designer of the locks of Welland Canal, and was the inventor of a labour-saving device (Third Report, p. 364) that was used on the Deep Cut. His son said that "Mr. Phelps was not one of those old fussey fogies or dandy doolittle contractors of whom you read of, (sic) and who accomplished next to nothing, but was a hard working, active, stirring, and wide-awake driving person, who always said to his labourers, come boy, follow me, instead of go men and do this and that, as is too often the case; but wherever there was any hard work, heavy lifting, mud, water, slush or dirt in the way, he always bounced in first and foremost and lead the way" (Junius, 1967; A Walk Around Town!'W'). ("Junius" is a pen name for Seymour Phelps, son of Oliver Phelps.)

He was an entrepreneur of the first order, a successful innovator and manager, and, when things went wrong as they did on the Deep Cut, a man able to persuade the Canal Company to absorb the losses. His alliances with Merritt and Keefer would parallel the alliances of Merritt with the elites of Upper Canada, New York State, and England, and serve the same purpose: - improving his own position in Canal affairs. He was, in many ways, the epitome of the early nineteenth century capitalist, and an ideal man to exemplify the contractors on the Welland Canal.

In 1827, Phelps was presented with another opportunity. As the board of directors said, in their annual report,

"By the opening of the season, the Contractors for the Deep Cut, Messrs. Beach, Hovey and Ward, represented their ability to carry on the work further at the price contracted for, and the Directors, after a full consideration of their proposal, consented to release them from their engagements, and to make preparations for reletting that portion of the work. Preparatory however to entering into any new contracts for the completion of the Deep Cut, the Directors offered a reward of \$125 to the person who would construct a machine that would remove the greatest quantity of earth in a given time, at the least expense, and many intelligent men were competitors for the premium.

The best inventions were those of Mr. Oliver Phelps and of Messrs. Pratt and Simpson, who have used them with great advantage during the past seasons.

The machine invented by Mr. Phelps, which has been generally used, consists of a wheel revolving round an axle, having one end fixed to the ground, and at such an angle as to bring the rim of the wheel upon the same plane with the slope of the road up the bank, - around this wheel a rope is passed, with a hook at each end to attach the empty cart going down and the loaded one coming up, keeping the cattle at a draft up and down - the empty team going down being generally sufficient to bring the returning load up with little labor to the cattle drawing the latter; thereby in effect reducing the ascent to a level (Third Report, p. 364).

Although the machine may appear unimpressive in the eyes of the late 20th Century, it was sufficiently impressive

in the early nineteenth century to get both the Canal and the invention a write up in a scholarly journal, "The American Journal of Science and Arts", Volume XIV, of July, 1828!

Ward, Hovey wanted an increase in their contracted price on the Deep Cut, which was 25 cents per cubic yard. The board had tried to hold them to their contract, and Ward, Hovey "...rather than attempt to proceed under their present contract, which they altogether declined..." (ibid., p. 372) stopped work. However, the board would "...consider any just claim which may be urged by them (Ward, Hovey)..." (ibid., p. 372). They appeared to have reached an amicable settlement, but the "just claim" was, in the opinion of the company, to be settled by payment of £23, 16s 9d! In the laconic words of the minutes of 6th July, 1827, "Messrs. Hovey and Ward declined accepting the above settlement" (ibid., p. 376).

Hovey and Ward apparently never did get a satisfactory settlement, as this letter from Hovey illustrates.

Lockport, April 1, 1833

W.H. Merritt, Esq.,
St. Catharines, U.C.

Dear Sir,

I am disappointed in not meeting you at this place. You will recollect that the last time we met was at this place, when you told me that a judgment against your Company would be of

no value. The favor that I now ask of you is, answering a plain question, whether it will be good at any future time, and if so, when.

You will recollect that at the commencement of that project, I entered heart and soul in it. I put my all at stake; more than \$25,000 was expended before a dollar was received - this was effected through the confidence I had in you, and an influence I had at that time with some of our best business capitalists and most efficient and persevering operators. The course taken by the Board of Directors, ...made a beggar of Ward (who died in consequence of it, in the opinion of his physicians, friends and neighbours). The loss I sustained, and the circumstances that I was left under, you need no information from me on that point: ...

If a sense of feeling, as a man, of duty, or of justice, prompts you to answer the question I ask, and give me your impartial and candid advice, I earnestly and most respectfully request it.

Your obedient servant, '

ALFRED HOVEY
(ibid., p. 55)

It was Phelps, their erstwhile partner, who had taken over their contracts. Mackenzie asked Phelps

"Did you consult with your partners in the locks, Messrs. Hovey & Ward, before you sent to Mr. Merritt the proposition to supplant them in the Deep Cut contract which I have just read to you? - Did you shew them, as your friends, what you intended to do, and ask their approbation? (A) - Mr. Merritt, Mr. Barrett, and myself, were all at the Deep Cut. Messrs. Hovey &

Ward were absent in the States, and therefore I could not consult them" (ibid., p. 86).

Phelps answered questions put to him by Merritt:

(Q) Did I not converse with you freely while putting up your machine in the Deep Cut, respecting the contractors endeavoring to extract what I thought an unreasonable price for the excavation?

(A) Yes, you did.

(Q) Did I name to you a price I thought the directors would be willing to give from top to bottom for the Deep Cut; and ask you if you would not contract for some part of it, and if so what was your reply? (A) Yes you did; the price you named was 30 cents and I replied that I did not wish to contract for any part of the work at the Deep Cut.

(Q) Did I not come to you after you had tried your machine and ask you to shew me by calculation what it would cost per yard to remove the earth by this method?

(A) Yes, I was sick with the fever and argue at Vanormans. I told you that I must decline making calculations, as I was a contractor with Hovey & Ward for the locks, and that by so doing I should give offence to them. Mr. Merritt came to me a second time and I declined. He came to me the third time, and said that all the men on the line were making similar calculations of what the work could be done for with the machine they were erecting, and that I must do the same if I expected to be entitled to the premium which was offered of \$500 for the best machine that could be erected for excavating the job.

(Q) Did I, on hearing your objections to this calculation, assure you that they were groundless, as Messrs. Hovey & Ward had given up their job, that they were only working for the time being at the estimate of the Engineers as well as their sub-contractors? (A)---Yes, and I then

made out a calculation" (ibid., p.74).

After succumbing to the third temptation Phelps sent the following letter to Merritt.

Deep Cut, 16th May,
1827

Dear Sir:

Being sensible of the importance of immediate and effective measures being taken for the completion of the Deep Cut this Fall, I will suggest for your consideration the following observations. - If machines are to be built, not a moment should be unnecessarily lost. I will firstly propose that I will immediately stake out the spots for 50 machines - and if you will have earth deposited this month as they draw it out at each spot sufficiently high for each machine, I will erect the whole of them with all the rope hooks and every part of them in order for use by the 7th day of June next; and will accept 2 cents on each yard the machines shall take out, as a liberal compensation for erecting the same, and as a reward for the benefit the Company may receive, which I am sure will not be less than fifty thousand dollars.

2nd. When this is done I will join each contractor on the most friendly terms and will purchase of them at a fair price all their horses, oxen, wagons, and carts engaged in hauling out, and will agree to take out all the earth to the bottom of the Deep Cut by the 30th day of November next for 10 cents per cubic yard - if you can agree with them on the ploughing and shoveling.

3rd. If you cannot agree with them I will make a further proposition that is, I will do the ploughing and shoveling

at fifteen cents per cubic yard, and will pay them for all their remaining teams, wagons, carts, ploughs, scrapers, shovels, shanties, furniture, and other tools at a fair valuation - the shanties to be estimated according to the number of yards that has been excavated, and that which is to do, which will make twenty-five cents per cubic yard after the machines are built - and I will perform the whole of the operation to the entire satisfaction of the Board and the Engineer and will complete the whole of the Deep Cut by the 30th day of November next, from the upper end of what is called Hargwell's to the lower end of Hovey & Ward's job.

Very respectfully,
Dear Sir,

Your obedient servant,

OLIVER PHELPS

Wm Hamilton Merritt, Esq.

N.B. - I can shew to your Engineer by a fair and close calculation that the foregoing proposition is as low as any judicious man ought to go, if it is, and I am sure it cannot be made out more so, it will leave but \$4500 to the contract, which is none too much; and it may come out nearer even than that. I can also satisfy your Engineer by exhibiting my plan of operation and every thing necessary to carry them into effect that I am abundantly able to complete the job in the time and for the price stipulated - at any rate the Company shall not be troubled with any further begging. I can also offer to the Company as security my farm and buildings here, which are free and clear except \$600 to Detrick, a hundred and odd acres at Laidlow mill with 3 good

dwelling houses, 2 barns and some village lots, with a good store and other buildings, and the best part of the steam boat on Cayuga lake, which is all free and clear and is worth altogether not far from twenty thousand dollars.

Yours,
OLIVER PHELPS

(ibid., p. 85)

Mackenzie asked Phelps about the letter, and he replied,

The letter is mine - I did decline making any calculations as to what the Deep Cut could be excavated for with my machine as stated in my evidence yesterday solely on account of Hovey & Ward having been connected with me in the locks, then being, as we ever had been, good friends and on good terms, I alleged that as the only reason why I was unwilling to enter into a calculation: I also did, as stated yesterday, decline doing the same until Mr. Merritt came to me the third time and assured me that Hovey & Ward had given up their contract and was only working under the Engineers for the time being, in addition to which I had frequently heard Mr. Ward blame Mr. Hovey very much for the course he had taken in giving up the job." (ibid., pp. 85,86).

Not surprisingly, the other contractors weren't pleased, for Phelps wrote "...the worst of all is they (the contractors) are sour and cross, and ... (1) ... cannot talk without being accused of either unfairness, dishonesty, or of committing a trespass by making out bills" (ibid., p. 87). (Phelps paid for equipment from the other

contractors by notes, i.e. bills). In his evidence, Phelps said "I think they had no good reason to be displeased with me ..." (ibid., p. 88).

The opinions of Ward, Hovey, and the other contractors are probably best summed up by Mackenzie, who asked Phelps,

Has not the results of your interference in the contracts of your brother contractors who were going on with the excavation of the Deep Cut, been to deprive them of the employment in which they had invested their means, and by which they earned their livelihood, while at the same time, although you was enabled to supplant by under bidding them in the work they were going on with, you have since come forward and claimed the additional prices they would have regularly obtained had you not been successful in monopolizing the whole work - and all this, although you had then plenty of employment as a contractor for 34 locks - work going on at the same time? (ibid., p. 88)

The evidence that I have presented contains two items that are, I argue, strongly suggestive that Merritt and Phelps were partners. The first is the appendix to Phelps' letter bidding for the Deep Cut contract, and stating the anticipated profit. It is virtually unheard of for a contractor to tell the contractee the anticipated profit - unless the contractee is to get a rake-off. The second piece of evidence is the fact that Merritt would tell Phelps that the board was prepared to pay 30 cents a cubic yard, an unusual statement for the agent of the Canal to make.

Phelps and Merritt, of course, denied any partnership.

There is, however, another piece of evidence which was not available in 1836. In 1828, Oliver Phelps built the 'Red Mill', which was originally a concession to build a saw mill, but was built to grind flour. Merritt, who was not mentioned in the application to the board for the water rights, was a partner in this mill. For his half share, he received \$1,125 in 1832 (J.P. Merritt; 1875; p. 136). Merritt and Phelps were, I believe, partners in the canal as well as the mill.

The testimony by Phelps, that he never received favourable treatment, is nonsense. Phelps received an allowance of \$2,491 for losses on the sale of cattle "the same allowance having been made to other contractors". He also received \$1,077 "to winterizing the same after the work stopped", \$1,000 "for superintendence of the aqueduct", and \$2,000 "for two years services" (Third Report, p. 54) - a total of \$6,568. Evidence demonstrated that no other contractor had, in fact, received allowances for cattle, and the idea of paying Phelps money to supervise his own contracts is ludicrous. He was, clearly, favoured by the board.

Having received the contract for the Deep Cut, however, Phelps moved rapidly to get everything under his control. He bought up the equipment of the other contractors for \$3,000, which was advanced to him by the Canal Company,

and in addition borrowed \$7,000 (ibid., p. 375). On the 6th of July, 1827, he borrowed a further \$500 (ibid., p. 376), was advanced \$1,230 on August 10, 1827, (ibid., p. 377), and had received a total of \$9,500 in advances by the 24th of November, 1827 (ibid., p. 380). On the last mentioned date, since the directors "...see no reason to mistrust his ability, prudence, or good faith...", they gave Phelps an additional \$2,000 "...to enable him to discharge unsatisfied claims of labourers and others" (ibid., p. 380).

The local newspaper, meanwhile, was filled with confidence regarding Phelps and the Deep Cut,

A large force is employed on the Deep Cut; a great quantity of earth is daily removed; and every thing presents an appearance of the greatest order and regularity. The present Contractor, Mr. Oliver Phelps, is certainly the most industrious and indefatigable man we ever knew. The job was taken the 1st of June; since which he has purchased and put in motion 15 or 20 machines, and about 250 yokes of cattle, besides a great number of horses, carts, wagons etc., etc. He has, also, made upwards of 20 roads up the sides of the cut, for hauling out the earth; erected a large temporary building for mechanicks to build and repair wagons, carts, ploughs, and other canal implements during the week; and to serve as a meeting house on the day which we are commanded to keep holy. In addition to all this, Mr. P. has put up a large house, and divided it into suitable apartments for a store, an office, and a genteel boarding-house, and large enclosures for cattle, etc.; and, in company with Jacob Keefer, Esq. Postmaster, Thorold has procured from New York and Montreal, a very extensive assortment of almost

every kind of Goods, suitable for the canal and country markets, which have just been opened, at their new store, at the Deep Cut. (F J & WCI July 25, 1827)

Phelps was, of course, using his own money to better advantage than buying equipment and paying his employees, for as the article indicates, Phelps and Keefer had gone into partnership in two stores, one at each end of the Deep Cut. This is the same George Keefer who had been the President of the Welland Canal Co., and was currently a Director.

Phelps' first act on getting the Deep Cut contract (indeed, it was actually three days before he got the contract), was not getting an advance from the board, or opening his new stores, but in recruiting a labour force. He ran this advertisement,

L A B O R E R S

Wanted on the

WELLAND CANAL

As the Company are determined to finish this Canal the present season, good encouragement will be given to all classes of Labourers: \$12 per month will be paid to common shovellers, with a privilege which will render it not difficult to obtain \$15. Good, active, smart men, as teamsters and men to hold the plough, can have from \$15 to \$18, with a chance of earning and receiving more: smart, active men, who are capable of keeping the time and overseeing 25 men, can have \$20

per month, with a chance of extending their wages to \$25. Any person that will bring on to the work two good stout cart, shall receive \$26 per month, and himself and team found; and can have employ until the Deep Cut is completed. Any person employing and bringing on fifteen good shovellers, shall be entitled to the wages of an overseer, and hold that station, and may draw for his men the wages above stipulated; or seven cents per yard for shovelling into carts or wagons, (after the earth is ploughed up) and his own pay as an overseer. All those wishing employment in any of the above situations, will find it their interest to apply immediately.

All persons employed on this work may be assured, that good Rules and Regulations will be adopted; and, although the country is generally healthy, still sickness is more or less prevalent in all places: Therefore, the Subscriber will erect a suitable House for the accommodation of the sick, where all necessary Medical aid will be administered to the labourers, gratis, together with all other attention that the nature of the case may require. All classes of MECHANICKS will do well to visit the Welland Canal, and judge for themselves of the encouragement offered.

Application may be made to the Subscriber, who has contracted to finish the Deep Cut, and is concerned in building all the Locks, and who will generally be found at the Deep Cut.

N.B. Cash will be paid for 100 yokes of good, young, working OXen, and for all kinds of grain.

OLIVER PHELPS

Centreville, May 28, 1827
(F J & WCI May 30th, 1827)

Phelps, who was nothing if not a man of many parts, in addition to his enterprises constructing thirty-four locks, the Deep Cut, stores, boarding houses, and offices, "...commenced building a large stone distillery, to run 100 bushels per day" (Third Report, p. 54) by the 1st of Sept., 1827. At about the same time, that is "...the fall of 1827" (ibid., p. 76) Phelps gave the Canal Company the bad news that "...it was doubtful wether...(he)...could finish it at the contract prices, but ...(he)...would perform the work in the most economical manner ..." (ibid., p. 76). At that time he had had the contract for about three months, and had undercut Ward, Hovey, to get it. He had also contracted to finish the Deep Cut by December 1st, 1827, which he was also unable to do. Phelps explained it in this way:

After commending the work and ascertaining that a good deal of earth of the sides of the canal, and old roads, which had been estimated in the previous work, and not being able to obtain a sufficient allowance for taking out the same, and also the excavation becoming harder and more difficult, together with an extra waste of time in watering cattle, and another fact of the soil being of such a slippery clay nature that instead of losing two days in a month by wet weather according as I had calculated, the roads were so slippery in wet weather that on an average from 4 to 5 days per month were lost, at some times full 3 days in a week. I was necessitated to ask further aid and assistance or stop the work, as it will be seen what little property I had was

300 acres of land lying on the canal, and houses and lands, steam boats, & c., in the States, and having no means of my own of prosecuting the work (ibid., p. 86).

The board, of course, continued Phelps as the contractor for the Deep Cut, but now Phelps was operating under a virtually open-ended commitment from the Canal Company for rather than receive a total of 27 cents per cubic yard, he was to perform it in "the most economical manner" (ibid., p. 76). It seems to have been the case, as another contractor testified that "...Mr. Phelps, at the onset of the work, by getting large advances, placed the company completely in his power (sic), and continued them so" (ibid., p. 574).

At the annual dinner commemorating the anniversary of the commencement of the Welland Canal, held on the 30th of November, 1827, Phelps was one of the guests of honour representing the contractors, and he "...made short and pertinent replies on the several occasions" (F J & WCI Dec., 5, 1827) i.e. answering toasts.

It was a fitting climax to a successful year for Oliver Phelps, but unfortunately the same was not true of George Keefer, for he left the partnership in the Deep Cut stores on September the 10th, 1827 (F J & WCI Oct. 24, 1827). The partnership had only survived for about two months, and we don't know the reasons for its dissolution. Phelps did, however, have another friend on the board of directors,

William Hamilton Merritt, so he was not without influence even though he and Keefer had reached the parting of the ways.

Phelps started the New Year of 1828 by proclaiming his "Rules and Regulations for the Deep Cut". They were as follows:

1st. As profane language is highly offensive to God, and dishonorable to rational men it will be wholly discountenanced; and those who cannot bring themselves to dispense with it cannot be longer employed on this work.

2nd. As Sabbath Breaking is a great evil, and has an unhappy influence upon society generally, it is to be hoped that all persons engaged on the Deep Cut will feel disposed to reverence the Holy Sabbath, and as far as circumstances will admit give their attendance at the House of Worship; and in no case indulge themselves in drinking or tippling at the groceries or taverns, on that day especially. Every person in the employ of the subscriber, let his religious tenets be as they may, shall be entitled to equal privileges and equal protection.

3rd. No quarelling or wrangling will be admitted on any occasion whatever; and every such offence will lesson the persons engaged in it, in the estimation of their employer, and however the first offence may be disposed of, a second will meet with a final discharge.

4th. It is the particular request of your employer, that every person as soon as he quits work at night, will put on suitable clothes to preserve health, and at an early hour retire to rest. No gambling will be countenanced; and those who cannot dispense with it must not expect the approbation of their employer, or stay long on the work.

5th. A comfortable house will soon be erected for the worship of God, and some good ministers of the gospel will be engaged to preach every Sabbath.

- A large and suitable house is already provided for the reception of the sick, where medical aid, with other necessary attendance, will be administered gratis to the labourers, and at the expense of their employers. - All those who comply with the first four articles, will be entitled to the privileges of the fifth.

As a further encouragement to the hand employed in completing the Deep Cut, the following advantages are afforded as a premium, to those who wish to make money themselves, and see this great work speedily completed:

1st. The Deep Cut will be divided into as many sections as there may be machines - probably about fifty; each section will require from 12 to 15 shovellers, one overseer, and five or six teams.

2nd. Shovellers' regular wages will be \$12 per month; but should they average eleven yards per day, (after the earth is well ploughed up,) their wages will be increased to \$13; and an additional dollar per month will be paid for every extra yard of earth they may average per day.

3rd. It will be equally to the advantage of each teamster to render every assistance by his industry and activity, and by placing his waggon or cart in the best position for the reception of the earth, and by every other assistance he may render, and every one complying with this article, and who is faithful in taking care of his team shall have his wages increased in exact proportion to that of the shovellers who load his waggon or cart.

4th. Every overseer who shall prove himself deserving the station he holds,

by endeavouring to preserve peace and good order, and a uniformity of operation, so as to enable his men to be benefited by his good management, shall have his wages increased in exact proportion to the shovellers.

5th. As very much depends upon the skill and activity of the overseers of each company the following PREMIUMS will be paid at the close of the work among the overseers:

The Overseer that produces the greatest number of yards, according to the number of days shovelling during the whole job, shall be entitled to and receive a premium of One Hundred Dollars. Second best \$90: Third best \$80. Forth do. \$70. Fifth da \$60. Sixth da \$50. Seventh do. \$40. Eighth do. \$30. Ninth do. \$20. Tenth do. \$10.

OLIVER PHELPS

Deep Cut, 12th January 1827
(Third Report, p. 380, 381)

(The original document has the date of 12th January, 1827. In fact, it must be the 12th of Janaury, 1828.) Phelps had clearly discovered the efficiency of piece work and bonuses, which appeared to work quite well; certainly Phelps and his men moved vast amounts of earth. They were also spurred on by alcohol, for "...in those days the regular allowance for each man was six tots per day, and whenever there was extra hard work or unusual weather, the dose was increased as it was said to be not only a stimulant to greater effort, but also a sufficient protection against

heat or cold..." (Tuer, 1931, p. 15).

Since Phelps had broken with tradition on the Deep Cut, and did not employ sub-contractors, he needed six clerks (including his own son and George Keefer Junior) who "...attended promptly, punctually and correctly to all of his office work and account, paying the men, &c., and by his wise system and known liberality towards his employees, everything proceeded properly, wisely, and well; and we venture to say more labour was performed by a given number of men in a certain time on his work than on any other job on the whole line of this Canal" (Junius; 1967, A Walk Around Town! 'W' continued). He also employed a force of overseers, who were, as previously noted, paid production premiums. Love Newlove, who had been a sub-contractor under Ward, Hovey, became an overseer or foreman under Phelps, for as he said, "Having been turned out of my contract, I was obliged to work under him as a foreman, or look somewhere else for work" (Third Report, p. 15) "...I hired my four sons, six yoke of oxen, two span of horses, and myself to Mr. Phelps for anything he could give me. As soon as Mr. Phelps could conveniently turn round he discharged me, and then I had to seek my living in other ways" (ibid., p. 143). Love Newlove testified that he didn't know of anybody who got the bonuses (ibid., p. 142).

On April 15, 1828, work commenced for the new season on the Deep Cut (F J & WCI op. cit.), which was a seasonal

operation. As shown in the illustration of Phelps' invention, the carts carrying the earth from the Deep Cut moved up an inclined ramp, and conditions were virtually impossible when the ramps were covered with snow and ice. Other portions of the Canal, however, continued on a year-round basis (F J & WCI, Nov. 7, 1827). On April 24, 1828, Phelps attended the launching of a schooner, the "Welland Canal" and on the 10th of May, on the occasion of her putting out to Lake Ontario, wrote to the newspaper:

...My happiness was not a little increased, I can assure you, when I heard the unequivocal terms of approbation expressed by our worthy Lieut. Governour, and the honourable Board of Directors of the general progress and construction of the work; and of their particular satisfaction in seeing the first fruits of their labour thus honoured by the reception of so splendid a piece of nautical architecture, as your village has produced. The respectable manner in which this elegant vessel was escorted from the basin into which she was launched, to the waters of the Ontario, must have been gratifying to the feelings of her owners, and highly pleasing to the citizens of your enterprising village.

You may rest assured, sir, that nothing shall be wanting on my part, speedily to open a free passage for this same vessel, to raise and mount with her lofty masts and spars, above the towering falls of the Niagara, and welcome the happy connection of those sister Lakes, by a new and heretofore unknown channel.

Before the Welland of St. Catharines
 Shall be in icy fetters bound,
 I hope a similar celebration
 Will make the deep cut banks resound.

OLIVER PHELPS
 (FJ & WCI, May 14, 1828)

Phelps clearly considered that the "...unequivocal terms of approbation expressed by our worthy Lietut. Governour, and the honourable Board of Directors... "were directed at him. However, his prediction of the completion of the Deep Cut

"Before the Welland of St. Catharines
 Shall be in icy fetters bound"

was not to be vindicated. On the 9th of November, 1828, the Deep Cut started to collapse. It had, unfortunately, bottomed in quicksand. "Our obliging correspondent" tells what happened:

Monday Evening, Nov. 10, 1828

Dear Sir - Yesterday morning, about 7 o'clock a part of the Deep Cut bank, extending about 12 rods in front of D. McFarland's store, on the Hartwell job, settled down nearly 20 feet, carrying in one of the machines and part of the wagon road or high bank, pressing the earth from the canal bottom, where there was 4 feet water, so that it now lies from 8 to 10 feet above the surface of the water. This day, again, about noon, another slide of sixteen rods took place on Mr. Thompson's job, on the west side of the canal, and about a quarter of a mile from the first, more serious than the other.

These are alarming symptoms of the instability of the foundation upon which this bed of clay rests; and which, it seems must be nearly cut through, and so weakened as to be unable to sustain the great weight of earth resting upon it.

The water was in a fair way of getting through before Christmas; and I still think that, unless further slides continue to take place, it may yet be done this season.

...from the description given, we should think that the only way to render it permanently safe, will be to have the defective portions well timbered and piled, in the same style, only on a more extensive scale, as such places are secured on the New-York canals, in which there is not difficulty other than extra time and expense. Notwithstanding these casualties, unless still greater ones occur, of which the publick shall have due notice, we think there can be no doubt but the canal will be opened for navigation early in the ensuing season (FJ & WCI, Nov. 12, 1828).

The optimistic tone of the report, with a suggestion that the quicksand areas could be timbered, was not to be realized, for on November 19th, the following article appeared:

We regret to state, that the operations at the Deep Cut have been suspended for the present, in consequence of the late casualties mentioned in our last, and others which have since occurred. The Directors are to meet here this week, to take the matter into consideration; when, we understand, arrangements will be made for noticing the contracts for construction the harbour at the mouth of Grand River, on Lake Erie - for making the towing path on the river Welland, and

all other remaining unfinished work on the line of the canal, with a view of completing the western section the ensuing year (FJ & WCI).

At a meeting on November 22nd, 1828, the directors inspected the Deep Cut and decided to carry an aqueduct over the Chippewa River to feed the locks from a higher level. The higher level would be Dunnville on the Grand River, necessitating the rapid completion of the feeder canal (Third Report, p. 397). Luckily full scale work had commenced in October of 1827, when Monson & Co. had hired about 1000 labourers (FJ & WCI, Oct. 10, 1827).

Phelps was now in a position where he had received about \$30,000 in advances, and would be bankrupt if he had to repay them. The only solution was to try and convince the canal company that it was their equipment, and that Phelps had only been using it on their behalf. Following this plan, "Mr. Phelps laid before the Board an inventory of all cattle, carts, and other property possessed by him and transferred to the Company, the same having been purchased with advances made by the Company and not now required for the immediate prosecution of the work" (Third Report, p. 397). The board decided to sell "the above property by auction, sending advertisements without delay to York, the head of the Lake, Niagara, and also to Lockport, Buffalo, &c., taking care to prevent their being sold at an increased and unreasonable sacrifice..." (ibid., p. 397). Phelps' plan had worked and he inserted this

advertisement in the paper of November 26, 1828:

250 O X E N

For Sale at Public Auction

One hundred of which are good Beef

Together with a large No. of Ox Carts, Horses, Wagons, Harness, Wheelbarrows, Shovels, Pickaxes, & C. &c., also, eight Potash kettles, 16 Caldrons, and the Store House Contractor's Office, Mechanick's Shops, and several other Buildings, at the Deep Cut, on the Welland Canal - being the property lately had in use for executing the canal of that place.

The sale to commence on Thursday the 9th of December next, at 10 o'clock, A.M. on the premises, and continue till the whole is disposed of.

TERMS - For all sums under £10, cash down; over that mount, nine months credit will be given; upon notes of hand with approved indorsers, payable with interest.

OLIVER PHELPS

Deep Cut, November 25, 1828 (FJ & WCI)

The same issue also carried the news of the alternative plan, framed once more in the most optimistic light:

WELLAND CANAL

The Board of Directors of this company, we learn, decided at their late meeting, as the best and most effectual means of remedying the defective and hazardous state of the canal at the Deep Cut (caused by the recent caving in, and bulging up of the quick sands, or soft earth, from the bottom of the canal,

as originally intended) upon raising the summit level 12 feet, and drawing the necessary supply of water, by a feeder of sufficient dimensions for boat navigation, from the Grand river, at a considerable distance up from its mouth; and have directed the Engineers to proceed immediately in examining the situation of the country, and to ascertain, by actual surveys the best route for laying out the proposed lateral canal.
(op. cit.)

When Phelps had started the Deep Cut contract "... there remained to be excavated ...677,328 (cubic) yards" (Third Report, p. 380). There is no way of knowing how much earth was actually removed, but Phelps received a total of £43,775, 14 shillings and 1 penny, or approximately \$175,000 (ibid., p. 423). (According to Merritt, the total expense of excavating the Deep Cut was £86,223 (ibid., p. 417). Mackenzie questioned Phelps about this:

(Q) It appears by the books of the Company that you received not only your contract price for so much of the remainder of the Deep Cut as you excavated before the slides took place, but also an advance of about ten thousand pounds beyond the Engineer's estimates; that from this ten thousand pounds an allowance of five thousand dollars and then another allowance between 7 and 8000 dollars were made you, although the result of your labors was a failure; and that for the remainder of the money amounting to £7558 you are now entered on the books of the Company as a defaulter. I am informed by the officers that they are unable to produce the original contract

made with you on this transaction, involving as it does an expenditure of about £50,000 - that it is lost, and that they have no copy - Mr. Beaton states to me that he is not sure that he ever saw that contract. You were asked for the duplicate of it some days since - are you now prepared to produce it? (A) I cannot now - I am not certain that I have it in my possession - I will send it to the Committee if it is to be found (ibid., p. 86).

At the end of 1828, however, Phelps was by no means finished with the Canal. On the 21st of January 1829, Phelps got the contract for the Aqueduct across the Chippawa River, worth £1525 (ibid., p. 423). Phelps would soon receive the contract for a lock on the Grand River (£150) and a contract for £2180 for new locks necessitated by the change in plans of the Canal. He also obtained a contract for five miles of the feeder canal, worth £1750 (ibid., p. 423). The directors, presumably, still saw "...no reason to mistrust his ability, prudence, or good faith". On August 13th, 1829, Phelps persuaded the board to increase his contract for the Grand River lock from £150 to £225 (ibid., p. 410). In February of 1830, Phelps was to be attacked by Barrett, the company engineer "Mr. Phelps' work goes slow from the frost. Money will take out the frost (sic)" (Barrett to Merritt, Feb. 7th, 1830, Merritt Papers, Archives of Canada). The Company was, of course, once more in arrears to everybody and Phelps appears to have been conducting work

on a "go slow" basis. The Company, paring expenses, informed Barrett at the next board meeting, on March the 8th, 1830, that they had to dispense with his services and simultaneously hired Phelps as a superintendent at \$250 per annum "as proposed by him in settlement of his account!" (ibid., p. 459)

Phelps was not interested in dealing with the company when they couldn't afford to pay him on time, and severed his connections with them. He had collected a total of \$78,328 (ibid., p. 423) and in addition collected \$11,500 in advance which was "...amicably settled between the Directors of the Welland Canal Company and myself and all sureties given up on the part of the Directors by my giving them as I did a certain piece or parcel of land of 40 or 50 acres joining the canal at Centreville valued at \$1,500" (ibid., p. 87). The valuation was, of course, made by Phelps. He had received a grand total of \$89,828, and had given up 'property worth \$1,500'.

Out of a total expended of \$269,746 (ibid., p. 423), Phelps had received approximately one third! Not surprisingly, Love Newlove was able to testify "I have since heard it said that Mr. Phelps is very rich, I have heard him speak of property as his, consisting of a farm, a grist-mill and saw-mill, within a mile of St. Catharines" (ibid., p. 15). My own judgement is that Oliver Phelps was that splendid Nineteenth Century creation, the mitigated scoundrel.

Although Phelps, at the age of 50, had left the affairs of the Welland Canal to pursue his other interests, the family connection was maintained. George Keefer, junior, became the engineer of the Company, and Thomas Merritt became a contractor. Orrin Phelps, son of Oliver, had become a contractor in 1829. None of them would match the chutzpa of Oliver Phelps. Who could?

CHAPTER FOUR

THE LABOURERS

A labour force was necessary for the construction of the Welland Canal, and in 1823, before the company's charter had been received, Merritt tried to recruit one. The timing was fortuitous, for "...the Erie Canal was fast approaching its connection with the Lake, so that a favourable opportunity would present itself to experienced contractors and workmen who would then be out of employment, to come in and undertake works on our canal ..." (J.P. Merritt, 1875, p. 55). In July of 1823, Merritt was in Lockport, N.Y., where he found that "There is no impediment whatever in our plan; the course of this canal (the Erie) and all I have conversed with confirms me in this opinion; an advantage will be derived for beginning early, as many of the contractors being out of work will have all their tools on hand and prepared to commence immediately..." (ibid., p. 57). It seems a reasonable assumption that the labourers were recruited from the Erie, for almost everything else was. As we have already seen, Ward, Hovey, Marshall and Phelps were recruited as contractors from the U.S. as were many others that I have not cited. The equipment was also imported, for when Merritt was asked, in 1836, "What amount of duties has been paid by the Canal Company on importation of tools,

cattle, and materials from the United States?" His answer was "£631,19,2d" (Third Report, p. 417). The men probably accompanied the tools.

Construction actually started in 1824, and by November, 1825, a large labour force was at work. Merritt describes the conditions in this way.

The harvest this year was an abundant one, and a general idea of improvement seemed to pervade all classes; business was good throughout the country; work on the canal was going on rapidly; six hundred labourers were employed, and more wanted. It was expected that the whole line would be under contract by Spring. The marked change along the route was wonderful. Where the forest stood a short time ago, was now a scene of life and bustle. The sharp rattle of the axes hewing and carving their way through the old woods; the unceasing hammering of the pick on the clayey banks, and occasionally the crash of a falling tree, mingling with loud gunpowder explosions when a blast was discharged, all lent a charm to the work which none enjoyed more than our subject, whose busy brain found ample swing; now at one place, now at another, superintending, watching, settling disputes, arranging details. In fact, if ever man had his "hands full", Mr. M. at this time had his. One hundred dwellings were on the summit, occupied by mechanics, labourers, tailors, shoemakers, store-keepers and others.

At the entrance of the Twelve Mile Creek, the works on the harbour inaugurated by the erection of a number of shanties, material collected &c., for the extensive works required at that place" (J.P. Merritt, 1875, p.77).

The six hundred labourers mentioned by Merritt were a very large labour force indeed, for the population of Upper Canada was, at that time, approximately 150,000. If one-quarter of the population was an adult male capable of work, the potential work force was 37,500. The six hundred labourers on the Welland thus represented approximately 2% of the potential work force. In fact, of course, the vast majority of the potential work force were farmers, and this influx of labourers represented, in a very real sense, the creation of a wage labour force in the Niagara Peninsula. The way in which the labour force on the Welland Canal was managed was a continual process of experimentation, in which Phelps, as we shall see, was the leading innovator.

At least as early as May, 1827, efforts were being made to recruit immigrants for the labour force on the Welland, for we find the Board of Director ordering, on May 21st, 1827, "That Mr. Walker (the Company's agent in Lower Canada) be requested to have hand-bills printed and circulated at Quebec, more particularly to the emigrants (sic) there, on landing, stating that any number of persons will obtain employment and good wages on the Welland Canal" (Third Report, p. 373). In the same month, May, 1827, the following article appeared,

DEEP CUT - The excavation at this place has already commenced with much activity; where we learn, constant employment will be given immediately to as many labourers and teams as can

possibly work to advantage. We hope our farmers and teamsters will avail themselves of this opportunity and come on with their teams from all quarters without delay, and there by retain the money in the country, which must otherwise unavoidably pass into the United States, to procure the necessary assistance; particularly, as team work will only be wanted about two months. During this time, there will, also, be a steady demand for all kinds of coarse grain, hay and straw, and a liberal price given (FJ & WCI, May 2, 1827).

The idea that money "...must otherwise unavoidably pass into the United States..." indicates that the labour force was still almost exclusively American. The "local farmers and teamsters" had, almost certainly, been employed on the Canal since its commencement, but on a fairly casual basis, since the needs of their own farms would be preeminent. In 1827, the need for labourers hit new heights, for Phelps would employ at least 800 (FJ & WCI, Aug. 29, 1827) on the Deep Cut, and Monson would employ another 1,000 on the Wainfleet Marsh (ibid., Oct. 10, 1827). In addition, work was proceeding on the locks, the harbour at Port Dalhousie, and other small contracts, so that the total labour force employed could not have been less than 2,000 in 1828, and may very well have approached 2,500. In 1829, when work was concentrated on the feeder canal, labour needs were intense, for the Board told the contractors, by means of a circular, "...that so soon after as his contract is finished and received by the Company he shall be employed

with all his hands on another contract at the same price..." (Third Report, p. 409). In 1829, the labour force peaked, at a total which may have passed 3,000 men. With the opening of the Canal in November, 1829, virutally no new construction was undertaken in 1830, and it was not until 1832 that the labour force once more approached 800, which was more or less maintained until the completion of the first Canal in 1833.

As I have argued, and the newspaper indicates, the labour force in the initial stages was recruited in the United States, along with the contractors. By July, 1826, however, a shortage of labour had developed, as this editorial indicates,

Labourers Wanted. - We are informed that a scarcity of labourers prevails, at this time, on the Welland Canal; and that several hundred able bodied sober men are now wanted, to whom liberal wages will be given. The situation is healthy, there not having been more than three or four deaths by disease, as far as we can ascertain, on the whole line of the canal, since its commencement, and the price paid is from 10 to \$15 per month. The men now employed generally enjoy good health. (FJ & WCI)

The wages of "\$10 to \$15" per month apparently attracted enough response to fill the needs of the contractors, for it was not until the spring of 1827 that the next advertisement for labourers appears. It seems reasonable to assume that, up to this time, \$10 a month had

been the minimum normal wage for labourers. The spring advertisement read as follows:

LABOURERS & TEAMS

Wanted on the

WELLAND CANAL

500 LABOURERS & 100 TEAMS, will find immediate and constant employment, at the DEEP CUT, on the Welland Canal, for the term of at least two months from this date. Prompt payment, and liberal wages will be given. Apply to either of the Contractors on the line of the canal. St. Catharines, U.C.
May 8, 1827.

(FJ & WCI, May 16, 1827)

This ad could not have provided the desired result,
for Phelps' ad of May 30th (which is reprinted in the previous chapter) was now offering \$12 to \$15 per month, along with numerous incentives. Cash bonuses were the least of it, for Phelps offered a choice of piece work or monthly wages, together with a promise of free medical and hospital care. Of course, as was usual with Phelps, the reality could be somewhat different. A James Trotter was employed by Phelps, and testified, in answer to Mackenzie's questions,

...He employed me the last summer that he worked on the deep cut to let the shovelling out by the yard, and he would pay seven cents per yard for shovelling it into the carts; the deep

cut was arranged with a certain number of runs where the machines were fixed for carting up the muck - he was to have the earth ploughed for them. On these conditions I let the work out as I thought the men could make good wages at seven cents per yard for filling in. The men worked very hard for one month and got their estimates, and had only from three to six dollars a month, after paying their board; the men turned out and would not work any more; he wished me to get them to take it for another month on the same conditions, as he said he thought there was something astray in the estimates, and I persuaded them to try it another month, at the expiration of which they had only from eight to twelve dollars a month, after paying their board, and I considered from the way the men worked for the two months, that they ought to have had from fifteen to twenty dollars each month after paying their board. He then hired the men at twelve to thirteen dollars per month, and paid their board. I always considered that the men never got a fair statement of the quantum of the work from Mr. Phelps, as they did it by the yard (Third Report, p. 163).

The most striking thing, however, is the degree of sophistication demonstrated by the Phelps ad, along with the increase, at least nominally, in the wages. With Phelps in command, ads were run in the Kingston papers (FJ & WCI, July 11, 1827) for "7 or 8 hundred labourers", while Phelps' original ad was run until September 5th, when he changed it to the following:

IMPORTANT TO
LABOURERS

The encouragement given at the DEEP CUT is such, that the Common Labourer is actually receiving from

Thirteen to Seventeen

DOLLARS per month, besides a number of PREMIUMS to be distributed when the work is completed, among those averaging the most labour. It continues very healthy here - only one having died, out of 800 labourers and about 150 families, for the last two weeks.

OLIVER PHELPS

Deep Cut, Sept. 5, 1827
(FJ & WCI, Sep. 5, 1827)

Once again, wages had risen, since the minimum was now thirteen dollars a month. This was not surprising, for

Mr. Phelps has doubled the force formerly employed at the Deep Cut, and is making astonishing progress, considering the casualties inseparable from the circumstance of introducing a new system of operations on such an extensive work, ... (FJ & WCI, July 11, 1827)

Phelps was not only innovative in his appeal for labourers, but in his use of public relations. Clearly, he anticipated that many potential labourers were reading the papers, for this letter appears to have been for general publication.

It has been the endeavours of many to send forth a general clamour, that the work, at the Deep Cut was unskillfully managed, and that it never went on so tardily. This should be overlooked, as it might have been a sin of ignorance. But to proclaim, from Dan

to Bersheba, that we were dying off by scores, both men and cattle, needs a little truth to remove the unfavourable impression that has gone abroad. The truth is, it was never more healthy in any place, at this season of the year; and those reports are, probably, the last resort of the disappointed enemies of the Welland Canal, whose disposition it is never to rest satisfied with any improvement, except their names are enrolled at its head.

The average number of labourers on the Deep Cut is about eight hundred: out of which only three persons have died since the first of May last, as can be substantiated by reference to the time books kept by the contractors, in which every person's name is recorded who has performed a day's labour on the work; and although a large house has been prepared for a hospital, where all medical aid, together with all other necessary attendance that the nature of the case might require, is offered gratis, still there has not been a solitary instance of a person being brought to it.

Editors who will favour me with an insertion of the above, and send one of their papers, with a bill of publishing, shall shortly receive the amount of the same.

OLIVER PHELPS

Deep Cut, W.C. August 24, 1827
(FJ & WCI, Aug. 29, 1827)

Phelps' advertising campaign appeared to work, for in the spring of 1828, the paper reported,

We understand the work has commenced this spring with much spirit, and that it is the intention of the contractors

to use every possible exertion to ensure its completion, from the Welland to Lake Ontario this summer. There are a number of men and teams already employed, and we daily see labourers arriving at this place, by Steam-boats and Packets, and proceeding to the Canal. The locks are in quite a state of forwardness on the whole line, as the attention of Mr. Phelps, the contractor, during our late open winter, was chiefly directed to their completion (FJ & WCI, April 9, 1828).

Wages appear to have stablized at a minimum (nominal?) level of \$13 per month, although towards the end of the year, in October, the Company was advertising for "2 or 3 hundred" labourers (FJ & WCI, Oct. 15, 1828). This appears to have been due to the determination of the Welland Canal Company to finish the Canal before year end, but these hopes were dashed with the collapse of the Deep Cut in November, 1828. The brief additional demand for labour appears to have had no effect upon wages, for in 1829, Phelps was, once again, offering \$13 per month. Phelps, in the following ad, appears now to be in charge of hiring (or at least advertising) for all the contractors:

LABOURERS WANTED

The Welland Canal Company have lately put under Contract five miles of FEEDER or new Canal; a DAM across the Grand river; together with a heavy Embankment upon the flats adjoining the river; and there still remains much to be done along the line from the Aqueduct over the Welland to the Grand river.

Liberal wages is, consequently, paid to good hands. The present price is \$13 per month, which will probably continue thro' the season. It is uncommonly healthy, and the work is in good order. LABOURERS can apply to H.N. Manson, St. Catharines; the different Contractors on the Line; Judge Wilkinson, at the Dam; or to the Subscriber, who superintends the five miles of new Canal.

OLIVER PHELPS.

Grand River, June 8, 1829
(FJ & WCI, June 10, 1829)

In July, labourers were still being recruited, for the paper mentions that handbills were being distributed, and the Welland Canal Company was once again advertising directly, (FJ & WCI, July 15, 1829) presumably attempting to finish the Canal. This time their efforts were successful, and the Canal was finally completed in September, 1829. The spring of 1830 saw a shortage of labour, which delayed the widening of the feeder canal (FJ & WCI, May 19, 1830). In January, 1832, an ad for 500 labourers did not specify the wages, although it seems reasonable to assume they did not exceed \$13 (FJ & WCI, Jan. 18, 1832). Merritt attributed the difficulties in recruiting labourers to the 'cheap' price of land, when he said,

The work on the Lake Erie route progressed but slowly, through a scarcity of hands, although liberal inducements were held out. The want of cattle was sadly felt. Advertisements were inserted in the papers, calling for hands; and although a number of emigrants were daily arriving

from Europe, yet, the prospects of becoming producers, and getting a good price though forwarding facilities, and lands being yet cheap, diverted many to agriculture (J.P. Merritt, 1875).

In fact, of course, the difficulty in maintaining a labour force had at least two causes, in addition to the attraction of cheap land. The first, and most obvious, was that the labourers often did not get paid. As previously mentioned, Phelps owed his labourers £2,000 or \$8,000 at the end of 1827 (Third Report, p. 380). Since he had approximately 800 men employed, he was in arrears about one month's wages at that time. By the end of 1828, the Deep Cut had collapsed, and it is extremely likely that Phelps was in arrears with the labourers once more. In 1829, the wage arrears would be chronic, for on January 15, 1830, Merritt testified "...the hands are now working on credit. (Q) Do they accomplish as much work as if they had their regular pay? (A) The work is not done so low (sic) as if regular payments were made - but the men have worked as faithfully as could possibly have been expected" (ibid., p. 418). The scarcity of labourers previously noted on May 19, 1830, seems satisfactorily explained. In fact, the Company had, at the end of 1829, owed the contractors and labourers a total of £10,115, or \$40,460 (FJ & WCI, Jan. 13, 1830). On the assumption that the labour force had, in fact, reached a total of 3,000, this represents slightly

more than a month's wages - and the majority of the work had been finished in September!

The other major cause of a transient labour force was the lack of steady employment. As noted previously, the Deep Cut was a seasonal work, closing about November and recommencing in April. The burden of lost time due to bad weather was also however, carried by the labourer, and that lost time could be considerable. Phelps testified that he counted on losing two days a month, but lost, in fact, four to five days, and "at sometimes full three days in a week" (Third Report, p. 86). Given a six day working week, or 24 working day month, a loss of five days would reduce the wage from \$13 to about \$10.50, out of which six dollars had to be paid for board. Discretionary income would thus drop from \$7 a month to \$4.50, and this was, in fact, the only money that the labourer saw, for Phelps, for example, deducted board direct from wages (ibid., p. 163). The purchasing power of money can be approximated from a contemporary letter, written by John Armour, in 1830,

You want to know the price of provisions, &C. - wheat sells at from 4 to 5 shillings, butter for 6d to 7½d per lab., cheese about the same as butter, potatoes 15d per bushel, tea & sugar are (about?) the same as with you when I left Scotland. Beef 2d & 3d per lb. Fresh port about from 2d to 3d per lb. you will observe that all the weights & measures here are the old English the same as before the change took place a few years ago a(t) home.

As to the price of lands, it varies greatly according to the quantity of land that is cleared and fit for tillage. Wild land you may get for a dollar (an) acre & 2 dollars, but a farm with 40 or 50 acres cleared will cost 6 or 7 dollars an acre. Upon the whole, cheap as provisions are in this country and also land, money is exceedingly scarce and every man going on a new farm has many hardships to endure; he is perhaps far from neighbours, has bad roads, has to carry on his back anything he wants, because no horse can pass the roads. But in a thickly settled place near a village & where he has a large clearance and grain to sell he has considerable comfort (Quoted by Armstrong, 1973, pp. 85,86).

John Armour's letter indicates that Merrit's concern, that potential labourers were being diverted to agriculture, may not have been misplaced. Another almost contemporary source, however, W.I. Imlach, gives more prices, but maintains that farming was not profitable.

As I had become tired of this bush farming, I rented my farm, eventually sold it, and moved over to the east side of the harbor, built a house, a store and sawmill, and commenced business, which was more congenial to me than this so-called farming, without a market for anything you produced. By giving some account of this store work, and the prices paid, and that mostly in trade for goods out of the store, it will be seen that farming could not be a profitable business; ...Compare the prices of today with the following, and paid in goods, viz.: Butter (so-called) ranging from eight to twelve cents; eggs from six to ten cents; oats about thirteen cents; potatoes not over twenty-five cents per bushel; cord-wood one dollar per cord

delivered at the canal; wheat was the only cash article, and not over 30 cents per bushel, and part in trade; fowls, ducks 25¢ a pair; geese 30¢; turkeys, best 50¢, and in the same ratio for all other articles; horses, cattle, sheep, etc., were almost unsaleable, and you had to take any price you could get for them (Imlach, 1937, p. 73).

(Imlach reached Dunnville in 1836, so prices may not be strictly comparable.)

The labourers, however, may not have considered farming as a viable alternative to wage labour. The author of an history of Dunnville claims "The progress of the new village was, however, for some time very slow, as most of the labourers employed on the dam and Feeder lived in boarding houses, and after the works were completed moved away" (Page, 1879, p. 15).

The immigrants who were recruited after 1826 were exposed to conditions that are virtually unimaginable today. *
Imlach, who crossed the Atlantic in 1836, described the journey.

We unfortunately had two deaths during the voyage - one a child, the other a young man who had his wife and infant with him as steerage passengers. These cast a sad gloom upon all, especially the latter, in sympathy for the poor young widow who was so suddenly bereaved under such trying circumstances. It was soon ascertained that she was not only alone, but without any means beyond enough for a few days' board after reaching New York. However, a subscription was at once taken up

all through the vessel, which resulted in quite a nice amount. As one who was collecting this, I paid a visit to the steerage, which was truly sickening, as some five hundred seemed to be crowded into a space not fit for more than half that number. The narrow passages between the berths had been named Main, Starboard and Larboard streets. The sanitary and moral condition of this miserable hole was something awful. It seems difficult to understand how these people could exist for six weeks in such a place, for most of them were not on deck during the whole voyage. However, it is pleasing to know that under our present system of inspection and navigation laws the unfortunate poor emigrant meets with more humane treatment (Imlach, 1937, p. 7).

Those who survived the voyage travelled to their destination, where conditions were comparable. (If, that is, their destination was the Welland.)

Here were men subsisting on the coarsest fare, holding their lives as uncertain as those of the leaders of a forlorn hope. Men excluded from all the advantages of civilization, often at the mercy of a hard contractor, who wrung his profits from their blood - blasting rocks, digging in the hard clay, uprooting trees, clearing the ground of briars - and doing all this for a pittance that merely enabled them to exist. The fetid exhalations arising from the pestilential swamps in which they were working produced diseases unknown and unheard of in their own country. The Irish laborers of those days stood in trenches up to the knees in water and mire, and the putrid exhalations rising from the earth consumed them with fever or set their teeth chattering as with cold, while the sweat rolled from their

foreheads. They waded knee deep in black muck, wheeled, dug, hewed, bore heavy burdens on their shoulders, exposed at all time to every change of temperature, till stricken down with fever, they took refuge in the shanties, and in narrow bunks trembled with disease (Harris, 1895, p. 260).

John Armour gives us more details of the sickness,

The first sixteen months I was in this country I never enjoyed better health, since that time I have been almost constantly sick. On the 5th of Sept., 1829, I was seized with the ague & Fever, which confined me till the end of April 1830, about 9 months. As the ague and fever is a disease that you never saw, I believe, I will give you a description of it. It generally arises in low marshy grounds, in high mountainous land it is never found. It attacks you in fits sometimes once a day - sometimes twice and sometimes once in two days. When the fit of sickness is coming on, the first thing you feel is a cold chill, then you commence shaking & trembling, which will make the bed shake under you and all the bed clothes in the world heaped upon you would not make you any warmer; after you have been in this state, perhaps an hour or two, then the fever comes on, then you are warm enough and this also continues sometimes longer & sometimes shorter, it may average about five hours. This disease reduces one in a short time to nothing but skin & bone. It did so with me & I was so weak that I could not get out of bed without assistance. After getting better of this disease, I had good health till the latter end of August when I was seized with, what in this country, is called the Lake Fever, and with you is called Bilious fever; of the fever I am just now recovering, I have not been able yet to do anything and my hand trembles so from the fever that I can

scarcely write a readable hand as you may see from this letter. But I will be well and able I hope, in a few days, to do business. I had my board to pay out of my own pocket all the time of my sickness, which has been about or nearly 12 months (Armstrong, 1973; p. 85).

This was not, he told his brother, an unusual circumstance.

For instance if you were to come to this part of the country you would most likely have a season of the fever and ague and become seasoned to the climate, but with care you would get over it. It is sometimes long & tedious, but seldom or never fatal. As to other diseases, this part is as healthy as any other in the province. I would therefore say come, as soon as convenient (ibid., p. 88).

One element in the Pandora's box of diseases appears to have been malaria. It should be noted, however, that Armour was encouraging his brother to come to Canada, as conditions were, presumably, better than those in Scotland!

Merritt suffered from the "fever" (J.P. Merritt, 1875, p. 113), and Phelps had "the fever and ague" in 1827 (Third Report, p. 74). In 1829, however, a particularly violent form of "fever and ague" struck the workers on the feeder canal,

Along the line of works on the feeder the fever and ague was raging; strong men were wasted to skeletons, and the general feeling of despondancy and discontent which all these vicissitudes bring in their train was felt in the ranks of the workmen who were employed; ...The season had been a dry one, and consequently the miasma from the stirred up earth was more severe in this section than usual; so severe

had it been that the work was delayed in consequence (J.P. Merritt, 1875, p. 120).

Cholera struck the workmen in 1832.

...as soon as the cholera made its appearance the affrighted workmen fled from the scene of death. One doctor fell a sacrifice to his humane exertions, a second, hired at double pay was seized with sickness, and obliged to return to St. Catharines. No competent medical aid could be procured at any price; and upwards of seventy laborers, who a few weeks before were in perfect health, fell victims to this sweeping scourge. When the disorder abated, and the work was resumed, it was found too late for the contractors to finish their jobs before the close of the season (Third Report, p. 490).

The Canal Company was clearly only interested in the cholera deaths to the extent that they delayed completion of the Canal extension. We only know that "upwards of seventy labourers" died. No details are available on the families and children of the labourers, who would, presumably have suffered a higher mortality rate than the 10% of the males. Merritt mentions the cholera epidemic, and in a virtual aside, the fact that women were among the casualties:

On the canal it raged with great violence, falling like a thunderbolt among the workmen and others. Strong men and women were stricken down, to expire in its agonizing grasp, and as each new name was added to the death roll a dread, soon resulting in a panic, took place, which in a short time left the whilom busy scene almost as quiet as the lone woods near by. A few only remained - those, probably, who could

not leave, or whose philosophy was stronger than their fears. Its effects were serious to all, as its appalling presence cast a shadow and gloom over the country. During its prevalence in this quarter, Mrs. Merritt and the family went to Mayville, where its influence was but little felt, but our subject remained at his post, and by care on his part he providentially escaped.

"MARSHVILLE", Welland Canal,
Sunday, 21st, July, 1832.

My dear Catherine:

On Monday last, I breakfasted at Mrs. Bennett's Grand River, on the same kind of fish the boys and I caught at Chatauque lately:

Left the dam on Monday, at 1 o'clock; went to Greabel's. Heard that the cholera had commenced its ravages that day at Gravelly Bay - three deaths. Went on to the Bay that evening, and found Conrad, a contractor, (the man who married Miss Shaw,) with a man by the name of Henry, working on the lock, and one Ross, a labourer, at the same place, was dead, and taken only that morning. Three or four others were considered dangerous. One only has since died, the others recovered.

On Tuesday, went through the line with Mr. Lewis, and as no new cases occurred that day, the men generally resumed their work.

Slept at Holms', Deep Cut. That night Lewis was taken: in the morning (Wednesday) sent to St. Catharines, for Drs. Cross; and Converse, who was up at Gravelly Bay. Lewis was very much alarmed, and I could not leave him until Cross arrived about 2 o'clock;

Mr. Fuller had bled him, and I gave him two pills of opium; he got better immediately, and is now well. Returned to Gravelly Bay that night, to quiet the minds of the men respecting Mr. Lewis. We found all who got medical aid and were bled, recovered; as it was chiefly among the intemperate. Had hopes of continuing the work, but on reaching Gravelly Bay, found Dr. Ellis and Mrs. Boles had taken it. Remained there until 12 o'clock, Thursday, and left for Dam with a determination to let every one take their own course - stopping the sale of liquor, and providing doctors on the spot (J.P. Merritt, 1875, pp. 134,135).

Merritt's claim, that cholera "...was chiefly among the intemperate" means, of course, that it was chiefly among the labourers. (As previously noted, the labourers were being given "six tots per day", and on the feeder canal, according to Taylor, "...since the water in the marsh was unfit for drinking purposes, "waterboys" kept the men supplied with whiskey which they served from tin pails with tin dippers" (Taylor, 1950, p. 22). It is not surprising, therefore, that they were "intemperate".)

If fever and ague, cholera and Lake fever, and, of course, Bilious fever, were not enough, there were snakes. The paper reports that "In West Flamboro' we have heard that the inhabitants turned out at one time, and destroyed several hundred rattle-snakes in a day" (FJ & WCI, Sept. 20, 1826). The current prevalence of rattlesnakes is not recorded, but in a possibly apocryphal story headlined, "A Sad Mistake", the tale is told of a canal worker of Irish

extraction who mistook a snake for an eel". "...An ale! an ale! by the powers!" Some bystanders soon undeceived him, when it was found that he had been bitten three times by the poisonous reptile" (FJ & WCI, Oct. 18, 1826). Miraculously, he recovered. Phelps' claim, therefore, that "...although a large house has been prepared for a hospital, where all medical aid, together with all other necessary attendance that the nature of the case might require, is offered gratis, still there has not been a solitary instance of a person being brought to it" (FJ & WCI, Aug. 29, 1827), must be viewed with some scepticism. The same article informs us that "only three persons had died", so we must assume that either they died instantaneously, on being stricken, or the workers had a pathological fear of hospitals: alternatively, of course, we may believe that Phelps greatly exaggerated the nature of medical aid available.

No description exists of a shanty, but they appear to have been crude wooden huts. Indoor plumbing did not, of course, exist, and the shanties were probably miserable hovels surrounded by human wastes. The most complete description of the shanties and their contents is given in Phelps' itemization of the properties he bought from the other contractors. The property of Mr. Hathaway, which Phelps purchased, included "25½ pair of blankets now in use", presumably by twenty-five (or six) people. It also contained "20½ pair of new blankets", so that Hathaway had accommoda-

tions for about 46 men. The furnishing included seven empty whiskey barrels, along with "3 barrels whiskey 36, 30,36 gallons", or a total of 102 gallons for 46(?) men. They appear to have been well fed for their \$1.50 per week, for the supplies included 2,836 lbs. of salt beef, 1 barrel of salt pork, 47 lbs. of smoked ham, 129 lbs. of smoked beef, 2,770 lbs. of meal, and 1,606 lbs. of bran. The shanties appear to have been completely equipped with knives, forks, spoons, plates, tables, cups and saucers, and even tallow for candles (Third Report, pp. 80-83).

The fact that the employer owned the shanty and provided the food gave the employer one of the methods of control of the workers, for leaving the job meant losing room and board. (No details are given of accommodations for married couples, though Phelps, in the previously cited advertisement of September 5th, 1827, said that "about 150 families" were at the Deep Cut.) Giving the workers liquor in large quantities must have acted as a depressant, thus giving a more tractable work force, albeit drunk. It appears to have been a common practice, for the "biography" states,

One of the institutions seemingly necessary on the works, was an individual who figures amongst others as the 'grog-man'. We are not aware that in these days of boasted enlightenment such a phrase ever occurs in the reports or estimates of any great public work; but as the word frequently appears on the old pay-list of the canal, we conclude that the unprecedented amount

of work daily accomplished was in some measure stimulated by this important personage (J.P. Merritt, p. 85 , p. 86).

Phelps, for instance, would experiment with other forms of control, but he too used alcohol to control his workers.

(His daughter, Mrs. Charlotte St. John, wrote about conditions at a much later date. Her interest at the time was promoting temperance; so it should be viewed with some scepticism. Allowance should also be made for the fact that she was 83 years old and writing 65 years after the events she describes.) According to Mrs. St. John, Phelps had been in the custom of giving his workmen large amounts of

whiskey. On a visit to Buffalo, he read an article on temperance which "opened his eyes to his responsibility", and he abandoned work on his distillery (Tuer, 1931, pp. 14-17). In fact, Phelps had almost certainly finished his distillery, which he started in 1827, using the oxen from the Deep Cut to mash the grain (ibid., p. 15). A competitor would testify about Phelps' use of alcohol, "He injured other contractors by increasing the wages and the allowance of spirituous liquor, and often giving brandy, and others had to follow this example or they could not keep their men..." The competitor concluded, somewhat forlornly, "...and all this, it seems, was done with the Company's money" (Third Report, p. 574). Phelps appears to have embraced temperance in late 1829 or early 1830, when he destroyed his remaining barrel of whiskey, for on January 8th, 1830, he

founded the St. Catharines Temperance Society (FJ & WCI, Jan.20, 1830). Virtually all construction on the canal had finished by that date, so Phelps displayed his normal excellent timing. (The price of whiskey also appears to have been falling.)

Phelps had, of course, as early as 1827, pioneered new methods of worker control. Up until that time, it had been common for contractors to employ subcontractors, who were totally responsible for their workmen. Phelps, in his ad of May 30th, 1827, introduced the use of foremen: "smart, active men, who are capable of keeping the time and over-seeing 25 men, can have \$20 per month" (FJ & WCI, May 30, 1827). This was a new sort of arrangement, as indicated in Trotter's evidence. Trotter clearly thought he was a sub-contractor, but in his testimony he said, "He employed me... to let the shovelling out by the yard, and he would pay seven cents per yard for shovelling it into the carts...on these conditions I let the work out..." (Third Report, p. 163). Phelps clearly paid the men himself, but Trotter thought they were his employees. Phelps may very well be the man who introduced the concept of a foreman or overseer, in the modern sense of the term, to Upper Canada.

Phelps had also offered workers a choice, that of piece work or wages, in the advertisement of 1827. As the experience with Trotter had shown, the payment of 7 cents per cubic yard didn't work very well, since there were arguments over the quantity of earth moved. If men could earn, as Trotter testified, eight to twelve dollars per

per month (which Trotter claimed should have been fifteen to twenty after paying six dollars for month for board), they were moving prodigious amounts of earth. Since Phelps employed them at twelve to thirteen dollars per month, and paid their board in addition, we may assume that they were worth at least \$20 per month in total. This means that they were moving about two hundred and eighty-five cubic yards of earth a month, or about twelve cubic yards a day. This is the equivalent of a hole six feet deep, six feet wide, and nine feet long, which was shovelled out every day! Trotter's workmen appear to have performed a stakhanovite-like role, for they seem to have been norm-exceeders. The regular work crews were required to average ten yards of earth per day for a monthly wage of \$12, less, of course, six dollars for room and board. Trotter's crew moved about two yards more per day, but received \$7 extra per month!

By the time the "Rules and Regulation for the Deep Cut" were drawn up (probably January 12th, 1828), Phelps had dropped the idea of piece work. He was, however, offering bonuses to the foremen or overseers "as very much depends on the skill and activity of the overseers of each company" (ibid., p. 381). They could, at the end of their job, earn up to \$100 in bonuses. (As earlier testimony indicated, it was never paid. The overseers, of course, were not to know this, and presumably gave it their all.)

Phelps' use of the press has been noted earlier, for he pioneered, at least on the Welland Canal, a new type of advertising approach. In addition, his letters to the paper served to present him and his enterprises in the best light possible. The idea that, after a 14 hour day, "every person...will put on suitable clothes to preserve health, and at an early hour retire to bed", (ibid., p. 381) is laughable. There was a shortage of water at the Deep Cut (Junius, 1967, A Walk Around Town! 'W' continued) and the men were filthy. After being "up to their knees in water and mire" they probably ate and collapsed in an alcoholic haze: - filthy dirty and wearing the same clothes they had worked in. They were summoned and dismissed each day by Phelps' forerunner of the time clock, a large bell "used there...to ring up and out to work his 1,000 labourers and 100 horse and ox teams..." (ibid.) (The bell still exists - in the Lincoln Arts Centre, St. Catharines.)

Another form of control and exploitation of the workers was 'truck pay', or payment that was given in credit at the employers' store. Junius says that Phelps "...paid his men in cash, instead of store pay, (and) they worked harder, obeyed better and respected him the more for it. He was always a favourite with the working Men!" (ibid.) Since Phelps owned three stores, of which two were on the Deep Cut, one is perhaps justified in a degree of scepticism, especially since we know that Phelps was chronically in

arrears on pay. When Junius discusses the events of 1830, he says, "Things went more prosperously. Contractors were settled with and the laborers paid up; the Canal shimplasters were bought up and redeemed, things were a more cheerful aspect, and the Welland Canal was all the talk and all the rage then" (ibid.). "Canal Shimplasters" were promissary notes that circulated in lieu of money, normally at a substantial discount. They would, of course, not be accepted at any great distance from the Canal. In this way, the labourers could be both retained, and their pay discounted, by the use of "canal shimplasters".

The Catholic Church also appears to have been used to control the workers. As has been apparent from some of the quotations, large numbers of Irish Catholics were employed on the Canal, so that in 1827, the Company issued this notice,

NOTICE TO LABOURERS
Welland Canal Office,
St. Catharines, June 20th, 1827

It has been represented to the Directors, that many labourers professing the Roman Catholic religion, are deterred from working on the Canal through fear of ill usage from persons of other persuasions, this is therefore to give PUBLIC NOTICE, that the Contractors are required to use every lawful means in their power to prevent such conduct; and not only to dismiss those who may be guilty of violating the peace, but institute legal

proceedings against the offending party without delay.

J. BLACK, Secretary
to the Welland Canal Company

(Third Report, p. 381)

The Catholics built "shanty chapels" (Harris, 1895, p. 263) on the line of the Canal, and in 1831, a Catholic Church was opened in St. Catharines (FJ & WCI, Jan. 18, 1832). The Irish Catholics who came to the Welland found themselves in a miserable position, as the following quotation illustrates:

Deprived of education at home and pauperized by stern laws, the Irish laborer found himself, when he reached this country, with few resources save his bodily strength and his cheerful habits. His character was spread before the public by journal, tract and magazine as that of a lazy, thriftless, drunken creature. Public references to him were accumulations of falsehood. His brogue was detested, his honest face was caricatured, his word was doubted, and his religion hated as a thing absurd and idolatrous. Yet his indomitable spirit was not broken, he was sustained in all his trials with the strength of his imperishable faith and the cheerful advice and comforting works of the Catholic priest.

It was only their religion, with its beauteous promise of reward hereafter and its comforting assurances, that enabled them to bear their hard lot and the scorn and contumely of men" (Harris, 1895, pp. 261,262).

The "promise of reward hereafter" could, of course, be used by the priests as an argument against present action. This is not meant to suggest that the priests were conscious agents of a conspiracy to control the workers, or that such a conspiracy existed. Indeed, I presume that the priests were honest and sincere men who acted with the best of intentions for their flock.

No details exist of the Church-labour-employer relationship prior to 1842, so the actions of the priests in the First Canal period is the subject of speculation. The actions taken by the priests at a later date suggest, however, that the priests acted, (with the best of intentions) as moral agents of the employer. For example:- a Father Lee would stop a starving mob of Irishmen who were looking for food in 1842, when "through his untiring exertions and eloquent appeals they were restrained from executing their avowed purpose" (ibid., p. 254).

An even more explicit example of this took place in 1849, when a Father McDonagh confronted a mob of labourers,

This priest had great power over all the laborers, and was always of great assistance in keeping the peace; but on this occasion he was obliged to resort to extreme measures. Drawing a line across the bank, he threatened to pronounce the curse of the church upon any who dared to cross it. Then, fearing lest some might be tempted to disobey, he rode down among them, laying the horse-whip vigorously over their shoulders, until this form of punishment brought the rabble to their senses, and they gradually sluck

off to their homes of lodgings
(Thompson, 1897, p. 80).

While Father McDonagh's zeal for the employers may have been exceptional, it does seem probable that the good fathers were more concerned with peaceful labour relations than with fair ones.

Behind all these types of social controls of the labourers, however, there was always the shadow of force. The first to experience it was an anonymous worker,

A serious affray happened at the Deep Cut, a few days since, among some of the labourers, which resulted in shooting down one man, by an officer of justice, from whom he attempted to rescue himself, after having been legally taken prisoner, by threatening the officer's life, and endeavouring to put his threat in execution with a long knife. - The officer immediately offered himself up to the proper authorities; but was not accepted. It is considered doubtful whether the prisoner will recover, as he was severely wounded in the face and eyes, by a full charge of musket shot (FJ & WCI, June 13, 1827).

Violence was fairly common on the Canal, as the following article indicates.

FATAL COMBAT - A few Sundays since, a couple of Irish labourers on the canal one of the name of Kennedy, and the other Ryan, had a quarrel, which arose from the swapping of coats; and feeling somewhat in a pugilistick (sic) humour, agreed to go to a suitable place and box it out! On their way to the spot appointed, accompanied by their friends, something occurring to give a fresh impulse to their passions, they fell to; when after taking a few rounds, in which the former laid his

antagonist on his beam ends, a third person of the name of Carroll, stepped in, and by some it is said he gave the prostrated combatant several kicks in the intestines; others say he did not, but that the latter fell directly across a sharp stump - be this as it may, he never rose again! poor Ryan expired a few minutes afterwards!

A coroner's inquest was held over the body on the following day. Verdict of the jury - manslaughter, against both Kennedy and Carroll. The latter immediately fled across the lines; but Kennedy was secured and lodged in Niagara jail to await his trial at the next court of King's Bench, which will probably be held in August, 1828.

The deceased has left a family to lament his awfully sudden and totally unexpected departure to the world of spirits (FJ & WCI, Nov. 28, 1827).

The only other documented use of the law is given by "A Passenger" on the first ship through the Welland Canal in 1829.

...Remained for the night on the level of the Chippawa (sic), below the locks. - Here a most unpleasant scene took place. Some of the Irish labourers became riotous, attacked the American captain and crew, in the most wanton manner, and drove them from the ship. However, peace was restored at length, through the activity of Samuel Street, Esq., and other magistrates, who were present (FJ & WCI, Dec. 9, 1829).

The fact that the labourers were owed £10,115, would, presumably, have stirred them to "become riotous", and, I would argue, what they did may have been a 'sit-in', in today's terminology.

There are, however, two other mentions of work stoppages, of which one has been mentioned, that of Trotter's crew. As he says "...the men turned out and would not work any more...(but) I persuaded them to try it another month..." (Third Report, p. 163). All in all, it was a pretty feeble work stoppage.

Thanks to Phelps' son, "Junius", we have another report to conditions on the Deep Cut, as seen by a Phelps.

On the Deep Cut he labored under many serious disadvantages; for he had to team drinking water from the Black Horse Tavern for his men, also hay and grain a considerable distance for his teams, and procure provisions a long way for his laborers. At Centreville, now Welland City, he at the first had also to team all of Adam's Ale from either Big Wright's well here, or Ball's spring at the mountain, which was no trifling task in those days, especially for so many men. Oftentimes too the fire would get into the brush, wood, and timber and destroy large quantities, and which was no easy matter to check and put out; sometimes the freshet would sweep away the Lock bottoms and do great damage; frequently, too, Corkonion and Connaught rows, Orange and Papist fights would rage amongst his men, which would seriously impede his work; then again occasionally a strike for higher wages would occur, which to say the least were very annoying and perplexing as well as untoward and disastrous to his progress and work; the prevailing sickness of the country then, viz., the fever and ague, which afflicted himself, family, and workmen oftentimes was at one time enough to dishearten almost any one, as we can experiencely (sic) testify; but amid

all these discouragements, in spite of all difficulties and in the face of every obstacle, he pushed on and forward his contracts to speedy completion, and by his iron will and indomitable perseverance he finally succeeded in his jobs to the entire satisfaction of the Directors (Junius, 1967, A Walk Around Town!'W' continued).

It would be instructive to know how Phelps settled the 'annoying and perplexing' strikes, but the report given is the totality of it. A hint about the cause of the "Orange and Papist fights" may be gained from a notice in the Farmer's Journal. The Orange Lodge held meetings at the Deep Cut, where the workers by now must have been predominantly Catholic! (FJ & WCI, June 25, 1828) 'Junius', an ardent advocate of temperance, laid almost everything to "distilled death and liquid damnation". He was reminiscing about his father and the Canal again, when he said,

We have often heard him say that when he dismissed the Liquor from his work and from his men, a happy, quiet and visible change took place; for their grog was generally the cause of all their rows and riots.

When the Welland Canal was being built in 1827, we being only but a boy of 11 years old, was what was then called "Grog Boss", and used to carry up and down the line of the Canal a large pail of whiskey, with sometimes a handful of tansey from Hartzell's garden in it, and deal it out in a small tin cup, called tot, six times a day to each laborer, of whom in our beat there were 250 or 300 in all. We then tho't (sic) we were not only doing the laborers a benefit, but assisting in completing the work, as well as doing

good. Our approach was hailed by the men with smiles and delight; often would some of the hardest drinkers plead earnestly for an extra tot which we seldom refused them. We followed this business for nearly two years, and now we can look back and see the sad sights, the mighty mischiefs and ceaseless cause of so many quarrels, rows, fights, bickerings and strifes caused by this distilled death and liquid damnation! We say fearlessly and boldly that ninety-nine hundredths of all the murders, fracasces, Corkonian and Connaught rows, knock-downs, shillaleigh-sprees on the Welland Canal formerly and in this Town too were caused by strong drink! It is the bone of the contentions, and the bone of all strifes. The Devil himself is not a worse enemy of men, nor a greater intermeddler amongst men (Junius, 1967, A Walk Around Town!'T').

Whatever the causes of the fights and work stoppages, by 1833 the vast majority of the labourers had left the Welland. The work had been largely done with picks and shovels, wheel barrows, and horses and carts (Third Report, p. 366). Horses, oxen, and men provided the motor power, and Phelps' invention was one of the few labour saving devices employed. An attempt to use a dredge resulted in failure, and approximately 1,500,000 cubic yards of earth were dug out of the Deep Cut by hand and hauled away. The ground was ploughed, the labourers shovelled the earth into carts or wheel barrows, scrapers levelled the ground once more, and the whole tedious business began again. In the process, many of the men died from accidents, in addition to the deaths from disease already itemized. Only four

accidental deaths have been recorded. The first was on the 31st March, 1826.

FATAL ACCIDENT. - On Friday the 31st...while a party of workmen were engaged in getting out timber for the locks of the Welland Canal, in the township of Thorold, one of the men, Mr. William Hinckle, losing his presence of mind, as is supposed, after chopping a small tree nearly off at the stump, ran precisely in the direction it was falling, and, consequently, was instantly crushed to death beneath its weight, in presence of a dozen persons, some of whom repeatedly warned him of his danger, but without effect. It is understood that he was a native Canadian Frenchman, from Laprairie, and about 30 years old (FJ & WCI, April 15, 1826).

The article was followed up the following month, when the paper said,

It is worthy of remark, that but a single serious accident has happened during the whole progress of getting out the immense quantity of timber necessary to construct all the locks on the Welland Canal, which is now nearly accomplished, by the W.C. Lock Co. under the judicious and energetic superintendance (sic) of Mr. Oliver Phelps. This was the one we mentioned several weeks since, of a man who, as was supposed, moved by the sudden impulse of an instantaneous derangement of his mental faculties, rushed directly into the jaws of inevitable destruction, instead of fleeing from danger, as he was advised (FJ & WCI, May 31, 1826).

In the same issue, two more deaths were reported, the first being that of a contractor,

Fatal Accident - Mr. James Dwyer, subcontractor on the Welland Canal, started from his job, ...near the foot of the mountain, with his wagon and horses, on Wednesday the 17th inst. for Queenston; but having a high-spirited horse in his team, which took sudden fright and ran at such a rate over a rough road as to separate the wagon-wheels, he became entangled among the rigging, from which he was unable to extricate himself, until at length he was unfortunately dashed upon the ground with such violence as to cause his immediate death. Another person in company with Mr. Dwyer, was severely injured at the same time. It is believed, however, he will soon recover (ibid.).

The second was that of an Irish labourer,

Another. - On Wednesday the 24th inst. MICHAEL LAUGHLIN, a native of the county of Derry, Ireland, aged 28 years, while employed as a labourer, among many others, excavating one of the lock-pits at the foot of the mountain, on the late Mr. Dwyer's job, Welland canal, near where some of his comrades were grubbing a large oak tree, was instantly crushed to death by its falling unexpectedly among them! It seems almost a miracle that no others were harmed in the least, although equally exposed to danger, with the hapless man who has thus met an untimely end.

We have the satisfaction to state, that a similar accident is not likely to occur hereafter, on this canal, as the whole line is now clear, or nearly so, from all obstruction of the kind (ibid.).

The last reported accidental death was that of another labourer, Robert Munse, who drowned while rafting logs (FJ & WCI, June 7th, 1826). In the four months of its existence, the Farmer's Journal had recorded four accidental

deaths. From June, 1826, to the end of 1833, no more were reported. It seems very likely that they were occurring, for conditions were frightening. Take the Deep Cut, for instance. Phelps described the conditions,

The part of the deep cut which I finished became harder as I went down, with very large stone and round rocks, and many spots of hard pan until I got about to the towing path of the upper end of my job; and as I went down it became softer, so that a man standing on some places, by springing upon it, could shake the earth 20 feet round, and we often thought in those spots that the earth appeared to swell at the bottom, as cutting a small ditch through the same would in a day or two almost become extinct; and only attribute the banks on the north part of the work standing as well as they do to the extreme hardness and toughness of the soil above (Third Report, p. 556).

In the construction of the Welland Canal, four workers died accidentally, "upwards of seventy" died of cholera, and "not more than three or four" died from sickness each year. According to these semi-official accounts, the death toll could not have been less than 85 men, but we may safely assume that the true toll was very much higher. The Canal had been paid for with blood, sweat, and tears: - and, of course, money.

CHAPTER FIVE
ECONOMIC DEVELOPMENT

Why was the Welland Canal built? Donald Creighton, in his book, "The Empire of the St. Lawrence", argues that "Upper Canada had shown the energy and initiative to build the Welland Canal and to attack the enormous problem of the St. Lawrence..." (op. cit., p. 285) implying that the Welland was built as part of an "Empire of the St. Lawrence". However, Creighton also states that "In many ways the Welland canal was simply an auxiliary of the Erie system... within ten years of its completion the New York route was dominating the trade of the new agricultural west" (op. cit., p. 25). Was it, in fact, built as "an auxiliary of the Erie" or as a link in the St. Lawrence system, or both?

Merritt, who, we have seen, promoted and organized the Welland, was to be "richly paid in the enhanced value of my property" (Merritt Papers, Vol. 12, Archives of Ontario), while Phelps had, of course, come to the Welland Canal because he, along with the other contractors, believed that there was an opportunity to make money. What of John Barentse Yates, the man who would put up \$200,000 of the capital of the Welland Canal? Aitken argues that the American investors had "...an early awareness of what later proved to be the case - namely, that in the short run at

least, the Welland was more of a link in American than in Canadian transportation routes" (Aitken, 1954, p. 50). Yates was, in Aitken's opinion, making a mistake in his investment, regardless of this awareness because he should have confined himself to short term investments (ibid., p. 50). If one assumes that Yates was not making a mistake, what possibilities are left? One possibility is that Yates may have viewed the Canal and its stock as a profitable investment opportunity and have had nothing else in mind.

Yates was, however, not operating in a vacuum. His brother was, at the time of his initial investment, the Governor of New York State, and a friend of De Witt Clinton, the originator of the Erie Canal. Merritt, it will be recalled, had visited De Witt Clinton in Troy, N.Y., in the spring of 1824. It is probable that Clinton had introduced Yates to Merritt, for Yates' brother was preceded and followed in the governorship by Clinton. It seems clear that J.B. Yates would not have invested in the canal without the encouragement of both J.C. Yates and De Witt Clinton, for they could have made things impossible for him - it was possible, for instance, by manipulating the tolls on the Erie, to affect the potential trade of the Welland (Third Report, p. 472), and thus the profitability of Yates' investment.

Whatever machinations may or may not have taken place, Yates became a shareholder in September, 1824, and in

December, 1824, was lobbying for a change in the Welland plans. He wanted a ship canal rather than a barge canal "...truly efficient for the purposes of an extensive trade" (ibid., p. 235). As previously discussed, the plans were changed and an 'extensive trade' was possible. With whom? The only plausible answer is the Erie Canal of New York.

Merritt was always careful to extol the advantages of the Welland Canal in both the New York and St. Lawrence routes, a position that was virtually forced upon him. As previously discussed, the family compact, Merritt's supporters and the source of his funds, had a marked anti-American bias. It would have been fatal to have argued that the Welland would be profitable primarily because it would link up with the Erie system. Merritt would thus say, in a statement to British stockholders,

Since the opening of the Erie Canal, the Americans have diverted almost the whole trade of the western country to the part of New York...The superior facilities of Canada for canals, if we will avail ourselves of them, must soon enable us to regain this trade. When the proposed communications are there opened, the cost of transportation will be as follows: (to Lake Erie, per ton)

BY THE WAY OF NEW YORK	£	s	d
Present price	5	2	3
Savings by the Welland Canal	1	3	5
	<hr/>		
	3	18	10

BY THE ST. LAWRENCE

	£	s	d	£	s	d
Present price				7	15	0
Savings by the Welland Canal	1	15	6			
Savings by the St. Lawrence, when navigable	3	1	0			
	<hr/>			2	18	9

...The political and commercial advantages which must result to the British Empire on the completion of the canals in Canada are great" (ibid., p. 388).

It is immediately obvious that Merritt has introduced another element into his calculation, the improvement of the St. Lawrence. In 1828, when Merritt was doing this comparison, the probability of Lower Canada spending money on canal improvements was remote, even though they had invested in the Welland in 1827. In fact, the St. Lawrence system would not be in operation until the 1840's. That being the case, and assuming Merritt's other figures are correct, here is the adjusted cost:

BY THE WAY OF NEW YORK

	£	s	d
Present price	5	2	3
Savings by the Welland Canal	1	3	5
	<hr/>		
	3	18	10

BY THE ST. LAWRENCE

Present price	7	15	0
Savings by the Welland Canal	1	15	6
	<hr/>		
	5	19	6

The Welland would, quite clearly, reinforce the advantage of the Erie Canal system over that of the St. Lawrence. In fairness to Merritt, it should be said that he did, in fact, promote the St. Lawrence system to the best of his ability. As early as 1825, he was instrumental in promoting a survey of the St. Lawrence, although his son seems to go too far when he says "His was no petty scheme intended only to benefit a particular locality" (J.P. Merritt, 1875, p. 75).

The inhabitants of Oswego, the Lake Ontario terminus of the Erie Canal, certainly believed that they would be the beneficiaries of the Welland, for "On the 21st August (1830) a grand dinner was held in Oswego in honour of the success of the work, and Mr. Merritt's health was drank amidst most unbounded applause" (ibid., p. 128). This was not a sudden appreciation on the part of the Oswegians, as witness this newspaper article:

Oswego and Welland Canals. - The Welland Canal in all probability will be completed next fall. When finished it will open a water communication for vessels, of from 50 to 200 tons burden, from Oswego Canal, which intersects the Erie Canal at this place and terminates at Oswego village, will be finished about the time. - The distance of this Canal is only about 50 miles, and when completed will open a direct communication with lake Ontario, where goods can be shipped on board a steam-boat and pass through the Welland Canal to any of the ports on the above mentioned lakes, in much less time than they possibly can be transported by way of the Erie Canal to Buffalo. Thus it will in a great measure change the

channel of trade, and Oswego village become the grand commercial emporium of the western lakes. A correspondent in the Albany Gazette says, that by opening and improving the Illinois river from Chicago, for about 50 miles, at a cost not to exceed half a million of dollars, we will then have an uninterrupted navigation by canals and steam-boats from New York to the Rocky Mountains, a distance of not less than 3000 miles (FJ & WCI, Nov. 8, 1826).

Obviously, the "grand commercial emporium of the western lakes" had no fears of Montreal or its soi-distant empire.

Taking a more balanced view, a report from Albany said,

Even with respect to the western portion of this state, which it has sometimes been said would be injured by the opening of the Welland Canal, I am decidedly of opinion that its real interests will be fully as much benefitted as those of the Canadas or of Ohio. The tide of commerce will increase, by the additional facility of transport, so much faster than these means can possibly do, that the business on our own canal will be augmented instead of being diminished; while its newly created feeder, viz. from Lake Ontario at Oswego to Syracuse, will pour into the eastern section of the canal, and thence to New York, a fresh steam of wealth. ...In this enlarged but perfectly practical view, we may consider the Welland canal as another portion of the same chain which is to bind all these countries together by the ties of mutual advantage. On these grounds, therefore, I sincerely rejoice at the prospect of the speedy completion of the work in question; ..." (Reprinted in the FJ & WCI, Sept. 25, 1827).

Not everyone agreed that the Welland would "pour into... New York, a fresh stream of wealth". The Farmer's Journal, for instance, a few weeks earlier, had said "It is ... generally believed by most enlightened men of both countries, that all property once afloat on Lake Ontario, will inevitably find its way to Montreal, on the completion of the St. Lawrence canal..." (FJ & WCI, Aug. 29, 1827 - my emphasis).

Once again, of course, we should realize that the St. Lawrence was nowhere near completion, and wouldn't be for many years. The position of Montreal and St. Lawrence system would clearly have improved if the St. Lawrence canal had been completed, but would it really be the case that trade would "...inevitably find its way to Montreal"? Merritt would prepare a comparison of exports from Lake Erie:

FROM LAKE ERIE TO NEW YORK (per ton)

	£	s	d
Present price	3	0	6
Savings by the Welland Canal		15	1
	2	5	5

FROM LAKE ERIE TO MONTREAL

	£	s	d
Present price	3	11	6
Savings by the Welland Canal	1	13	6
Savings by the St. Lawrence, when navigable	0	10	11
	2	4	5
	1	7	1

(Third Report, p. 388)

If we disallow the savings from the St. Lawrence, we still get a price for the downward leg to Montreal of \$1 18 0, meaning that after 1829, it was cheaper to ship to Montreal than to New York from Lake Erie or the upper Great Lakes. Clearly, since this didn't happen, there must have been other factors at work. Merritt was assuming, for instance, that the United Kingdom was the eventual market, and that the shipping cost from Montreal to London was identical to the shipping cost from New York to London. Neither assumption may be correct. If New York were shipping to other ports, its cost was probably lower (and its cost to London would be lower by the extra insurance, pilot charges, etc., for the Montreal-London portion of the trip that was inside the estuary of the St. Lawrence).

Perhaps the most forthright statement of the situation comes, appropriately enough, from New York,

It has been apprehended by those who are always anticipating evil, that the Welland canal will injure the western part of the Erie, as the Lake Erie vessels will bring their cargoes direct to Oswego, where they will only have a canal transit in boats to Syracuse; of 32 miles, whereas the distance from Buffalo to this point is nearly two hundred miles. But we have no jealousies of this sort. Indeed, we rather rejoice in the Welland as an American canal. Already the business of the Erie canal is so great that a second, to run by its side, is contemplated. And when we look at the wide spread and fertile country extending from Syracuse to Erie, and from Ontario to the Susquehanna, to

say nothing of the produce of the 50,000,000 of acres of choice lands which will soon be peopled and cultivated beyond, where is the ground to fear that two, or even three canals, will not have as much business as can be attended to? And as the grower must be benefitted in proportion to the cheapness of the transportation, we maintain that all channels of conveyance and competition will tend to enrich the country, and be found mutually beneficial.

Another objection, perhaps may be raised by short-sighted politicians, viz: that when the produce from Lake Erie has once entered Lake Ontario, it may be more readily diverted from the New-York to the Canada market. But there is one unerring law of trade upon this point. Agricultural and other produce, will always find that which is on the whole the best market. The New-York merchants have only to keep New-York the best market in America, for the purchase of produce and the sale of goods, to make it the great commanding market of the Western world. (The New York Spectator, quoted in FJ & WCI, April 2, 1828).

The "New-York merchants" clearly believed that they had "the best market in America", and don't seem to have had much fear of Montreal and the St. Lawrence system. The view of the Welland "as an American canal" was probably appropriate. The Directors of the Welland Canal would report, in 1835,

Although the inhabitants of these Provinces have witnessed the entire loss of the Western Trade, with a degree of supineness not to be satisfactorily accounted for, it is cheering to know that the Legislature

of this Province have commenced the improvement of the St. Lawrence ..." (Third Report, p. 554)

Until the St. Lawrence improvements were finished in the 1840's, the Welland would act as a feeder for the Erie Canal.

The Welland Canal provides a good test for theories of development, for the whole of Upper Canada was virtually uninhabited before the American Revolution in 1776 (Jackson, 1976, p. 63). (I have ignored the aboriginal population.) St. Catharines probably had a population of about 200 in 1823, (ibid., p. 164), and the rest of the line of the Welland Canal was virgin land. The whole population of Upper Canada was probably not more than 130,000 people. The village of St. Catharines revolved around William Hamilton Merritt, for he was by far the largest employer (J.P. Merritt, 1875, p. 52). He had a saw mill, grist mill, distillery, blacksmithy, salt works, and a cooperage operation (ibid., p. 52). As previously discussed, Merritt intended, with the construction of the Canal, to ensure the water supply to his mills and guarantee water access to his property. The possibility of expanding his business was also very good, for "Messrs. Clark & Street's mill at the Falls, from Long Point, on the shores of Lake Erie, round to Dundas, at the upper end of Lake Ontario...is the only mill possessing facilities to carry on a merchantable

business" (ibid., pp. 56-57). It would be foolish to suggest that the primary purpose of the Canal was not to be trade, for without imports and exports the Canal would not be economically viable. One can, of course, argue that the Welland was an example of backward linkage in the staples trade, but since that trade was virtually non-existent with Lake Erie and the upper Great Lakes before the opening of the Welland Canal, (and, indeed, for some time afterwards) it seems more logical to consider it as the shareholder's of the Canal saw it:

"...the commercial intercourse between the Sea and upwards of 400,000 square miles of fertile land, must pass through the Welland canal or the smaller one belonging to the State of New York...from the known rapidity of the increase of population in new countries the period is at hand when the quantities of produce will be so great as to compel an enlargement of the present dimensions of the Canal..." (written in 1825; Third Report, p. 274).

The building of the Canal was, in and of itself, the engine of development along the whole line of the Welland Canal, for the area was about to industrialize. In the cash-poor economy that existed prior to 1824, barter appears to have been the norm, but the massive infusions of cash from them until 1833, would provide a medium of exchange which facilitated expansion. The other key to development was the harnessing of the water power created by the canal. Once construction was under way, immigrants and new businesses

would complement each other, and lead to virtually self-sustaining growth. As the company once again said "Improvements suggest and assist each other..." (ibid., p. 276).

By the fall of 1825, six hundred labourers were working on the Canal, and "One hundred dwellings were... occupied by mechanics, labourers, tailors, shoe makers, store-keepers and others" (J.P. Merritt, 1875, p. 77). Since the population of St. Catharines was, at the end of 1826, 384 people, (FJ & WCI, Jan. 3, 1827), the impact must have been startling. At this time, of course, what had happened was simply a growth of service industries, but more ambitious undertakings would soon commence. By 1835, for example, Yates and the Hydraulic Company had built:

- 2 Run of Stones for their Grist-Mill,
- 2 Mill Saws, an over-shot Wheel
- 1 Carding Machine
- 1 Fulling Machine,
- 1 Circular Lath Saw,
- 1 Shingle Machine, and
- 1 Machine for cutting Ships' knees

(Third Report, p. 55)

Carding and fulling machines are used in the manufacture of woolen or cotton cloth, so that no later than 1835, a cloth mill was located along the line of the Welland. Since it has been argued that cotton was the engine of economic growth in the U.K. (see, for instance, Landes, 1977; Mathias, 1975, etc.), the Welland appears to have been following the same pattern of development. Phelps had, as previously noted,

constructed a flour mill and a distillery, and built another flour mill at Dunville in 1829, as did Keefer, (Page 1879, p. 15). A saw mill was also built there, followed by two more that were built in 1836. Most interesting, however, is the construction by one Deffenbacher of another cording mill in 1833, in Dunville (ibid., p. 15). As early as the spring of 1830, when only two ships had passed through the Canal, (and that in the ceremonial voyage of November 29th, 1829) "six mills have been erected along the line of canal, four more are now in progress and applications to the Company for water power to turn other (sic) fifteen grist-mills, saw mills, carding and fulling mills are now under consideration" (Third Report, p. 449). Although there is some duplication of the previously mentioned mills, it is probable that the fulling mill referred to is in addition to the fulling mill constructed by Yates.

The boom was spread throughout the community, for in 1827, the Company is reported to have spent \$1,000 per week on oats and hay (FJ & WCI, Feb. 28, 1827), and the amount of money spent on food for the labourers must have been very large. By 1829, for instance, assuming 3,000 workmen at six dollars each per month board, the total room and board was \$18,000 per month! Phelps, in his Deep Cut contract, must have spent between three to four thousand dollars per month on food alone. This was not the only spur to the

farmers, as a Directors Report of 1825 makes clear:

It has been found from experience, that when agricultural produce had to be carted 130 miles it ceased to be worth raising, as the expense of bringing it...so far, added to that of raising it, exceeds or equals what can be obtained for it in the Market; hence at this distance, a check is put upon agriculture, and the improvement of any country. It has also been found that water communication, such as that which the Welland Canal opens is to Land Carriage as 1 to 25..." (Third Report, p. 274).

Once construction was started, a market existed for produce at both the Chippewa and Lake Ontario termini of the Canal, and by 1829, at Dunnville on the Grand River. In addition to an increased demand and better access to markets, the farmers received other benefits. A great deal of the country would have been cleared of wood along the line of the Canal, as the labourers would have burnt phenomenal amounts for heat and cooking. One thousand men, (for instance in the fall of 1827, on the Deep Cut) would have burnt the equivalent of five to ten full grown trees per day, or between one hundred and fifty and three hundred per month! The partially cleared land would have encouraged farming, particularly with a ready market immediately available.

Among the more impressive indications of economic growth is the launching of the schooner, the "Welland Canal", owned by Monson, Merritt, and Chace. The ship was built in St. Catharines and launched on the Canal on April 23,

1828). The launching of the 100 ton ship was followed by another, the "Peacock", one year later (ibid., April 23, 1829). The builder Russell Armington, was advertising for additional work in May, (ibid., May 13, 1829) and the construction by Yates of a machine "for cutting ships' knees" indicates fairly substantial ship building activity. (Repairs were also carried out.) The construction of a ship would involve skilled craftsmen, and require rigging, sails and lumber, all of which would stimulate the local economy.

An article in the Farmer's Journal lists the business activity in St. Catharines in 1829:

Dyer's hotel...several elegant stores; a handsome Academy, built of brick; ...two or three lawyers; a water-power furnace for castings of all sorts; mill-rights (sic), an abundant supply of ingenious and enterprising Yankees; saddlers; druggists; doctors; silversmiths; jewellers; taverns; a newspaper office; watch makers; hatters; painters; cabinet makers; with a noise of carriages a going all the time" (op. cit., Feb. 25, 1929).

The same issue of the paper carries an advertisement by E & J Hayward, who "still continue to manufacture...mill stones in St. Catharines", along with ads for glazing, chair making, and tailoring (op. cit.). A few weeks later S. Parker was advertising himself as a gunsmith, and in June, Parker was advertising that, "having had several years experience in some of the best shops in the U. States", he

was prepared to supply rifle companies at "a great discount" with "rifles of his own manufacture" (FJ & WCI, June 24, 1829). The level of technology required to support a gunsmith must have been quite high, although no details are available. What is clear is that the development of St. Catharines was well advanced before any ships, and thus any staples, travelled through the Canal. It was not only St. Catharines, of course, but the whole area, and particularly the line of the Canal, that was experiencing a boom in development.

In 1847, according to John Jackson, the following machines were in operation at various locations:

Dunnville	10 mills (5 saw, 2 grist, and one each of flour, fulling and carding mills)
Marshville	2 mills (1 grist and saw mill) (now Wainfleet)
Port Robinson	1 mill (grist)
Allanburg	4 mills, (one each of grist, saw, carding and fulling mills)
Thorold	3 mills (two flouring and one cement mills)
St. Catharines	12 mills (three flour, two turning, and one each of cement, wool, foundry, tannery, pump and axe factory i.e. by the St. Catharines Water Power Company, with water taken from the Canal at the Mountain above Lock No. 17) (Jackson, 1976, pp. 222, 223).

It should be noted that the situation in 1847, though long after the period we are concerned with, was still one year before the completion of the improvements to the St. Lawrence

By 1856, Junius tells us,

We have foundries and factories, machine shops and work shops, woolen factories, carriage factories, edge tool factories and smith shops where almost all kinds of Agricultural, Mechanical, and other implements are made. A Large Paper Mill and starch factory too are in the course of erection here (Junius, 1967, A Walk Around Town!'H').

There were about twenty flour mills and the various industrial enterprises "will employ a great many hands" (ibid.). (The 'Union Furnace' of Chancey Yale employed about forty men, Gilbert Samson employed fifty, George Dill employed thirty, and some of the other enterprises had similar work forces (ibid.)) Junius foresees St. Catharines as an industrial giant, when he writes, in 1856,

We hope to live to see the day, when every drop of surplus canal water will be used for manufacturing purposes. When 10,000 spindles and shuttles will be set in motion; when the cotton factories, woolen factories, edge-tool factories, farming implement factories, machine factories, pail and tub factories, and all other useful factories will be profitably employed here and giving work to thousands of hands. We think the time has come for Canadians to manufacture more at home, and buy less abroad. We go for a just Protective Tariff, for home manufactories and for low taxes. Let every Canadian cherish, sustain and maintain home manufactories! Let every good citizen aid, assist and encourage them. May the products of the Field and the Loom, the forge and the workshop, the Mechanic and the Artizan (sic)

be increased a thousand fold in Canada; then will the sun of our prosperity begin to shine upon this land; wealth begin to flow in upon us; plenty await us; and happiness dwell in all of our borders. May we be producers as well as consumers, and may our home markets be better patronized, and foreign markets less frequented (Junius, 1967, A Walk Around Town!'A').

We will consider why Junius' forecast was wrong, but the evidence that I have given, of the development that had taken place by about 1833, when construction on the Canal finished, indicates burgeoning industrialization. This had taken place without the benefit of a "staple" trade, for it was largely due to the construction of the Canal itself. The construction project brought in men, quite literally, by the thousands, and the combination of manpower, waterpower, and an influx of cash, was the precondition for impressive growth. The industry and energy of Merritt, Phelps, Yates, Keefer, and the "mill-rights, (sic) an abundant supply of ingenious and enterprising Yankees" along with those other immigrants, the Irish who dug the giant ditch, created a economic breakthrough. The Canal Company in 1832, had no doubts that it was the Canal construction and not the Canal traffic which had caused the boom.

The public advantages arising from the canal are at this period so generally understood that a further allusion to them may appear unnecessary. As a proof however, we would merely notice that at Dunnville, Grand River dam, (a place which



before construction of the canal was a waste, or not inhabited,) there are three lumber mills, one flour, fulling, and carding mill, three merchant's shops, three store houses, and some thirty or forty dwelling houses, and the lands in the neighbourhood, formerly valueless, are now selling at from \$4 to \$8 per acre. -A small village, with a grist and saw mill, is springing up at Marshville, another is laid out, and will form a prominent point at the junction ...Port Robinson at the South, and Allanville at the north end of the deep cut have not increased as rapidly as the situations warrant, in consequence of a general belief that the deep cut will be lowered to the level of the Welland. A small village is commenced at the former; and a grist and lumber mill building, and one in operation at the latter.

Thorold is rapidly increasing. The largest grist mill in the province; four lumbering mills, and a large village, are erected, where it was quite a wilderness when the canal was commenced.

The value of lands in the neighbourhood of the canal increase in proportion, so that it would be difficult to estimate the extent of wealth created by its construction (Third Report, pp. 495,496).

With no staples trade, there can have been no forward, backward, or final demand linkages from the staple before 1829 - unless the staples thesis is so broad as to insist the the Canal was built for a staple trade which would occur in the future, and thus the Canal itself is an example of backward linkages!

The more realistic conclusion seems to be that the Canal was constructed to facilitate any and all trade between Lake Ontario and the West, and the act of construction, with its associated activity, started the industrialization of the Niagara Peninsula. The development of Southern Ontario must surely be an acid test for the staples thesis, which purports to explain Canadian development. If the development of the industrial heartland of Canada cannot be explained, then what does the staples thesis explain? It is, in fact, a theory of underdevelopment, of metropolis - hinterland exploitive relationships, and, as such, has no bearing on the development of the Welland Canal, and the industrialization that took place, between 1823 and 1833.

CHAPTER SIX

CONCLUSIONS

The four men who have been the focus of this study are Merritt, Phelps, Keefer and Yates. Without William Hamilton Merritt, the promoter of the Canal, it would never have started. (This is not an argument, of course, that a canal would never have been built; but it would have had a different location and different economic consequences.) There would be general agreement that Merritt was an entrepreneur.

In 1829, when, as we have seen, twenty-five mills were either built, building, or applied for, Merritt had no involvement in them. (Unless we count the dubious half share in Phelps' mill, for which Merritt received \$1,125 in 1832.) The involvement of the other three was, however, startling: - Phelps had two mills; Keefer had two mills; Yates was responsible for nine mills! The three men were responsible for more than half of the construction of mills along the line of the Canal. Merritt had promoted the ship building enterprise in St. Catharines; he would also promote a bank, and a barge company. (He continued his promotional activities for the rest of his life.)

Phelps, Yates and Keefer, are clearly engaged in entrepreneurial activities in their mill-buildings. The role of the four men is thus a major factor in the economic transformation of the Welland canal area. We may reach this conclusion because we know that major construction projects have been undertaken without any lasting effect (c.f. Newfoundland and the Brinco project). What, then, makes an entrepreneur?

It is tempting, particularly in light of Phelps' belief in predestination, to adopt the argument of Max Weber about the Protestant ethic. This would, in my opinion, be incorrect. Of the four entrepreneurs, only Phelps was a Presbyterian, while the other three were not. While Yates, Merritt, and Keefer, were Protestants, there are many examples of entrepreneurship in Japan - a country not noted for indigenous Protestants. The coincidence of Protestant extremeism and entrepreneurial activity noted by Weber and other observers, (for instance "...a very large proportion of enterprise (in the U.K. in 1800) lay in the hand of Protestant Non-conformists, ...certainly a much greater proportion than their numerical presence in the total population would indicate" (Mathias, 1975, p. 158)) can be explained in another way. The existence of any group that rejects the societal norms (or has just made an abrupt break with the past, in the case of a whole society - for example, the United States and the American Revolution) will

foster "new ways of doing things" - that is part of its credo. New ways of doing things will foster new things to do.

It is tempting, once more, to argue that there is some difference between Americans and Canadians which favours U.S. economic development. The fact that Merritt and Keefer were United Empire Loyalists, while Phelps was an American who settled in St. Catharines, and Yates was an American who, apparently, never considered migration, should indicate that this argument is incorrect. The Canal Company did indicate, however, that "Improvements suggest and assist each other", (Third Report, p. 276) which foreshadows Landes' argument on the causes of the British Industrial Revolution,

The more persons who sought new and better ways of doing things, the greater the likelihood of finding them...growth provided opportunities for further innovation, intended or accidental (Landes, 1977, p. 19)

which has far reaching implications. If, as I have argued, the institutional constraints on entrepreneurship were greater in Canada than they were in the United States, then the United States would, almost inevitably, pull ahead in the long run. A minor difference in 1830 in entrepreneurial activities would be magnified over the next twenty or thirty years. Immigrants would choose the more rapidly growing country, accentuating and reinforcing the divergence in growth trends. Not only would there be a numerical difference,

but, quite probably, a qualitative one, for those who had new ideas would tend to gravitate to the country which was most likely to put them into practice.

The capital market in Canada, which created one of the constraints, namely a lack of capital for entrepreneurial activities outside of the staples industries, is thus the major culprit in creating Canada's role as an exporter of raw materials and an importer of manufactured goods. Paradoxically, this behaviour would reward entrepreneurship in staples, or staples-related, industries. Unfortunately, since improvements suggest and assist each other, entrepreneurship would be concentrated in a few industries. (Thus, we have an extremely competitive forest industry and mining industry, but virtually no leading manufacturing enterprises.)

The banking system in the 1820's was clearly inimical to Canadian entrepreneurship on the Welland Canal, but that influence was overcome. By the 1870's, with the National Policy, institutional arrangements would increasingly favour staples over industry.

There is one other common characteristic of the four men on the Welland Canal - they were all grasping and unscrupulous. The similarity with the "robber-barons" of the U.S. is probably more than coincidental. One does not have to be a criminal (or 'deviant') to be a successful entrepreneur - but it helps. Criminal or deviant behaviour indicates a rejection of societal norms of behaviour. This

rejection may lead to new ways of doing things, for having rejected some of the constraints on behaviour, it is easier to reject others. (The criminal activity may thus be a consequence of entrepreneurship, rather than its cause.)

Entrepreneurship can be learned, if we may universalize the experience on the Welland Canal. Up until 1827, the only major example of entrepreneurship was the promotional effort by Merritt. The prize offered for a labour-saving device would generate two winning entries, one, of course, being Phelps'. While I stress, once again, that invention is not entrepreneurship, the attempt to overcome normal constraints fosters entrepreneurial qualities. This was exactly what happened with the middleaged Phelps. He now faced a labour force which was increasingly composed of Irish peasants, unused to the wage nexus, and was able to socialize them into their new role. At the same time, he transformed advertising techniques and management techniques.

The ability to realistically appraise the value of innovations propelled Yates, Phelps, and Keefer into the mill operations on the line of the Canal. The element of risk-taking is involved, but, as we have seen, there were at least two factors involved. The first was, of course, the ability to minimize risk. The second, which relates to the first, is a different appraisal of the degree of risk, that is, they perceived a greater reward/risk ratio than any of their contemporaries. Thus, they built while the majority watched.

The workmen on the Welland had virtually no chance of becoming entrepreneurs. They worked to the point of exhaustion, spurred on by copious quantities of liquor (and little opportunity to quench their thirst with water). They had a very small amount of cash left after paying for their room and board, and could not afford to take financial risks. Perhaps most significantly, however, the only real solace for these men, employed in a new world with new diseases, was their cohesiveness as a group of Catholics in a Protestant dominated society. Aberrant behaviour (and that, after all, is what doing something in a new way involves) was a threat to the security of the group, and was strongly discouraged, as the actions of the priests demonstrated.

It is generally believed by economic historians that North America substituted capital for labour, since labour was scarce, in contradistinction to the situation in the U.K. (See, for example, Landes, 1977, p. 523 et seq.) The evidence on the first Welland Canal does not agree with this interpretation. The shortage experienced on the Welland Canal was a shortage of capital, and led to a shortage of labour (In other words, if the men didn't get paid, they wouldn't work). Phelps' invention was at least as much an attempt to minimize capital as it was to minimize labour. He could cut down the number of oxen required to haul each cart.

The most important element in the differences between the industrial development of North America and the U.K. may have been displayed by Phelps - a willingness to experiment with a variety of employment practices. In this he was aided by a work force which had no real alternative to complying with his demands, and had displayed their own adventuresness by migrating to the New World. As a social unit, they were conservative, but as a work force, they were pliant. The result of this flexibility on the part of both labour and management would allow new inventions to be employed, and productivity to increase, thus allowing for higher wages relative to the U.K.

The attraction of "cheap land" as an alternative to wage labour does not appear to have had much effect on the labourers, who do not seem to have had any interest in becoming farmers.

The behaviour of the Bank of Upper Canada with respect to the Welland Canal was clearly that of risk-minimization rather than profit maximization. For instance, the policy of requiring directors to co-sign for loans, and the refusal to lend money on receivable items, indicates an ultra-conservative policy on the part of the Bank. Because of the ties with the family compact, and with Yates, the Company was able to overcome these handicaps. One of the unfortunate consequences of the successful completion of the Canal was the reinforcement of the attitudes of both the

Bank and the family compact.

The risk-minimizing behaviour of the Bank appeared to be an appropriate response to risk ventures, which would, of course, militate against "doing new things" or "doing old things in new ways". The tried and true would be favoured, in a world which was undergoing an industrial revolution - and these positions had been justified by the success of the Welland Canal! The problems of the Welland Canal, mainly financial, had been exacerbated by the behaviour of the Bank of Upper Canada, making the Canal appear to be a higher risk venture than it was, and reinforced risk-minimizing behaviour on the part of the Bank.

What was developing was the dominance of finance capital over industrial capital, leading to distortions in the economy. Risk-minimization would lead to a giant, conservative banking system in Canada, with increasing emphasis on loans to fields in which the banks thought the risk was minimal - staples trap.

The staples thesis, which looms over Canadian historiography, has persisted because, I have argued, it has a great deal of plausibility even though it is incorrect. There was a succession of Canadian staples, and Canada is still a staple exporter. There was, and is, a staples trap, which promotes staples at the expense of other opportunities. The geographic and economical determinism which pervades the

staples thesis is, however, wrong. Choices are continually being made which foster or frustrate entrepreneurial activities, and thus development.

In 1833, industrialization on the American or British pattern was still possible. The choices that were made would foster underdevelopment and a dependence on staples. We are still faced with a choice today, if we are prepared to radically change social and institutional constraints.

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